On surgical diseases of women / by I. Baker Brown.

Contributors

Brown, Isaac Baker, 1812-1873.

Publication/Creation

London : Robert Hardwicke, 1866.

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ON

SURGICAL DISEASES

OF

WOMEN.

BY

I. BAKER BROWN, F.R.C.S. (BY EXAM.)

SENIOR SURGEON TO, AND FOUNDER OF, THE LONDON SURGICAL HOME;
LATE SURGEON-ACCOUCHEUR TO, AND LECTURER ON MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN AT, AND ONE OF THE FOUNDERS OF, ST. MARY'S HOSPITAL;
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ASSISTANT-SURGEON TO THE LONDON SURGICAL HOME.

Third Edition, Revised and Enlarged.

LONDON:
ROBERT HARDWICKE, 192, PICCADILLY.
EDINBURGH: MACLACHLAN AND CO. DUBLIN: FANNIN AND CO.
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OF

THE LONDON SURGICAL HOME.

MEDICAL SOCIETY OF LONDON W.
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1773

PREFACE TO THE THIRD EDITION.

THE first edition of this work was published in 1854; the second in 1861. I have now (1866) the gratification of printing a Third. I have thoroughly revised the different chapters; have added many things, and omitted a few. Among the additions are numerous illustrative cases; chapters on Retroversion, Retroflexion, and Anteflexion of the Uterus; Vaginismus; and Abdominal Sections. The last-named chapter is substituted for that on Ovarian Dropsy in former editions. This subject I have treated in a separate work (*"On Ovarian Dropsy: its Nature, Diagnosis, and Treatment — the result of thirty years' experience."* 1862).

The lithographic illustrations of the first and second editions have been modified and re-drawn on wood by my Son, Mr. Isaac Baker Brown, jun., M.R.C.S., Assistant-Surgeon to the "London Surgical Home," and most intelligently engraved by Mr. Royle, of Featherstone Buildings. Many new plates have been added; and with reference to those representing the various displacements of the uterus, my Son joins me in thanking Dr. Savage for the great assistance afforded by the study of the admirable illustrations of his work on "The Female Pelvic Organs."

24, Upper Harley Street, Cavendish Square, W.,
1866.

PREFACE TO THE SECOND EDITION.

THE sale of the previous edition of this work, and the flattering manner in which it was received by the Profession and noticed by the Press, afford evidence that the subjects it treated of were of no small importance and interest, and that it supplied a defect in the surgical literature of this country.

In putting forth this Second Edition I have endeavoured to render the book still more worthy of the attention of my professional brethren, both by the addition of new, and by the careful revision of the previous, matter. Indeed, the impetus to the study of the Surgical Diseases of Women has been of late so great, that, had I even received less encouragement in my previous endeavour to promote it, a revision of the contents of the first edition would have been required to convey an account of the many improvements in the modes of operating, and in other particulars. Moreover, the longer and much wider experience I have since had, has enabled me to confirm many, and to correct other, points of practice, to improve upon old methods of operating, to suggest new ones, and to add a very much larger number of cases illustrative of the curative measures I adopt, and confirmatory of their value.

To show more clearly the improvements and additions in

this present edition, I will enter into a few particulars. New chapters or sections have been added on Intra-uterine Fibrous Tumours, on Hypertrophy and Irritation of the Clitoris, on Cauliflower Excrescence of the Uterus, on Certain Diseases of the Rectum producing or simulating Uterine Disorder, and on Certain Surgical Lesions connected with Sterility in the Female. The chapter on Ruptured Perinæum has been thoroughly revised, and the operation for its cure illustrated by eighty-one in place of eighteen cases. To the account of Vesico-vaginal and Recto-vaginal Fistula much has been added; these sad and of old most intractable lesions being now readily amenable to treatment by a surgical operation which has reached a high degree of perfection and precision. In the last edition my experience with the operation for vesico-vaginal fistula had been limited to four, but I am now able to record the history of forty-two cases which have fallen under my own care.

The account of Tumours of the Uterus has been much enlarged, their pathology more fully considered, and those of the intra-uterine form rendered much more practically interesting and important by the description of a plan for their successful treatment. All the cases illustrating this plan are now for the first time published. Leaving out of sight the additions made to the history of the several surgical conditions comprised in the chapters on Operations of the Uterus, and on Operations upon the External Sexual Organs, I may direct attention to the detailed history of fifty-five cases of Cystocele, Rectocele, and Prolapsus Uteri—a number, moreover, which might have been considerably larger, had not some of my case-books at St. Mary's Hospital been surreptitiously removed and lost to me.

Passing to the concluding chapter on Ovarian Dropsy, I will say of it that it has received my best attention; that the pathology of the disease has been much more copiously examined, and that the number of illustrative cases operated upon has been largely extended, particularly those of Ovariotomy, of which I have had twenty more than described in the last edition. I hope, therefore, this chapter will continue to merit the commendation it so largely received when it first appeared.

There is another advantage in enumerating these particulars, besides demonstrating the improvements in the present edition—viz., that by so doing I make an appeal to experience, and put the chief merit of the book in its being a mirror of clinical observation—a practical treatise on some most important surgical operations, the value of which is discoverable in the record of appended cases.

My previous large experience at St. Mary's Hospital has, during the past three years, been greatly added to by the opportunities of observation afforded me in the wards of the "London Surgical Home," in which I have had twenty beds constantly occupied by cases of the severer forms of disease treated of in the pages of this work. And I cannot, in mentioning this institution, forbear expressing my recognition of the valuable and ready co-operation and assistance of my professional colleagues on its staff, as well as of some other practitioners who have been interested in its practical working and efficiency, viz., Dr. J. Hall Davis, Mr. T. W. Nunn, Mr. Philip Harper, Mr. Wratislaw, Mr. Spencer, Dr. Menzies, Dr. Giles, and Dr. Tulloch.

In conclusion, I would commend this treatise to the members of the Medical Profession, not as a recondite treatise on

the pathology of the several affections considered in its pages, but as a contribution to practical surgery; and with the hope that its publication may serve to advance and perfect the means of cure for a number of diseases ranking among the most painful to which woman is subject.

I. B. B.

May 1*st*, 1861.

PREFACE TO THE FIRST EDITION.

THERE is no branch of Surgery more open to improvement than that which relates to those accidents and diseases, incident to the female sex, which admit of no relief except from the hand of the surgeon. In the standard works on Midwifery and the Diseases of Females, these surgical diseases are for the most part but imperfectly discussed, and their treatment is often described in few words and without any suggestions to direct the surgeon through the difficulties and dangers of the more important operations proposed for their relief. Nor has there yet been published in this country any work specially devoted to the consideration of these difficult, and, for the most part, exceedingly distressing, cases.

On some of the diseases in question, it is true, we have not only admirable articles, scattered over the pages of our periodical literature, but also full and well-written treatises; and to the authors of these I gladly acknowledge my obligations. With regard to other diseases, however, of not less urgency and importance, I have sought in vain for any useful information in books, and have been thrown, of necessity, on my own resources. It is to the diagnosis and treatment of the latter class of cases that the bulk of this volume is devoted; although the former are not passed over with neglect, especially where I felt able to add any details of

practical importance to what is already known concerning them. The treatise makes no pretensions to completeness. The subject is by no means exhausted. I have, however, endeavoured to present a clear and practical description of all the more recent improvements in this branch of Surgery; and I take leave of the subject, not without the hope that much greater advances will soon be made by abler hands than mine.

I. B. B.

1854.

PRELIMINARY OBSERVATIONS.

THE Surgical Diseases peculiar to Women treated of in the following pages are divisible into two sections—viz., I. Those which mostly result directly or indirectly from parturition; II. Those which occur independently of pregnancy.

I. Under the first section are classed:—

1. Rupture of the Perinæum.
2. Vesico-vaginal Fistula.
3. Recto-vaginal Fistula.
4. Laceration of the Vagina.

II. Under the second section:—

1. Prolapse of the Uterus.
2. Prolapse of the Vagina: Cystocele—Rectocele.
3. Tumours of the Uterus: Fibrous—Other varieties.
4. Other Surgical Lesions of the Uterus: including Hypertrophy of the Os Uteri; Imperforate Os Uteri; Stricture of the Os Uteri.
5. Retroversion, Retroflexion, and Anteversion of the Uterus.
6. Stone in the Female Bladder.
7. Lesions of the External Sexual Organs: including Imperforate Hymen; Encysted Tumours of the Labia; Hypertrophy of the Clitoris; Vascular Tumour in the Meatus Urinarius.

8. Diseases of the Rectum resulting from, or simulating, Uterine Disorders.
9. Certain Surgical Lesions connected with Sterility in the Female.
10. Vaginismus.

I have added also a chapter, allied to both divisions of the work, on Abdominal Sections, as practised for the Cæsarean operation, the removal of the fœtus from the abdomen after rupture of the uterus and in extra-uterine fœtation, and excision of the uterus and appendages.

The lesions included in the first section had, prior to the date of this work, received little attention in this country, and were very widely regarded as beyond the scope of the surgeon's art, on account of the serious difficulties and numerous disappointments which had always been encountered in the attempts to cure them. Hence most of the sufferers were allowed to drag on a life of much distress and misery, without prospect of relief in most cases, cut off from society and from domestic comforts and enjoyment. But within the last fifteen years the operation for the cure of perinæal lacerations, to which I have devoted so considerable a portion of each edition of this work, has become fully recognized by the Profession, and is constantly carried out with nearly invariable success; and now, in this present issue of my work, I am able to describe and largely illustrate an almost perfect and invariably successful operation for the still more distressing injuries known as vesico-vaginal and recto-vaginal fistulas, which were, indeed, only a few years since, considered as practically beyond the pale of surgery.

Among the diseases of the pelvic viscera of the female, comprised in the second section, are several of well-nigh as distressing a character as those already alluded to. Indeed, the prolapse of the womb, of the bladder, or of the rectum into the vagina may entail as great an amount of misery as does rupture of the perinæum, with which, in fact, each of those displacements is often associated; and it is an important advance in surgery to be able to point out means for their

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The other subjects embraced in the several chapters of the second section, if less serious and less distressing in their character than those which have passed under review, are highly deserving the best consideration of the medical practitioner; and it is hoped that the remarks made on them, and the operative measures suggested, will be found instructive and useful.

Several of the lesions considered in the following pages have been so thoroughly treated of by others, that I have deemed it unnecessary to enter into detail respecting them; and have accordingly restricted myself to the practical suggestions I have to offer as to their causes, diagnosis, and treatment. This will, for instance, account for the apparently superficial description of the varieties of prolapsed uterus, polypus uteri, &c., lesions which are considered mainly with reference to the peculiar plans of operation I propose for their cure.

I would here acknowledge the great advantage I have derived from the able treatises of Dr. Fleetwood Churchill, Dr. McClintock, Dr. Graily Hewitt, and Dr. Tilt, on "Diseases of Women," and would refer my readers to them for those particulars which the peculiar character of my present work excludes.

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ON

SURGICAL DISEASES OF WOMEN.

CHAPTER I.

LACERATION OR RUPTURE OF THE PERINÆUM.

This is one of the most distressing accidents of labour; and although, thanks to improved skill and medical knowledge, it is now an accident of comparatively infrequent occurrence, yet few, if any, medical men fail, I presume, to meet with it, in greater or less severity, in the course of their practice. But be this as it may, it is a duty undeniably incumbent upon every surgeon and accoucheur to make himself thoroughly acquainted with the characters and causes of this lesion, and with the means devised for its relief.

The Frequency of the Accident.—What the relative frequency of laceration among parturient females may be I have no data to show. The slighter degrees, which demand no particular treatment, are certainly common, especially in *primiparæ;* and I apprehend that the severer forms are more frequent than is generally supposed, these often being, from the natural modesty of women, and from their despair of obtaining relief, kept secret by the sufferers. No doubt can be entertained of the particular liability of *primiparæ* to the accident; this, in fact, is no more than might naturally have been predicted.

Thus, in 86 patients who were operated upon for rupture of the perinæum, as hereafter detailed, and whose histories were clearly ascertained, the laceration occurred during the first labour in as many as 64.

The patients referred to form part of a larger group of cases, 112 in number, which constitute the clinical groundwork of this chapter, and respecting which certain facts relating to age, period, character and duration of accident, and success of treatment, may first be noted.

Age.—The ages of the patients, when subjected to treatment, were as follows:—

From	17	years	and under	20	... ...	5
„	20	„	„	30	... ...	39
„	30	„	„	40	... ...	36
„	40	„	„	50	... ...	17
„	50	„	„	60	... ...	3
„	60	„	„	65	... ...	3
Age omitted from reports					... ...	9
						112

Period, character, and duration of accident.—The laceration of the perinæum occurred:—

During the	1*st*	*labour*	in 64	cases
„	2*nd*	*labour*	in 7	„
„	3*rd*	*labour*	in 3	„
„	4*th*	*labour*	in 1	„
„	5*th*	*labour*	in 3	„
„	6*th*	*labour*	in 1	„
„	8*th*	*labour*	in 3	„
„	10*th*	*labour*	in 3	„
„	13*th*	*labour*	in 1	„
Not recorded			26	„
			112	

In one instance, a perinæum which had given way during the first labour, and had been cured by operation, was ruptured again during the fifth labour. In a second instance, after the successful treatment of a laceration experienced in a first con-

finement, the perinæum was once more torn during the second confinement.

The ages at which laceration took place in the *primiparæ*, in 46 cases, were as follows:—

15	years	and under	20	...	...	8
20	,,	,,	30	...	...	30
30	,,	,,	40	...	...	7
40	,,	,,	50	...	...	1
						46

More extended data do not support the opinion expressed in the first edition of this work, respecting the comparatively large proportion of cases of ruptured perinæum in women thirty years of age and upwards in labour for the first time. A more extensive series of observations is required before a trustworthy conclusion can be expressed on this point.

In 90 cases, the rupture of the perinæum was *complete*, in 22 *partial*.

The period which intervened between the accident and the patient's coming under my care, in 85 cases, was as follows:—

Immediately	after	...	...	...	5
3 days	,,	...	...	...	1
5 ,,	,,	...	...	...	1
14 ,,	,,	...	...	...	3
17 ,,	,,	...	...	...	1
4 weeks	,,	...	...	...	1
5 ,,	,,	...	...	...	1
6 ,,	,,	...	...	...	3
7 ,,	,,	...	...	...	2
8 ,,	,,	...	...	...	2
12 ,,	,,	...	...	...	3
15 ,,	,,	...	...	...	1
4 months	,,	...	...	...	3
5 ,,	,,	...	...	...	4
Carried forward				...	31

	Brought forward	... ...	31
6	months	after	3
8	,,	,, ...	1
12	,,	,, ...	1
14	,,	,, ...	1
16	,,	,, ...	2
18	,,	,, ...	4
2	years	,, ...	7
30	months	,, ...	1
3	years	,, ...	4
4	,,	,, ...	3
5	,,	,, ...	3
6	,,	,, ...	1
8	,,	,, ...	2
9	,,	,, ...	1
10	,,	,, ...	4
11	,,	,, ...	2
12	,,	,, ...	1
13	,,	,, ...	2
14	,,	,, ...	1
15	,,	,, ...	1
16	,,	,, ...	1
17	,,	,, ...	1
20	,,	,, ...	2
21	,,	,, ...	1
22	,,	,, ...	1
28	,,	,, ...	1
30	,,	,, ...	1
36	,,	,, ...	1
			85

Results.—Of the 112 cases, 104 were *cured;* 2 (XXI. and XXVI.) were *relieved;* in 2 (III. and LXII.) the treatment was not completed; and 3 (XI., LI., and LVI.) *died.*

Structure of the Perinæum.—Without entering into details, it will be proper to describe briefly the general structure of the *perinæum.* This region extends from the fourchette of

the vagina to the anus, and varies in length, from an inch to an inch and a half, in the quiescent state; but it will measure from four to five inches when put on the stretch during labour, so extensible are its tissues. It consists of skin, fascia, and muscular fibre; the last made up of the constrictor vaginæ, transversalis perinæi, and sphincter ani muscles, all of which meet at, and, in fact, have their common insertion at the centre of the perinæum. By this arrangement it follows that, when divided in the line of their common centre, as is the rule, these muscular fibres must by their contraction draw asunder the sides of the fissure. More deeply seated are the deep fasciæ and the levator ani muscle. From their attachments the fibres of this muscle will evidently also assist in separating the edges of a perinæal laceration. The firmness of the perinæum depends on the tonicity of the muscles, the elasticity of the skin, and particularly on the strength of the fascia.

Varieties of Ruptured Perinæum.—Four varieties of ruptured perinæum are distinguishable :—

1. Where the perinæum is torn to the extent of an inch or less from the fourchette. This degree of injury is of no great moment, is little marked when the parts return to their quiescent or normal state, and requires no special treatment.

2. Where the perinæum is torn between the constrictor vaginæ and sphincter ani, those muscles remaining intact. This is actually a *perforation* of the perinæum, and, in some rare cases, has given passage to the child.

3. Where the laceration occupies the entire length of the perinæum, but does not penetrate the sphincter ani.

4. Where the laceration extends so as to divide the sphincter ani, and even the recto-vaginal septum. It is this last form which constitutes so heavy a calamity to the patient, and has hitherto been found so little amenable to treatment.

M. Velpeau remarks (*De l'Art des Accouchements*), that two different lesions are generally confounded together under the title of rupture of the perinæum—viz., perforations and fissures; the former (*perforations centrales*) existing where the sphincters of the anus and vagina are unbroken; the latter (*fentes vul-*

gaires) where the sphincters are involved and the fissure invades more or less the rectum. Laceration of the perinæum is peculiarly an accident of childbirth; yet it may possibly occur from external violence. Some may imagine that such an accident during parturition ought not to occur in the hands of a careful practitioner; an inference, however, not warranted by the records of obstetric medicine. This injury has occurred in the practice of the best accoucheurs, and it is determined by circumstances which cannot at all times either be obviated or removed.

The causes of laceration of the perinæum are distinguishable into those peculiar to the mother and those referable to the child; and they are further divisible into predisposing and exciting. Of the latter the more noteworthy are—the injudicious or improper employment of instruments to facilitate delivery; the careless use of manual force; clumsy manipulation in aiding the passage of the child through the os externum, and more particularly of the shoulders; sudden and violent expulsive action of the uterus before the external parts are properly dilated, or whilst the patient is in an unfavourable position for delivery, as standing, or when assistance is not at hand.

The latter combination of exciting causes depends on the state and position of the parent; others depend on the dimensions of the child, absolutely as well as relatively to the capaciousness and expansibility of the maternal outlet. Thus, among such causes, are included—unusual largeness of the whole child, or of its head only, as in hydrocephalus, the presence of twins, and an unnatural presentation.

Again, the course of the labour may be natural, the dimensions of the parts concerned in parturition sufficient, the bulk of the child unincreased, and the uterine contractions normal: and yet the perinæum may give way owing to an unnatural state of its tissues, either peculiar to it, or caused by too much meddling during the process of labour. Such predisposing conditions of the perinæum are—(1) an unnatural rigidity of its tissues, which are found hot, dry, thin, and unyielding; or, (2) a structural peculiarity in which the perinæum is thick, undilatable, and readily torn, a state usually accompanied by a

general flabbiness of the muscular tissue of the patient, and debility.

Or, with or without an exciting cause, the conformation of the perinæum and vaginal outlet, or that of the pelvis, or a misplaced uterus, or pelvic tumours, may predispose to, and indirectly cause laceration. Of such structural peculiarities I would particularly mention that form of the perinæum in which this part is extended so far, that it becomes distended and driven before the advancing head of the child like a bag, the os externum meanwhile remaining nearly quiescent; in other words, the propulsive efforts of the womb drive the child's head against the broad surface of the perinæum instead of towards the external outlet.

Further, when after the child's head is forced down upon the perinæum, the labour is prolonged considerably, whether from mismanagement or not, there is a great disposition to rupture on account of the long stretching of the tissues; so much so that if more active uterine contractions come on, or an attempt to deliver by instruments be made, the overstretched and weakened tissues rapidly give way. Lastly, in parturition, at a very early, or at a late age, for the first time, we have another predisposing cause of ruptured perinæum.

In thirty-one of the one hundred and twelve cases of rupture detailed in this chapter, instruments are recorded as having been employed to facilitate delivery, and as having more or less directly caused the injury. In two or three, indeed, the sudden onset of violent uterine contractions, after the application of the instrument, is stated to have been the more immediate cause of the accident, by the rapid propulsion of the child, together with the instrument, through the external parts. The vectis was the instrument employed in one instance; in all the others, except two, in which the instrument is mentioned, the forceps. In one of these two exceptional cases craniotomy was resorted to; and in the other, according to the patient's statement, a boot-hook was used, undoubtedly in the absence of proper instruments. In one case in which the forceps was applied, an eye of the child was destroyed by the instrument.

In all probability, instrumental means of delivery were em-

ployed in some other of the examples of ruptured perinæum recorded, but were overlooked in collecting their history, or lost sight of by the patients in narrating it.

In six women the cause was rapid delivery before aid could be obtained; and in two or three others it is noted that the sudden onset of violent uterine contractions after a tedious labour did the mischief.

Of the agency of an unnatural presentation and of an unusual bulk of the child, as causes of ruptured perinæum, we have several examples; of the former in seven, and of the latter in six instances. An abnormal condition of the perinæum and an undue constriction of the vaginal outlet are assigned as causes in certain instances; the latter particularly, in the remarkable example of perinæal perforation. Turning was resorted to in two patients, and at least contributed to the accident; whilst in two others this was due to improper dragging of the child through the pelvic outlet. Lastly, in two of the cases no assistance at all was at hand at the time of labour, and in as many as seven a midwife only was in attendance. This last number, however, is not strictly correct; for in some of the other cases in which instrumental aid was put into requisition by medical men, and produced the laceration, the patients had been previously attended by women, who had either mismanaged the labour, or allowed it to be prolonged so much, that the rupture of the overstretched and weakened tissues was in all probability well-nigh inevitable, notwithstanding the most skilful application of instruments.

As the question has been mooted how far ergot of rye is an indirect cause of laceration of the perinæum, I may state that that drug, injudiciously administered, may certainly be a cause of the accident, by inducing violent uterine contractions and a too rapid expulsion of the child. Other medicinal or physical agents, or the age, or various conditions of health of the mother, may interfere with parturition, and act as remote causes of rupture; the description of these, however, would involve details unsuitable to the present treatise, and they are fully considered in the standard works on obstetric medicine.

Prevention of Rupture.—There is considerable difference of

opinion amongst accoucheurs with respect to the management of the perinæum during the last stage of delivery. The old authors on midwifery all recommend supporting the perinæum with the hand alone, or with a napkin; others object to this plan, as causing a reflex nervous action from the perinæum to the uterus, whereby the latter is excited to greater expulsive efforts, and consequently to the exertion of greater tension on the perinæum. This objection, no doubt, in a great measure holds good; for it is certain that frequent interference to support or press against the perinæum, or to examine *per vaginam*, does keep up an injurious excitement of the uterus, and increase its expulsive efforts. Yet it is equally true that where the head is pressing downward and backward—*i.e.* on the rectum and perinæum—the hand should be steadily applied, so as to guide the head forwards under the arch of the pubes through the external parts.

Where rigidity of the perinæum opposes the advance of the child, various remedies have been proposed to overcome it, as bloodletting, tartar emetic, warm fomentations, and greasy substances; but since the introduction of chloroform* into practice I have never resorted to any of them, because I have found that in ten minutes, in the very worst cases, the parts have become dilatable when that agent is administered by inhalation.

In those instances of elongated perinæum in which the head distends that structure like a bag, and cannot be driven forward, it is necessary not only to support the perinæum with the greatest care, but also to introduce the thumb and forefinger of the right hand as far as the vertex, so as to be able to give a forward direction to the head, and to guide it through the external parts, and at the same time to protect the fourchette, where rupture is most apt to occur, from excessive pressure.

Where, lastly, the contractions of the uterus are so violent as to threaten precipitate delivery, the passages being unpre-

* I now recommend and use the preparation of my son (Mr. J. B. Brown, jun.), chloroetherine. It has all the effects of chloroform in allaying pain and relieving tension, without being capable of producing total unconsciousness.

pared, the uterine action must be restrained by the inhalation of chloroform, or, where this is contraindicated, by the administration of opium. Having these resources at hand, I consider bloodletting inadmissible, and tartar emetic unadvisable, as a means of reducing uterine power.

In cases where rupture seems inevitable during delivery, Dr. Blundell recommended and practised the plan of relieving the tension of the perinæum by a slight lateral or oblique incision during a pain; thus actually producing a laceration, but one of no moment, if it serve, as intended, to prevent the tear along the median line, where it naturally takes place, and proves of serious consequence. This plan I concur with, and would practise where chloroform failed, or could not be administered.

MM. Paul Dubois and Chailly-Honoré advocate an oblique incision of the vulva, towards the perinæum, about a third of an inch long, either to prevent altogether the rupture of that region when much distended, or, when the laceration is unavoidable, to favour it at a spot where it may produce the least mischief. The writers support their views by the history of successful cases (*Lancet*, vol. I., 1860).

M. Chailly-Honoré also places particular stress on duly supporting the perinæum during the delivery of the shoulders; stating, as his belief, that most lacerations occur at that time from the neglect of such support. In two of the cases hereafter recorded, the exit of the shoulders caused the rent; and so again it was the rough attempt to deliver the shoulders which, in M. Verhaeghe's third case, did the mischief. This reference to experience does not, indeed, confirm Chailly-Honoré's opinion, but it demonstrates the importance of giving due assistance, at this stage of delivery, by showing that laceration is then a not unusual result. It is again an obvious rule to induce women to moderate their efforts at expulsion during the passage of the head of the child.

I need not extend my observations on the means of obviating the causes of laceration, since they are fully treated of in most books on the art of midwifery.

Consequences of Rupture.—The consequences entailed by a

laceration of the perinæum will depend on its extent. They may be slight and temporary, or so severe as to render life miserable. The latter only require to be detailed, and to any one who attentively considers the relative anatomy and functions of the parts, they will seem very obvious. The triangular chasm of which the perinæum forms the floor, has the rectum, tending downwards and backwards, as its posterior wall, and the vagina, passing downwards and forwards, as its anterior; consequently, when the two lips of a ruptured perinæum are drawn asunder, the prominent convexity of the posterior wall of the vagina is brought into view with its transverse rugæ; and, when the injury is of old date, this is much hypertrophied and hardened. Again, the laceration may have penetrated so as to lay open the vagina, tearing asunder the sphincter ani and recto-vaginal septum, thus converting the two canals into one.

Acting as the perinæum does in antagonism to the downward pressure of the diaphragm on the abdominal and pelvic viscera, its laceration deprives the latter of their natural support; hence the proclivity to prolapse of the uterus, of the bladder, and of the rectum, and their attendant symptoms—dragging pains from the loins, interference with the functions of the bladder, leucorrhœal discharges, incapability of exertion, even of ordinary exercise, inability to go up or down stairs. Again, when the sphincters are torn, their functions are lost, and the fæces and intestinal gases pass uncontrolled; hardened fæces may certainly be in a measure retained, but when the evacuations are at all fluid, they will usually escape quite involuntarily, and penetrate into the vagina and adjoining parts, and the afflicted person is then necessarily confined to her house or room, excluded from all society, and her existence rendered miserable. Nay, the consequences of the lesion may even induce disgust on the part of the husband towards his unfortunate wife, and render her companionship odious. No patients, indeed, ought to be more the objects of our profound commiseration, and of our liveliest sympathy. If any condition could incite us to devise remedies, it would surely be this, in which the patient may have all the bodily and mental

functions in health and vigour, but be by this accident so cut off from all the pleasures and comforts of existence, that death seems preferable to life, and any means appear justifiable and are sought for, which promise temporary quiet or oblivion.

Difficulties of Treatment.—The difficulties to be overcome in the treatment of laceration of the perinæum were, up to the date of publication of the first edition of this work, generally regarded as almost insurmountable. This impression led to the common practice of leaving the injury to nature; and not only so, but the frequent failure of operative proceedings induced many eminent surgeons to oppose altogether their adoption. Nay, more, as Dr. Barnes writes (*Lancet,* vol. II., 1849), "an eminent obstetric author has sought to console his brethren under the disappointment of baffled art, by assuring them that it is better not to cure the whole laceration." I have heard a physician-accoucheur, whose obstetric works are well known, assert that, through a long life, he has never seen a case bad enough to require an operation. And I regret to say he is not the only practitioner who has felt called upon to ignore and decry a proceeding which has been the means of restoring to soundness and health several scores of females, who, prior to its performance, were among the most wretched sufferers. Such opposition is unaccountable, save on the supposition that its authors are insensible to evidence, or determined not to receive it.

The situation of the wound, its nature, the structure of the parts involved, and their relations; the time which may have elapsed since its occurrence; the retraction that usually occurs; the difficulty of effecting apposition for a sufficient length of time to insure union; the irritation, inflammation, and even sloughing, apt to occur in some constitutions; the greater tendency to the growth of mucous membrane than to union by the first intention, or even by granulation; and the difficulty of the management of the bowels and bladder during the healing process, present so many and great obstacles in the way of success in an endeavour to restore the integrity of the parts by any surgical operation, that the most skilful attempts have often been frustrated, and many bad cases

abandoned as hopeless. However, I have continued for several years to demonstrate, by the records of ample experience, that none of these impediments or difficulties are insurmountable, but that, on the contrary, the operation required for the closure of lacerations of the perinæum is actually a simple one, and may be readily performed. At the present day there are many surgeons who can bear me out in this assertion, either having witnessed my practice, or having, by the instruction conveyed in the previous edition of this book, themselves performed the operation with success. On this matter I may refer to the records of the operation in professional journals, showing its wide adoption by surgeons of public institutions, as well as by other practitioners. Dr. Daniel Parker, of Nova Scotia; Dr. Bozeman, of New Orleans; Dr. Keiller, of Edinburgh; Mr. Greaves, of Manchester; Dr. Tracy and Dr. Wilkins, of Melbourne; and Mr. Lane, of St. Mary's Hospital, in the Metropolis, and others, can testify to the value of the operative proceedings described in this and the previous edition of this work. Indeed, at the present time there is scarcely a hospital in this city, or any provincial town, or even in any foreign city or town, in which this operation is not performed, generally after my plan, sometimes with slight and unimportant variations.

Surgical History of the Subject.

I cannot profess to write a complete history of the various attempts which have been made in past periods to remedy the lesion under notice, but will content myself with an outline of the principal plans devised that have come within the compass of my own reading and observation. To commence, I may remark that, among ancient medical writers, those who have mentioned the injury, treat of it as irremediable.

Celsus speaks of lacerations about the vulva, and of recto-vaginal fistula, but does not describe the severe form of ruptured perinæum. For the relief of those injuries which he mentions, he recommends absolute rest, the tying of the legs together, and other general measures to favour the natural dis-

position to heal. And with reference to all but comparatively recent days, it may be stated generally that no operation was attempted to bring about the union of the torn parts.

German Writers.—Excepting Dieffenbach, German surgeons appear to have studied the subject but little. It has certainly been often enough the theme of dissertations or theses of students proceeding to their degrees: but, so far as I can discover, has been rarely a matter of practical research by those so situated as to be able to contribute to our knowledge. Indeed—and the remark applies not to Germany only, but also to France and England—neither the anatomy nor physiology of the perinæum has been sufficiently attended to in its bearings on the accident in question: how accurately soever they may have been studied by surgeons with reference to the operation of lithotomy.

Dieffenbach's Rules of Practice.—It is not till 1829, when Dieffenbach directed his attention to the matter, that, in Germany, we meet with any originality in the treatises on, or in the treatment of, rupture of the perinæum. This eminent surgeon, after a most deliberate and careful investigation, concluded that sutures alone could not be relied upon to cure perinæal laceration; and, among others, he laid down the following rules of practice:—1. That prior to the operation the bowels should be well cleared by purgatives and enemata. 2. That, despite the swollen state of the torn parts, the presence of discharges, and the debility of the patient after delivery, the operation should be performed as quickly as possible after the accident, since those evils would be more than counterbalanced by others consequent on delay, as suppuration, sloughing and loss of substance, and by the yet later results—displacement of the uterus and associated organs. 3. That no rupture, however slight, should be left to nature: for the healing would be superficial, and the vulva enlarged, proportionably to the extent of laceration, by the retraction of the labia towards the anus, the support of the pelvic viscera being also thereby diminished. 4. That three to five sutures are necessary, according to the severity of the accident; the insertions of the sutures commencing at the anus, and, where

the sphincter is torn, the first being applied at its angle. 5. That where the perinæum is lax, either the twisted or the interrupted suture may be used; and when the vagina is implicated, its fissure should be first brought together; also that where the perinæum is tense and rigid, an elliptic incision should be made on either side the median line, and equidistant from it. 6. That in those cases where there has been a considerable loss of substance, the transplantation of an adjoining piece of integument may be resorted to—*i.e.* a plastic operation may be attempted. 7. That in cases of old standing the edges of the fissure require to be pared before being brought into apposition by sutures. 8. That after the operation the bowels should be bound by the administration of opium, in doses of one-third of a grain twice a day; and that the urine should be regularly withdrawn by the catheter.

Such are the maxims of Dieffenbach. Of these the most original is the making incisions where the tension of the perinæum is considerable; among them, too, is one which I have much insisted on, and which, moreover, is opposed to ordinary practice—viz., confining the bowels by opium after the completion of the operation. With respect to the incisions advised by Dieffenbach, they are spoken of as penetrating only the integument and superficial fascia on either side the wound, in order to obviate the drag upon the sutures by any movements. He seems to have overlooked the divergent action of the sphincter ani, and did not attempt to remove it by a division of the fibres of that muscle. Moreover, it was only latterly that this eminent surgeon recognized and advocated recourse to operation immediately on the occurrence of the accident.

Chelius gives a brief exposition of the operative proceedings pursued in the treatment of ruptured perinæum, but offers nothing original. He, and Zung, advocate the common practice of keeping up a looseness of the bowels during the process of healing. Professor Roser, in a paper in Schmidt's "Jahrbücher" for the year 1853, recommends hare-lip (twisted) sutures to bring together the edges, leaving them undisturbed for three or four weeks, notwithstanding any suppuration. Other writers in Germany, with whose works

I am personally unacquainted, have written on rupture of the perinæum; among them Menzel, Osiander, Wutzer, and Langenbeck. The plan of the last-named surgeon it is the object of a memoir by M. Verhaeghe, of Ostend (*Mémoire sur un nouveau procédé opératoire pour la Guérison des Ruptures complètes du Périnée.* Bruxelles, 1852), to make known; but I shall defer describing the method at present. To that memoir I am indebted for the following notice of German opinions.

The interrupted suture is that generally recommended as the chief, and the twisted suture as accessory, to keep the integument and subjacent areolar tissue in accurate apposition by preventing inversion or eversion. M. Wutzer employs long curved needles, about 3½ inches in length, which he runs through the entire thickness of the lips of the wound. These needles M. Verhaeghe tells us he has himself employed with great advantage. Wutzer and others postpone operating till the cessation of lactation; but Dieffenbach, Jungmann, and Langenbeck advise immediate operation.

French Writers.—The French literature on the subject is more extensive than the German. Ambrose Paré, the father of modern surgery, pointed out the applicability of sutures to the accident. Mauriceau likewise wrote in favour of this method of procedure. But the first authentic instance we have of the suture being actually employed is related by Guillemeau, a pupil of Ambrose Paré; he used the interrupted suture, and met with success. This plan did not, however, become a recognized mode of treatment until the time of Saucerotte and La Motte, at the close of the last century. Noël and Saucerotte used the twisted suture, and each succeeded in a single case.

Although admitted by the majority to be the most effective and certain means of securing union in perinæal rupture, yet the suture has been condemned as useless, and even as mischievous, by not a few French surgeons and accoucheurs. Deuleurye (*Traité des Accouchements*) says, such solutions of continuity are to be healed without sutures. Puzos agrees with him; likewise Outrepont and others. Boyer even con-

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demns attempts to heal the laceration. M. Duparcque (*Histoire complète des Ruptures et des Déchirures de l'Utérus, du Vagin, et du Périnée.* Paris, 1836), who has devoted an entire treatise to ruptures of the female generative organs and perinæum, concludes that sutures are unnecessary and undesirable, and expresses his reliance on the old general rules of position, absolute quiet, &c.

On the other side, as advocates of operation by suture, we have Saucerotte, La Motte, the MM. Dubois, and that most successful and talented surgeon, M. Roux. This last-named gentleman succeeded in curing four out of the first five cases he attempted. He employed the quill-suture with an accessory twisted suture at one or two points. In one instance he kept the bowels confined for twenty-two days, but he does not point out such a proceeding as a rule of practice: not generally, indeed, resorting to it himself. He also practised Dieffenbach's incisions, but does not appear to have recognized the utility of dividing the sphincter ani to obviate retraction of the edges of the wound. Moreover, M. Roux thinks it best to defer operating till suckling is given up. In this opinion he is supported by Danyan. Madame Boivin (*Mémoire de l'Art des Accouchements.* Paris, 1836) is silent on the subject.

M. Velpeau (*L'Art des Accouchements*) has a chapter on rupture of the perinæum, and supplies a good review of its literature, but presents no original matter. He appears to recommend sutures, and, where tension is great, Dieffenbach's incisions.

In a patient with rupture of the perinæum, involving also the vagina, Saucerotte, upon repeating an operation, divided the sphincter ani. No reason, however, is assigned for so doing, nor is the direction of the incisions mentioned. In fact, he evidently did not recognize the proceeding as an essential part of the operation.

At the date of publication of the first edition of this book, in 1854, the best account I had met with of ruptured perinæum and its treatment was that written by M. Verhaeghe, surgeon of the Civil Hospital, Ostend, to make public the views of M. Langenbeck, of Berlin, and the particular

operation this distinguished surgeon had devised. In many particulars the opinions and practice advocated coincided with my own; but it was curious to notice that, though my essay on Ruptured Perinæum had been for some time published, and was indeed referred to in the pages of his memoir by M. Verhaeghe, as known to him, yet many of those very coincident opinions were referred to as peculiar to himself and the mode of treatment he advocated.

The operation in question was named "perinæo-synthesis," and was divided into several stages—viz., 1. Vivisection of the free border or spur (*éperon*) of the recto-vaginal septum. 2. The splitting (*dédoublement*) of the septum, and the formation of a flap destined to form, in the new perinæum, the anterior side of the triangular space formed by the two canals, vagina and rectum, with the perinæum as the base. 3. The vivisection of the two lips of the laceration. 4. The insertion of the sutures. 5. The two semilunar incisions advised by Dieffenbach.

After the edges are pared, tension of the septum is maintained by the two fingers in the rectum, and then a nearly semicircular incision is made on the anterior surface of the latter, and two or three lines from its inferior border. The upper lip of this incision is next seized by forceps and separated by careful dissection from the deep layer for the space of six lines in length, and over the entire breadth of the septum. Thus two laminæ are formed: one anterior or vaginal, the other, posterior or rectal; the latter destined to continue *in situ* to close the rectum, the former to be drawn forward and fixed by its angles at the anterior part of the new perinæum on each side. An inclined plane is in this way constructed, directed from behind forwards, intended to act as a sort of valve to the new perinæum, as the epiglottis does to the glottis; that is to say, prevent the fluids of the vagina coming in contact with the newly united parts.

The vivisection of the two sides of the laceration is the next step. To effect this, a quadrilateral space, about an inch and a half long, by three-quarters of an inch wide, is circumscribed by the scalpel, from the vulva towards the anus, the mucous

membrane of the vagina above, and the skin below, being avoided. In front the incision must not pass beyond, nor yet stop short of, the point where the posterior commissure of the vulva naturally exists; behind, it should connect itself with the corresponding side of the pared edges of the spur: no portion not pared should exist between them.

Bleeding having ceased, the next business is the introduction of the sutures. Three or four sutures are necessary, the one intended to close the rectum is the first introduced. M. Wutzer's long and curved needles are preferred for this part of the operation.

To fix the lamina derived from the septum, left until the present at the anterior part, small curved needles with a single thread, and two or three sutures on each side, suffice. This flap is now seen to act as a vaulted roof to the parts, obliging the secretions to flow towards the vulva without infiltrating in the interstices of the united fissure. In other words, it reconstitutes the anterior wall of the triangular space seen in the normal perinæum.

The sutures of the perinæum are now drawn tight, and it is as well, perhaps, to introduce a twisted suture between the first and second sutures from the vulva. Lastly, the incisions of Dieffenbach may be made, as they serve materially to obviate dragging on the united parts by movements.

Water-dressing is advised, and a (Hooper's) water-cushion, of a horse-shoe shape, for the patient to lie upon.

The after-treatment consists of the constant application of compresses dipped in water; frequent injections of infusion of camomile into the vagina, and catheterism whenever a desire to pass water is felt. Attention to this last is most important, and requires to be continued until union is perfect.

The patient is to be placed on low diet; constipation to be secured by opium, and kept up until at least one or two days after the removal of the last suture. After three days the sutures may, one or other, be withdrawn, and lint, dipped in goulard-water, applied. After the first stool, enemata may be used, and from this date a more substantial and plentiful diet is allowed.

Such is a condensed account of Langenbeck's method of treatment, as set forth by M. Verhaeghe. It evidences great attention to the subject, and in some particulars, especially in the production of constipation after the operation, by opium, resembles the plan advocated by myself. However, the writer tells us that this very point of practice, constipating the bowels, has not been thought of in England.

Langenbeck's operation differs from mine, primarily and essentially, in omitting the division of the sphincter ani; and in an inferior degree, in forming a flap from the septum or spur of the vagina, intended to prevent infiltration of vaginal discharges between the conjoined parts. This latter proceeding I have not found necessary, and it complicates and adds to the difficulty of the operation. I add an analysis of the three cases illustrating M. Langenbeck's plan.

Cases of M. Verhaeghe:—Case I. A woman, aged 24. The laceration was complete, extending to the anus, and for about four lines into the recto-vaginal septum. It occurred in her first and only labour, two and a half years previously; the labour was long and painful, and the midwife used much force with her hands to deliver the head of the child. Intestinal gases escaped involuntarily at all times, and also the fæces when soft. The bodily health was good, and menstruation regular.

Prior to the operation, hip-baths, simple vaginal injections, purgatives, and enemata were used, and the bladder emptied. The patient was brought under the influence of chloroform; and immediately after the operation a dose of opium was given, and repeated twice before night. The general after-treatment above described was pursued.

The next day three doses of opium were administered. The patient's state was satisfactory. On the 24th, a tolerably abundant, blackish, sanguineous vaginal discharge occurred, like a return of the menses, though these had ceased only ten days before the operation on the 21st. The central portion, four or five lines in length, was open, and there was suppuration. Pledgets of lint soaked in goulard-water were applied. The opium and low diet continued. 29th: The posterior and last suture, which united the rectum, came away. Granulations were closing up the central fissure. 30th: The menstrual flow ceased. The granulations were touched with nitrate of silver. October 2nd: The first desire of defæcation occurred (*i.e.* twelve days from the date of operation). Three enemata of infusion of linseed were injected. The patient felt able to control the evacuation both of fæcal matters and of wind. From this day the nourishment was increased and improved in character. October 4th: She got up for the first time, and walked gently. The lateral incisions were now healed. She quitted the hospital cured at the end of the month.

Case II. A woman, æt. 24, suffered from complete rupture of the perinæum, caused by the application of the forceps in her first confinement five months before; the sphincter ani was entirely divided; the inferior border of the recto-vaginal septum, forming a sort of spur (*éperon*), was the only

separation between the vagina and rectum. Even when the fæces were hard, they could be retained only a short while. The operation was performed on the 21st December. Besides the suture to close the rectal fissure, four other deep interrupted sutures were introduced. Three other sutures made fast the flap of the septum on each side, and one twisted suture was placed between the first and second of the interrupted. The incisions of Dieffenbach terminated the operation, which had lasted three-quarters of an hour, the patient during that time having been kept insensible by chloroform. A half-grain of opium was given at once, and twice repeated before night. The catheter was introduced twice daily, and frequent vaginal injections made. The most restricted diet was ordered—only barley-water and lemonade. 24th: Union seemed perfect. 27th: The remaining threads removed. On the 30th, the first desire to evacuate the bowels occurred—*i.e.* ten days after the operation. Two injections were given, and much hardened fæcal matter discharged. Notwithstanding every care, the wound opened about half an inch, posteriorly; fortunately, the anterior half held good. Jan. 1st: After a laxative by the mouth, a loose evacuation followed, which the patient was enabled to retain some time. Granulation in the re-opened portion proceeded slowly; to stimulate it nitrate of silver was frequently applied. This closure by granulation, however, and the consequent contraction of tissue, had the effect of shortening the perinæum. On the 27th she quitted the hospital quite cured.

Case III. A woman, æt. 22, suffered complete laceration of the perinæum in her second labour, six months ago. The injury resulted from the efforts of the midwife to disengage the shoulders by introducing her hand into the vagina. The delivery was followed by puerperal fever, and by an abundant suppuration along the edges of the laceration. The recto-vaginal septum was laid open for about three lines; the incontinence of fæcal matters complete; the bodily health good.

After the preliminary baths, injections, and aperients, the operation was performed on the 17th March. The parts were highly vascular, and bled largely, retarding the operation, and requiring torsion of the small vessels. Four sutures were placed; one to close the rectum, and the other three to form the new perinæum. The flap taken from the septum had been previously fixed by two sutures on each side. The Dieffenbach incisions bled in an unusual manner.

Cold-water dressing was used, and cold injections of infusion of camomile every three hours. The knees were kept together by a bandage. The oozing of blood, chiefly from the lateral incisions, did not cease till near evening. She progressed favourably. On the 24th menstruation occurred, and lasted till the 27th. 26th: Catheterism omitted from this day; but patient made to pass the urine as she rested on her hands and knees, and the parts carefully washed afterwards. The opium was discontinued. It was not till the 28th that a copious evacuation was obtained; three enemata on the previous day having almost failed to act. After this an enema was ordered every morning, and vaginal injections twice a day. 30th: The small sutures confining the flap of the septum were not removed till to-day. A first attempt has been made to walk. The new perinæum is a good inch long, and very firm.

In concluding, M. Verhaeghe calls attention to the great importance of minute attention to the details of the after-treatment, upon which, he truly observes, the success of the operation will depend.

Thus far I gave, in my first edition, an outline of the French

authors on Perinæal Laceration. To make this more complete I have sought among the subsequent productions of the French press for other notices of the subject, and with the following results.

Bernard and Huette, who wrote in 1855, recommended Roux's quilled sutures, and, if needed, Dieffenbach's cutaneous incisions. They also advocate the non-removal of the sutures until complete cicatrization had taken place, and they treat union by the first intention as an event not to be counted upon. Guérin and Sédillot, who both allude to the subject in their surgical treatises, published in 1855, content themselves by recording the propositions and practice of Roux, Dieffenbach, Vidal-de-Cassis, Montaigne, and Langenbeck. Dugué (*Des Déchirures du Périnée, &c.* Paris, 1856. Thèse) has the following remarks:—"When the sphincter and recto-vaginal septum are involved, the edges are to be pared, the sphincter divided, and three quill sutures employed." The success of the operation (he adds) will depend entirely upon the attention bestowed on the after-treatment of the case; and he then does me the honour to remark, "that the mode of conducting this has been laid down with much precision by Mr. Brown." The deep sutures M. Dugué proposes to leave for four or five days, and the superficial for about a week; and the bowels he rightly directs to be kept confined for ten or twelve days.

M. Nélaton, in his recent surgical treatise (1859), distinguishes three varieties of ruptured perinæum, as complete, incomplete, and central. The last form, he says, heals by position alone; and of the others also his opinion seems to be that they may be left to the natural healing powers, care only being taken to keep the torn edges in contact by attending to the position of the patient. However, he describes the operative proceedings of Roux, Dieffenbach, Langenbeck, and Cloquet, as at times probably desirable.

American Writer.—Gross, whose *System of Surgery*, published in 1859, is the chief American text-book on the subject, recommends operation immediately after the accident, and in old cases directs that where the rent extends into the recto-vaginal septum, its edges must be pared and then carefully

fastened together by two stitches. This done, the perinæal fissure is next to be closed by three sutures, and the sphincter divided, if there be much tension; but this last proceeding, he states, is seldom required. The bowels are not to be allowed to be moved for ten or twelve days, and the sutures not to be disturbed for a fortnight. To illustrate the operation he reproduces the diagram given in my book.

English Writers.—Among English surgeons and accoucheurs rupture of the perinæum has engaged but little attention. We have no English treatise on the subject; and it is, moreover, strange to observe how often a lesion, so important in itself and in its consequences, and not so uncommon in its occurrence, has been almost or altogether passed by unnoticed in works on midwifery and surgery, and even in those of standard reputation. For example, I find no mention of it in S. Cooper's elaborate *Surgical Dictionary;* none in Pirrie's *Treatise on Surgery;* no article upon it in Dr. F. Churchill's *Operative Midwifery;* nor in Burns' *Principles of Midwifery.* Again, where not altogether omitted, it has been very superficially considered; so much so, that no sufficient instruction is conveyed to the practitioner having the treatment of a case, and with no experienced surgeon at hand to advise with.

In my search after recorded cases of ruptured perinæum, and for opinions respecting its treatment, I have met with several notices scattered in books and journals, to which I will briefly advert.

Smellie, in his book on midwifery (*A Treatise on the Theory and Practice of Midwifery*), relates several cases of laceration; but all the severe ones were either left to nature or treated unsuccessfully. Dr. Aitken (*Principles of Midwifery,* 1785) is a determined opponent to operation, especially by suture, and would trust to the expedients practised of old, such as tying the legs together, attention to cleanliness, perfect rest, the withdrawal of the urine, the use of enemata, &c. Dr. Blundell (*Lectures on Midwifery*) says: "With the greatest care and nicest management, these cases are seldom remedied by operation." He mentions cases of old and partial laceration operated on successfully by Mr. Rowley, which, he says,

"did great credit to his surgery." Denman (*Practice of Midwifery*) presents a good description of rupture of the perinæum, its causes and prevention, but points out no plan for its cure. Dr. David Davis (*Principles and Practice of Midwifery*), in his chapter on ruptured perinæum, appears averse to operative proceedings, because, he states, "they much more frequently fail, ... leaving the intermediate gap in a worse state than before;" and he remarks "that it is a damage seldom benefited by any of the modes of treatment hitherto resorted to for that purpose."

Mr. South, in his translation of Chelius (*System of Surgery*), appends to the tolerably good account of the subject by the German author, some valuable notes, and quotes a successful operation by Mr. Davidson, reported in the *Lancet* (vol. II., 1838-39, p. 225), in which the quill suture was employed, and constipation kept up for seventeen days. Mr. South, however, favours the common plan of keeping the bowels loose after the operation.

Dr. Ramsbotham (*Principles of Midwifery*) speaks of laceration of the perinæum as an accident of labour, but mentions no remedy for it. Miller (*Principles of Surgery*) devotes only ten lines to the subject, and advises any operation being delayed for some time after parturition.

Dr. Cockle (*On Laceration of the Perinæum during Labour*, 1853) recommends a chance being given of natural union by the first intention; and remarks that, "as a general rule, sutures are to be considered as inadmissible, at all events in the early stage."

Thus, on the whole, the prevalent opinion in England appears to have been that, from the uncertain and most frequently unsuccessful results of the operations devised, and from the apparently insuperable difficulties to be contended with, it was better merely to aid the efforts of nature in narrowing the wound, and in lessening the evils attendant on it.

This last paragraph was penned with particular reference to the opinions of British surgeons at the date of the first edition of this treatise (1854). It did not apply with so much

force in 1861, when the second edition was published, since many surgeons in this country had then approved and carried out the operation for ruptured perinæum; but there were still eminent men who at least hesitated to adopt it save as an exceptional expedient. Thus, Mr. Skey (*Operative Surgery*, 1858) writes to the effect, that operative surgery has too often failed in the attempt to restore the integrity of the divided structures, to justify a hope of success, except under circumstances of peculiar care on the part of the operator, and the most favourable conditions of health as regards the patient, and that it is not desirable to perform an operation during lactation. However, he proceeds to describe the operation pretty much after my plan. Respecting the lateral incisions, he agrees with me that they are of no advantage; but on the after-treatment we differ considerably, for he says that it is necessary to keep up constipation for only a day, or a day and a half, and adds that, "of the two conditions, a state of relaxed bowels throughout the treatment is preferable to constipation, for nothing can withstand a violent expulsive effort of the abdominal muscles and rectum conjointly; but the latter condition is far more favourable to union."

Mr. Erichsen (*Science of Surgery*, 1860) recommended the same proceeding as I do for lacerations not extending through the sphincter—viz., to pare the edges, and to keep them in apposition by two quilled sutures.

Since the publication of the last edition of this work, in 1861, the surgical text-books, which have been published in this country and on the Continent, have given due prominence to the treatment of ruptured perinæum.

In the latest edition of Vidal's *Traité de Pathologie Externe et de Médecine Opératoire*, edited by Dr. Fano (1860), the methods of Dieffenbach and Roux are described, and the treatment of recent cases by spring clasps (*serres-fines*) is recommended.

M. Nélaton, when he visited this country, in 1862, honoured my practice by witnessing me operate in several cases. He expressed his entire approval of the plan I followed, and proposed to modify his own, so as to bring it in accordance with it.

M. Jobert (de Lamballe), in his treatise *De la Réunion en Chirurgie* (1864), has devoted a chapter to the consideration of the treatment of ruptured perinæum. The only novelty he suggests is the adoption of a form of suture, which he designates *serpentine*. He states that the interrupted, twisted, and quilled sutures in common use do not, although all have been adopted successfully, fulfil completely the requirements of the operation. He recommends the use of silk and of curved needles of a mean size. The needle is to be plunged into the left superior angle of the perinæum, from without inwards; then the instrument is to be passed anew, at one centimètre's depth, in the thickness of the septum. This is to be repeated, five or six times in succession, to the other angle, which is to be included in the last loop of the series. The sutures are next to be fastened, by double knots, along the median line of the perinæum, and they may be removed on the seventh day.

Of English writers, the late Professor Miller (*System of Surgery*, 1864) gave a brief, although still imperfect, summary of the surgical treatment.

Mr. Jonathan Hutchinson, the author of the article on the subject in Mr. Holme's *System of Surgery*, ignores almost entirely the work of previous operators, states that there are few data to estimate the ultimate benefits of surgical treatment, and confines himself to the results of his own experience, which was limited to ten cases! This in the most voluminous work on surgery of our own day, and one professing to be systematic!

Mr. Erichsen, in the last edition of his classical work on surgery (1864), describes and recommends my plan of procedure.

Professor Graily Hewitt (*The Diagnosis and Treatment of Diseases of Women*, 1863) also adopts my method, and on one important point he remarks: "There has been some question as to the proper period for operating in cases of ruptured perinæum, that is to say, as to whether an operation should be performed immediately after the injury has been inflicted: it has been considered by some authorities that the operation

should be deferred until the patient has recovered from the effects of labour. Mr. Brown argues, and, as it appears to me, conclusively, in favour of an immediate operation. In favour of the latter conclusion, we have the circumstance that the edges are already raw, and only require to be brought together in order that they may have the chance of uniting by the first intention: the operation is thus simplified. If the operation be not, however, performed within a few hours of the occurrence of the rupture, it appears desirable to wait until the lochial discharge has entirely ceased" (p. 491).

Cases on Record.

Of the instances of operation narrated in the medical journals, I will refer first to that described by Mr. Joseph Rogers (*Lancet*, vol. I., 1849, p. 555). The laceration did not in his case involve the sphincter, but extended round the extremity of the rectum quite to the posterior part. The edges of the wound had nearly cicatrized throughout. In his first attempt, Mr. Rogers used two stitches (interrupted sutures); but these having ulcerated through, the operation was repeated, and the edges placed in perfect apposition by hare-lip pins, secured by the twisted suture. After the operation, the patient was interdicted nearly all food for six days, and had her bowels kept bound by opiates. At the end of seventeen days complete union had taken place; the period, however, having been prolonged by obstinacy on the part of the patient.

On this case, Dr. Robert Barnes has offered some remarks (*Lancet*, vol. II., 1849). He writes: "I believe that no amount of skill and precaution will justify the surgeon, in the majority of cases, in looking for perfect union by means of any of the sutures in common use." He then proceeds to recommend the *bead-suture* devised by Mr. Charles Brooke, as obviating all the objections raised against operation by suture. He supports his recommendation by reference to a case operated on by Mr. Brooke, under very unfavourable circumstances, yet with complete success.

Mr. Higginbottom, of Nottingham, briefly relates (*Lancet*,

vol. II., 1849, p. 661) a case of laceration of the perinæum, extending through the sphincter ani, which was "directly united by the interrupted suture in two places, and the nitrate of silver applied to the skin on each side, close to the line of the wound, and left without any other dressing." At the end of the second day the bowels were opened by castor-oil, and on the third day the sutures were removed. "The wound united by the first intention; the eschar surrounding the laceration made by the caustic had the power of fixing the parts as if adhesive plaster had been applied." This treatment was carried out thirteen years prior to the published account; and during that lapse of time the patient had suffered no inconvenience, and had borne nine children without any recurrence of the laceration.

In the same volume of the *Lancet* (p. 672) is the report of a case treated by Mr. Holt at the Westminster Hospital. The rupture was of two months' standing, deep, and ragged, "extending from the lower portion of the vagina to the upper part of the anus." The edges having been pared, their contact was secured by "three double sutures passed through the whole thickness, at about half an inch from the edge. A piece of small gum-elastic bougie was then placed on either side; one piece through the loop formed by the double thread, and the ends of the ligature tied over the other." Eight days after, the sutures were removed, and the bowels, hitherto confined, relieved by castor-oil. In about four weeks union was complete.

In the *Lancet* (vol. II., 1850, p. 93), two cases occurring at King's College Hospital, under the care of Mr. (now Sir Wm.) Fergusson, are briefly recorded. In some preliminary remarks, it is said (apparently on the authority of Mr. Fergusson) that "it is better to wait, before any surgical means be attempted, until the primary inflammation has subsided." In both cases the interrupted suture was employed; the distinguished operator stating his opinion to be that the objections to it are removable by precautionary measures, of which the most important, as illustrated in the cases cited, are the parallel incisions in the long diameter of the perinæum, as proposed by Dieffenbach.

In the first case, the bowels were kept regularly open by enemata; but in the second, they were kept confined six days after the completion of the operation. The perinæal wound was entirely and accurately closed within twenty-seven days after the insertion of the sutures, but a very small communication existed between the vagina and rectum, so unimportant, however, that Mr. Fergusson declined resorting even to cauterization.

Mr. Arnott, of the Middlesex Hospital, has operated successfully for laceration of the perinæum, but has published no detail of his cases; and without doubt many successful operations remain unrecorded, or are at least unknown to me.

Dr. Lever and Mr. Hilton's Operation.—The volume of *Guy's Hospital Reports* for 1853 (vol. VIII., part II., p. 401) contained an essay, by Dr. Lever, on Laceration of the Perinæum, describing two cases wherein the coccygeal attachments of the external sphincter and levatores ani were divided by a subcutaneous incision.

In the first case, "the laceration extended through the perinæum, so that the fæces passed involuntarily." The operation took place on the 26th August; on the 1st September, the patient is reported to have then had "command of the rectum; but she felt a bearing-down pain after standing or sitting; and on the 7th "there was a continuous surface of mucous membrane from the sphincter to the vagina." "This patient, when last seen, two and a half years after the operation, had lost the pain and bearing-down, and had full command of the bowels, except occasionally, when the fæces were very fluid."

The second case, of nine years' standing, was complicated with procidentia uteri and leucorrhœa, whilst a considerable portion of the rectum protruded through the anal opening, the mucous membrane being intensely injected with blood, and very tender.

"She complained of constant burning pain in the rectum, with inability to retain the fæces if the stools were fluid. . . . This woman was seen more than three years after she left the hospital, and stated that there was no descent either of the

uterus or rectum, but she was compelled to be attentive to the state of her bowels."

Mr. Hilton operated in each instance, and thus details his reasons for dividing the coccygeal attachments of the external sphincter and levatores ani:—"Remembering that the levatores ani have one firm and fixed attachment to bone near the arch of the pubes, and another at the coccyx, and that the external sphincter ani might be regarded anatomically nearly in the same light in relation to its effects upon the injury to the perinæum, and bearing in mind that all muscles contract towards their more fixed point, it occurred to me,—that by disengaging the coccygeal attachments of the levatores ani, I might allow them to retract the anal aperture and adjacent structures in a direction towards the pubes, as it were, to bury the perinæal injury deeply in the pelvis, thus enabling the lower fibres of those muscles to assume the office of a sphincter to the lacerated opening, by approximating the edges of it, and drawing it upwards towards the pubic arch." Also, "that by separating the coccygeal fixed point of the sphincter ani, I should necessarily change the direction of its contractile power from the coccyx towards the vagina, and thence to the pubes; this I hoped would help to occlude the lacerated opening between the vagina and rectum. Whether I had reasoned rightly or not, the results were as satisfactory, and indeed more so, than I had anticipated. It seemed to myself, that two ulterior purposes might be held in view by such an operation; the first was to ascertain how much of complete relief could be afforded by an operation which promised to be altogether free from both danger and the severity of the ordinary operation for such cases; and secondly, should no important immediate benefit be derived, it would certainly tend to the advantage of the patient by putting the parts into a better state (by relaxing them) for the easy and perfect accomplishment of the usual but more formidable operation of paring the edges of the lacerated wound, and maintaining them in contact for a time by sutures."

From the last clause especially, but also from the general line of argument, Mr. Hilton seems to have apprehended the

importance of annihilating traction of the fissure by severance of the muscles; yet I cannot commend the utility of the operative measures his anatomical reasonings suggested. At the best those measures answered very indifferently:—the fissure remained (not so widely gaping, it may be) a source of annoyance and discomfort; and the control over the dejections continued imperfect and a necessary cause of misery. The operation may indeed appear less "formidable" than that of paring and stitching the edges together, but the end gained is trifling, and not to be weighed against complete cure, which the plan I pursue almost certainly promises. I cannot believe Mr. Hilton will have many imitators, nor that he and Dr. Lever were themselves much in love with the operation, as it has never since been repeated.

Mr. Bryant (*Guy's Hospital Reports*, vol. XI., 1865) records cases, and discusses the method of operation; and Mr. James Lane has given reports of two cases in the *Lancet* for the 9th September, 1865. Mr. Lane states that he believes that he has operated during the last five years on thirty cases of ruptured perinæum of every degree of severity. He used wire sutures and perforated ivory bars, and had not failed to obtain complete union in a single instance.

The Operation.

It now remains for me to state my own views, and to detail those operative proceedings which, on an examination of the deficiencies of other plans, I have been led to adopt, and which an ample experience, hereafter detailed, has convinced me to be the best.

The first of the four forms of rupture which I have enumerated (p. 5), and in which the rent extends to only an inch or less, requires, as already stated, no special treatment, at least of an operative description. Such a laceration needs only quiet and an attention to cleanliness to heal it.

The second form in which the perinæum is torn between the constrictor vaginæ and sphincter ani, is perforated in fact, is rare, and demands special treatment. Mostly, in order to

secure the closure of the perforation, it is necessary to divide the anterior band at the fourchette, and then to bring together the edges by quill and interrupted sutures. It almost seems unnecessary to point out that, where the accident has existed some time and the edges have become covered by mucous membrane, or otherwise cicatrized, these must be pared before being sutured. An instance of this unusual form of laceration has occurred to me, and is detailed as Case CVII.

The third variety, in which the perinæum is lacerated throughout its entire length, but the sphincter remains entire, is a proper object for treatment. Although the functions of the rectum are not disturbed, yet a rupture of this sort, left to itself, entails many evils. Besides those immediately attendant on the enlarged vulva, there are others due to the want of support to the pelvic viscera; hence, prolapsus uteri, displacement of the bladder (cystocele), or of the rectum (rectocele), and symptomatic disorders consequent on such dragging-down. Wherefore every instance of this degree of laceration requires operative treatment. For when left to nature, even if closure of the fissure occurs, adhesion is apt to be superficial; and the contraction ensuing upon the process of granulation and partial closure is such as to draw backwards the parts towards the anus, enlarging the vulva, and so predispose to displacements of the pelvic viscera.

In examples of this form of ruptured perinæum, the treatment is pretty much the same as for the next and severest form, in which the laceration extends through the sphincter ani, and even tears the recto-vaginal septum, sometimes even to the os uteri. Most of the steps of the operation to be presently detailed relate to this degree of the accident.

In the first two cases of the former description which I operated upon, and which were recorded in my second essay, read before the Medical Society of London, on Rupture of the Perinæum, I divided the sphincter ani. This proceeding, however, is seldom necessary. The sutures are all placed in front of the anus, and both quill and interrupted sutures are desirable; the former in order to secure accurate apposition of the edges and deep union.

Besides the instances of rupture of the perinæum not extend-

ing through the sphincter ani recorded in this chapter, there are others appended to the account of vaginal cystocele and rectocele, in which, however, the usual operation was modified to adapt it to the cure of the complication which in those cases was the leading feature.

Contra-indications to Operating.—Before deciding on an operation, certain circumstances are to be taken into account. For instance, if pregnancy has advanced beyond the fourth month, if suppuration and inflammation exist, the operation must be delayed; in the former case till after parturition, in the latter until the arrest of those morbid processes. To operate before the third or fourth month of pregnancy, or even, indeed, at any period after conception, has been objected to, as likely to induce miscarriage. Such an objection is an extension of the doctrine maintained respecting surgical operations generally in the pregnant state; but experience has convinced me that it does not hold good within the period mentioned in regard to operations about the sexual organs. On the contrary, I believe that wounds in the perinæal region then heal more rapidly; and in no single instance in which I have operated has miscarriage so much as threatened. And I may remark, by way of hypothesis, that operations performed on other parts of the body may be supposed to cause a diversion of vital energy and nutritive power from the uterine or pelvic region to the parts operated upon. The presence of leucorrhœa need not deter from operating, but a postponement is desirable until after a menstrual period. Cough, if present, should be relieved, on account of the straining it causes: and, speaking generally, if the patient's health be impaired, an endeavour should be made to improve it, for the condition of the patient has much influence over the success of the operation. Indeed, it is of the greatest importance that the same precautions should be taken as in all surgical operations of moment: viz., strict attention to the healthy functional action of every organ of the body, especially the skin, liver, and bowels. The neglect of these precautions will often cause failure or even death. It is also important that inquiries should be made if the patient has been in the habit of taking opium to quiet the

bowels. I have lost two patients from neglecting to make this inquiry. Both died of pyæmia, and both I found afterwards had for years taken daily large quantities of laudanum. The plan I now always pursue is this: I clear out the liver and the bowels by pills of podophyllin, colocynth, and henbane. I order the patient two or three warm baths (or in their absence general sponging with warm water), and have the skin thoroughly cleansed with soap and flannel. I give also tincture of the sesquichloride of iron, alone or in conjunction with tincture of arnica, thrice daily for eight or ten days, feeding the patient at the same time with a good but non-stimulating diet. It is always best to operate just after menstruation.

Time of Operating.—The operation may, and should be, performed immediately after the completion of the labour. The surfaces of the wound are then fresh, and in a condition favourable to union by the first intention, and consequently the paring of the edges required in old cases is not necessary. Should, however, surgical means not be resorted to on the day of delivery, the edges will require to be pared, and granulations removed.

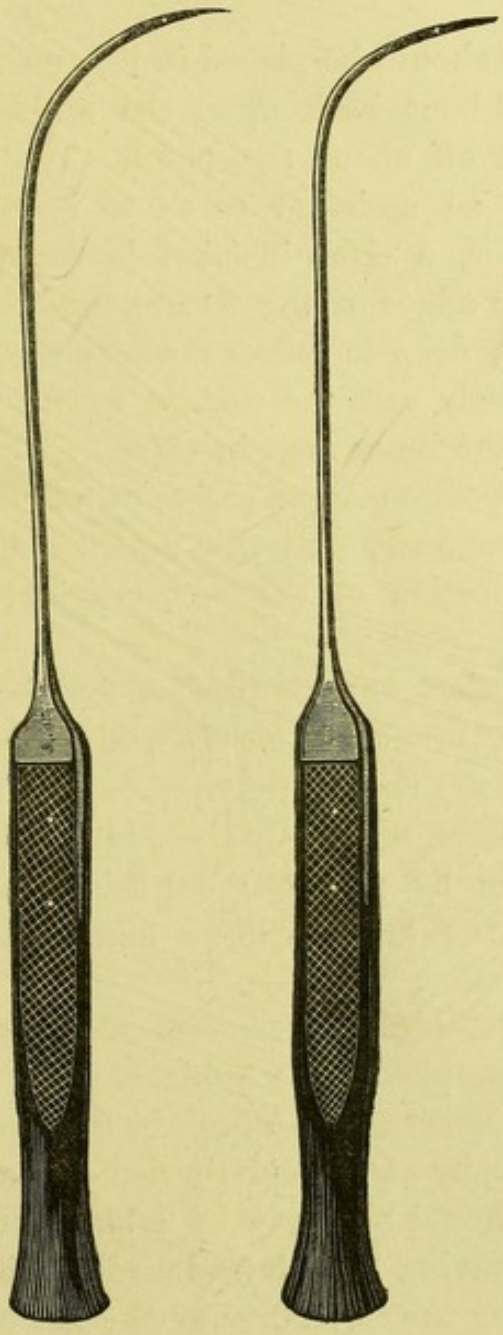
The bowels should be well cleared out by aperients and injections immediately before the operation; and at the last moment the bladder should be emptied.

Instruments required.—The instruments required are,—a common straight scalpel; a blunt-pointed straight bistoury, to divide the sphincter; a pair of long dissecting forceps; three large needles for deep sutures; small needles for the superficial interrupted sutures; a tenaculum; pieces of gum-elastic catheter or bougie (as suggested at my first operation by my friend Mr. Lane), with twine well waxed; silver or iron wire; sponges, &c. I now use pieces of cane the size of No. 9 bougie, one side being cut so as to convert a convex into a concave surface. This prevents too much pressure on the soft structures, and subsequent sloughing.

The needles used for both deep and superficial sutures are fixed in handles, and more or less curved to adapt them to different cases; the width of perinæum and the thickness of

the tissues varying considerably in different persons. (*See* Figs. 1 and 2.)

Fig. 1. Fig. 2.



*** These figs. 1 and 2 represent one-half the size of the instruments actually used.

The operator will require at least two assisants. Unless contra-indicated, or opposed by the patient or her friends, it is desirable to place the patient under the influence of chloroform or ether; for not only will she be thereby saved

pain, but opposition and straining are avoided, and a favourable relaxation of the parts obtained.

Mode of Operating.

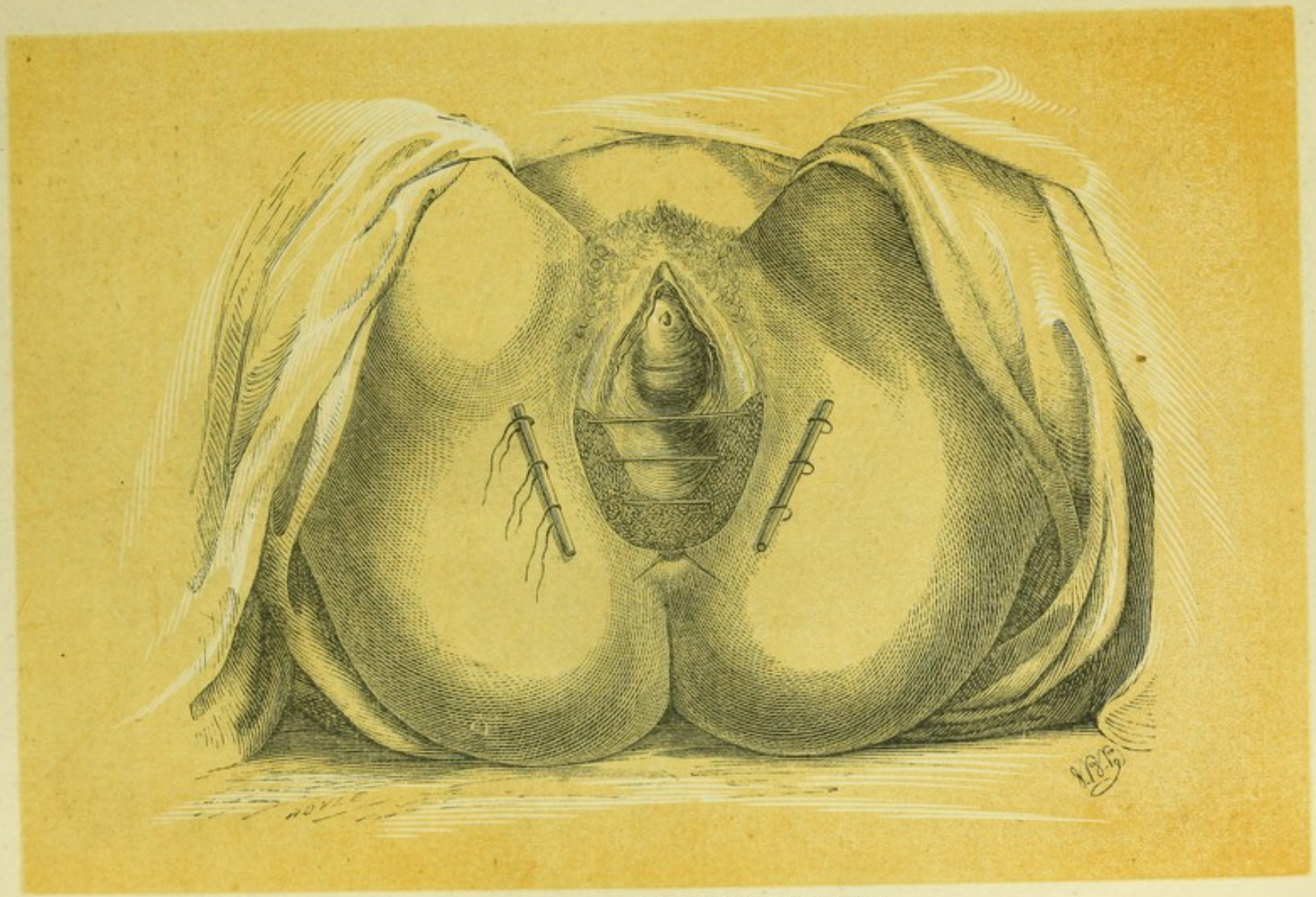
The patient should be placed in the position for lithotomy, the knees well bent back upon the abdomen, and all hair be closely shaved off about the parts. The sides of the fissure being held by an assistant so as to insure sufficient tension for the operator, a clean incision is made about half. an inch external to the edges of the fissure, and equal to it in length, and sufficiently deep to reflect inwards the mucous membrane, and to completely bare the surface as far as another incision carried along the inner margin. (*See* Plate 1.) The denudation of the opposite side of the fissure is then to be practised in a similar manner, and the mucous membrane from any intermediate portion of the recto-vaginal septum to be also pared away.

This denudation must be perfect, for the slightest remnant of mucous membrane will most certainly establish a fistulous opening when the rest of the surfaces has united.

Some operators, especially the continental, remove the mucous membrane by scissors; but this is a clumsy and unsafe method, and the knife will be found to effect the purpose quicker and better.

Division of the Sphincter.—So soon as this stage of the operation is completed, the sphincter ani is divided on both sides, about a quarter of an inch in front of its attachment to the os coccygis, by an incision carried outwards and backwards. The incision should be made by a blunt-pointed straight bistoury, which, having been introduced within the margin of the anus, guided by the forefinger of the left hand, is quickly and firmly carried through the skin and subcutaneous areolar tissue to the extent of an inch, or even two, external to the anal orifice, through some of the fibres of the muscle which immediately surround the anal aperture, but leaving those more deeply seated within it untouched.

Insertion of the Quill Sutures.—The sphincter having been



OPERATION FOR RUPTURED PERINÆUM.

Showing the denuded surfaces, with the quill sutures inserted before the parts are brought together; and also the division of the Sphincter on each side of the Coccyx.

divided, the thighs in the next place are to be approximated, and the quill sutures introduced. The left denuded surface and the tissues external to it being firmly grasped between the forefinger and thumb of the left hand, a strong needle carrying a double thread is plunged, with the right hand, through the skin and subjacent tissue an inch external to the pared surface, and thrust downwards and inwards beneath it until its point reappears on the edge of that surface; it is then introduced at the corresponding margin of the denuded space of the opposite side, and made to traverse beneath it in a direction upwards and outwards until it escapes at a point equidistant from the external margin with that at which it entered on the left side. Each suture is to be introduced in the same way, the one nearest the rectum first: two often suffice, but three are at times required.

The sutures are double, to allow them to enclose the quills, or (as used) the pieces of elastic catheter, cane, or bougie, around which they loop on one side, and are tied over by their free ends on the other. For the quill sutures I prefer stout twine, well waxed, to silk, as I believe it to be less irritating, and productive of less suppuration.

Insertion of Interrupted Sutures.—The quill sutures being firmly secured, the sides of the fissure become approximated,—the denuded surfaces in apposition. To bring together the outer margins, along the line of the skin, it is advisable to pass three or four interrupted sutures; and these answer best when metallic, consisting either of iron or silver wire, or copper silvered. If this be carefully done, union of the skin will speedily take place, and that of the deeper parts be materially facilitated. (*See* Plate 2.) As an accessory or superficial suture, the twisted form is used on the Continent; but I think the interrupted more simple, and have found it answer completely.

Previously to bringing the operation to a close, the forefinger of the right hand should be passed into the vagina, and that of the left into the rectum, so as to ascertain that apposition is complete throughout.

Lastly, the parts having been well cleansed by sponging

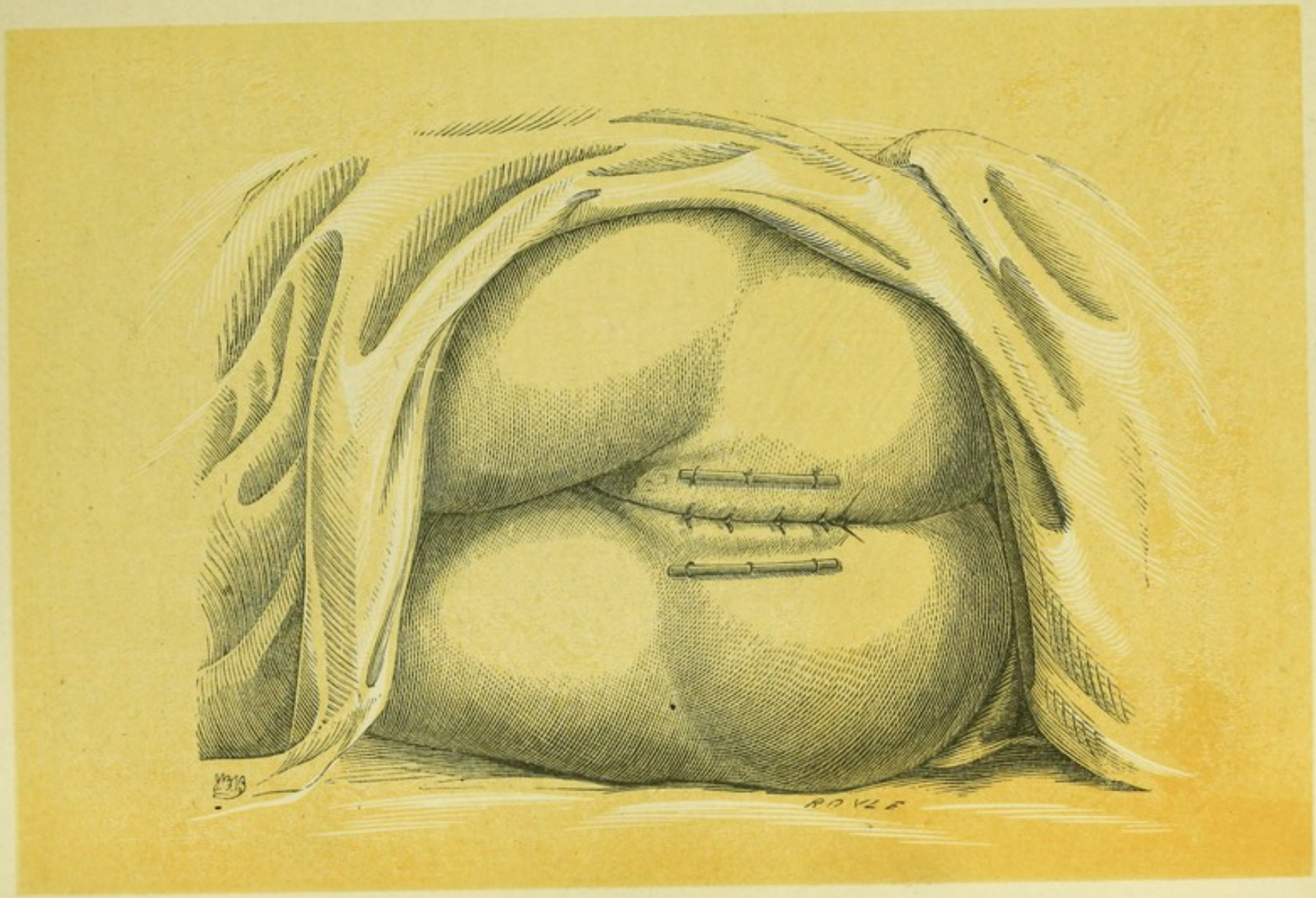
with cold water, a piece of lint steeped in cold water is applied, and over it a napkin kept *in situ* by a T bandage.

Operation in Recent Cases.—The only variation of the plan required in cases treated immediately after the accident, is the omission of the otherwise necessary denudation of the margins of the fissure. If the laceration be not one of the very worst forms, namely, completely through the sphincter ani, and including part of the recto-vaginal septum, the interrupted silver suture, pressed deeply, so as to secure all the lacerated parts, will be found sufficient.

After-treatment.—The patient having been removed to her bed, should be placed on her left side on a water-cushion, with the thighs and knees close together, and flexed on the abdomen. Perfect quiet must be enjoined, and cold-water dressing continued. Ice given to suck for twenty-four hours is refreshing, and allays febrile reaction and nausea. One grain of opium should be administered at once, and repeated every six hours for the first twenty-four hours, and afterwards one grain night and morning. Beef-tea and arrowroot may be given within the first twenty-four hours, but not wine, unless there are signs of flagging, when both the latter and brandy may be demanded; the wine I commonly give is port. After the first day, four ounces of wine may be allowed; and a generous diet, chops, strong beef-tea, &c., after the second or third day. This is supposing no symptoms occur to contra-indicate such a regimen.

It is of great importance to draw off the urine by the catheter every four or six hours, for three or four, or more days after the operation. As the patient lies in the common obstetric position, this is best done by introducing the catheter between the thighs from behind; and in withdrawing the instrument, the thumb should be kept on its end, in order to prevent any urine remaining in it from escaping into the vagina, whereby it might cause such irritation about the wound as would defeat the attempts to close it. If the patient lives at some distance from the surgeon, and the nurse cannot pass the catheter, it is better to introduce a small elastic catheter with the stiletto out, and having on a liquid-proof bag at the end to collect the urine.

After some days, as on the eighth or ninth day, if the heal-



OPERATION FOR RUPTURED PERINÆUM.

Showing the parts brought together by the deep and interrupted sutures.

ing go on satisfactorily, and the strength of the patient be equal to it, she may be allowed to pass water, resting on the hands and knees, so as to prevent, as far as possible, its contact with the lower or sutured surface of the vagina.

The deep sutures should be removed on the second day; in about forty-two hours is the best time. I have found their retention after the periods named of no service, but rather mischievous from the tendency to suppurate and slough, results of more rapid occurrence in hospitals than elsewhere. On the sixth or seventh day the interrupted sutures may be taken away. In withdrawing the quill sutures care must be taken not to separate the thighs, for it is necessary to maintain their apposition for some time. The best way to remove the deep sutures is to cut the loop on the right side with a sharp knife. The quill is immediately freed, and that on the opposite side and the sutures are easily removed by a pair of forceps.

The time above stated for the removal of the sutures does not correspond with my practice in the earlier cases I published: increased experience has led to the alteration.

If there be, after the operation, any considerable bleeding, not controlled by the simple water-dressing, pieces of ice may be introduced, or ice-water injected into the vagina: other measures, as ligature or torsion, are scarcely ever required. For the first week the parts are left undisturbed, except being carefully sponged with warm water for the sake of cleanliness. After this time vaginal injections of tepid water are serviceable.

Should there be an offensive discharge, chloride of soda may be added. The opium should be persevered with, so as to keep the bowels constipated for two to three weeks after the parts have united; then when union has become firm and complete, the bowels may be relieved by injections of warm water with castor-oil, and by the latter given by the mouth. Attention should be paid during the passage of the first evacuation, and support given to the restored perinæum; but all hardened masses should be carefully broken down by the injections before being allowed to pass.

The precise time for opening the bowels must be regulated

by the degree of adhesion set up, and by the amount of reparation of lost tissue which has been attempted.

For several days after the first evacuation, it is best to use an enema.

Should adhesion, unfortunately, from any accident, not be complete throughout, and a fistulous opening persist, the application of a caustic or stimulating substance may be tried; the most effectual is the acetum lyttæ applied by a camel-hair pencil.

Criticisms and Suggestions.

In the historical sketch which has been given, the propositions and plans of treatment suggested by other surgeons have been described in sufficient detail; but it is proper that I should respond to the criticisms which have from time to time been made upon my mode of operation and treatment. This I shall do very briefly, as the best answer is furnished by the greater success of the cases so treated, than of those operated upon by any other plan yet brought forward. Hypothetical *à priori* objections are indeed not worth discussing; for it is by experience alone that the fitness or unfitness, the safety or danger of a measure can be proved. Give importance to such objections, and what operation would be attempted?

On Immediate Operation.—It has been said that in operating immediately after the accident, immense danger must attend the suturing of the parts; that inflammation may be set up in the vagina, and may thence extend to the uterus and neighbouring structures, which, after delivery, require to be carefully preserved from any such morbid action. But, omitting for the present, reference to the teachings of experience, I may observe, that the vagina is a mucous canal, not very delicate, and not prone, like a serous tissue, to so rapid propagation of a morbid process; for within it severe inflammation may be very limited in its extent. It is well known to every accoucheur

that nature is most ready to repair any injury around the genitals after delivery or during pregnancy, and, we may, therefore, fairly rely on her efforts to assist our surgical proceedings. Moreover, by immediate operation, the otherwise necessary denudation of surface is avoided; only the sutures have to be introduced, and the sphincter divided; the torn edges are thus brought into contact, that is, into a position favourable to healthy union, and one assuredly not more likely to be followed by untoward inflammatory action than would the ragged edges of the laceration if left to itself; for the accurate apposition of surfaces by the quill sutures guards against the noxious irritation from secretions. In other words, supposing the case left to itself, will not the chances of extended inflammation be even greater? Will not the inflammation, unavoidable, indeed necessary to the healing of the lacerated surfaces, be greater, and its duration longer, seeing that the torn parts are exposed to every source of irritation? The reply must surely be in the affirmative.

The injurious influence of the lochia on the wound, chiefly in preventing or retarding the healing process, has been urged as an argument for delaying the operation. The danger therefrom is, however, as just intimated, obviated by the close and accurate apposition of the surfaces obtained by the sutures and by the annihilation of the action of the sphincter fibres in drawing them asunder. The ill effects of this discharge are further provided against by the constant attention to cleanliness, and by the use of tepid injections.

Another reason for deferring a surgical operation until some time after delivery is founded on the fact of the successful issue of some cases which have been left to themselves. For my part, I cannot admit this as a sufficient argument for delay. The maxim that "delay is dangerous," holds good in all its force regarding ruptured perinæum. The chances are greatly against spontaneous cure, even in milder cases; in severe, it is vain to hope for it. Surgical operations would be few indeed, if extraordinary instances of natural cure were allowed generally to contra-indicate resort to them. On the other hand, the operation for ruptured perinæum, and more particularly in

recent cases, is not of that formidable character to alarm the patient or to peril her life; whereas, by it a complete restoration may confidently be anticipated,—a result hardly ever to be reckoned on when the injury is left to repair itself, though all the advantages obtainable from general attention to quiet, position, and such like expedients, be secured.

That the *laissez faire* doctrine has so extensively prevailed, is readily accounted for, when we consider how very unfavourable have been the results of operative proceedings heretofore devised and put into practice. Too often has the operator not only failed in procuring union of the fissure, but he has rendered the mischief worse by his interference. These sore discouragements will, I believe, be removed, and with them the prejudice against immediate operation, if the principles of treatment laid down in these pages be followed out. And at this time the sanction of experience is not found solely in my practice, for the operation has been widely adopted even for recent cases by many surgeons, and among others by Mr. Obré, who has resorted to it successfully in nine such instances.

Lastly, it is to be remembered that resort to operative means may in slighter cases secure an adhesion of the laceration in three days; and, at all events, will always effect a cure in a much briefer period than can the natural unaided process. The only exceptional condition against immediate operation, of at all a general character, arises when the mother is unable to suckle her child, or where the child is dead. Those of a special nature, such as fever and organic disease, need not be particularized.

Supposed Rigidity of Restored Perinæum.—Another general objection to the operation—indeed, to any similar operation—is that the restored perinæum must be, from its nature as a cicatrized tissue, so unyielding as to be almost necessarily ruptured from the stretching of a future labour. This is another of those vain hypotheses which vanish when examined and tested by experience. The closed fissure certainly presents a cicatrix, but the natural yielding tissues persist on each side, and admit

of the needed extension. Ample experience testifies to the fallacy of the objection.

Thus, sixteen of the patients operated on by me have been subsequently confined, three of them on two occasions. Yet in only five instances did the perinæum receive any injury, and in these the laceration was in no wise a consequence of the cicatrization of the restored parts. Thus, in Case I. there was a tear during delivery, not along the line of the united parts, but obliquely outwards from the fourchette. Again, the lady whose case is numbered VII. and VIII. was twice delivered without any injury to the restored parts, and it was not until the third labour that the laceration was reproduced, and then only as a consequence of untoward circumstances, quite unconnected with the dilatability of the perinæum. Moreover, as reported, this patient has had the parts again restored by operation. In the third instance of subsequent laceration, numbered XLVII., and previously described as a case of success (Case XXIV.), the patient was stout, had a narrow pelvis, and produced large children, circumstances which induced me, after my first operation upon her, to recommend her not to go her full time in any subsequent pregnancy, but to have premature labour induced. This advice, however, she did not follow, and the consequent injury must be looked on as a well-nigh inevitable event, and certainly in no way chargeable to the condition and character of the restored perinæum.

Lastly, in the fourth instance (Case LVII.), there is ample explanation of the accident in the remarkable contraction of the pelvic outlet, through which, as I have observed in my notes on the case, no child of the average size could pass without lacerating the perinæum.

In none of these cases can I admit the restored perinæum to have in the least been necessarily injured by subsequent delivery. The damage befell it under circumstances such as might at any time be productive of laceration of a perinæum never injured. But whilst making this assertion it must be advised as a measure of common prudence, to give particular

attention during labour to a perinæum which has previously suffered and been restored.

Suggestions.—The cutaneous elliptic incision on each side the sutured part, proposed by Dieffenbach, and practised by Sir W. Fergusson and most continental surgeons, is of no service when division of the sphincter is resorted to. Again, I cannot appreciate the supposed utility of the central flap (*dédoublement*) from the recto-vaginal septum, adopted by M. Verhaeghe; perfect closure is attainable without this, and the reflected portion can have little vitality, and is very apt to perish.

On Incision of Sphincter.—A subcutaneous incision of the sphincter has been suggested, but it will not furnish the results aimed at. The muscular fibres of the sphincter immediately around the anus must be completely severed, and also the investing integument, to annihilate all traction. The utility of dividing the skin and subcutaneous tissue is undoubted, and was particularly recognized in the incisions of Dieffenbach.

On Sutures.—The Bead Suture.—The bead suture, invented by Mr. Brooke, has been suggested as preferable to the quill suture, and as sufficient of itself to keep up the required apposition of the edges of the wound, and to render division of the sphincter unnecessary. In its mechanical operation as a suture it may be very excellent, but I have had no experience of it; for having been very successful with the quill and cane sutures, I have not tried any others. That the bead suture would render section of the sphincter unnecessary, I cannot admit, until repeated trials have proved this; for, according to my views, the division of that muscle is an important and essential feature of the operation to restore the perinæum in complete rupture.

As the history given shows, each kind of suture has had its advocates, and each has frequently failed. Dieffenbach thought the quill suture did not approximate and keep so closely together the edges of the wound as did the interrupted suture. I can account for this notion only by supposing he gave the quill suture but little trial, or that he failed to take up sufficient tissue with it.

MM. Langenbeck and Verhaeghe employed the twisted as the supplementary suture; but I think the interrupted, as used by myself, more simple and effectual in bringing about union of the integument.

I have no experience of the serpentine suture of Jobert (de Lamballe).

The spring clasps (*serres-fines*) invented in France, to keep the edges of a wound in contact, have not sufficient power and stability to be of any use in so serious an accident as a severe perinæal rupture.

On Diet.—The after-treatment proposed has had various arguments brought against it. The dietary has been thought ill adapted to the circumstances of the patient, after a severe operation, and the customary low diet of gruel, toast-water, and such like, been thought preferable. This low or fever diet, in my opinion, has been far too much persevered with in disease generally. In women after delivery, I believe its adoption is a mistake in most instances; and in the majority of women with ruptured perinæum, there are more or less exhaustion and weakness, demanding support. I believe, also, that a more generous diet, with wine, is favourable to the healing process, and a safeguard against erysipelas. This opinion is a reiteration of what was advanced by me in my paper read before the Medical Society of London, in 1851, and subsequently published; and it is with peculiar satisfaction that I support it by the able advocacy of Mr. Skey, who thus writes in his Lectures *On the Prevalent Treatment of Disease* (1853):—"Why do we invariably subject patients after a long and severe operation to abstinent diet? why do we anticipate inflammation? and, still more, why do we encourage it? We anticipate inflammation, because our experience teaches us that it is ready at hand, that our patient is now predisposed to it; but do we not refer it to the wrong cause? We attribute it to the irritation caused by the knife, and not to the *debility* and to the shock produced on the system by the operation, with attendant loss of blood. I believe that such persons should always be supported by moderate stimuli, from

the hour of the operation until their inclination for food is re-established. By such treatment, generally, if not uniformly adopted, many lives, particularly after operations of severity, would, I believe, be rescued from the grave; that, and—'odium chirurgicum,' or rather 'odium medicum'—the lancet and scarificator, with all their concomitants of purgatives, laxatives, and diaphoretics, which tend to rob the body of its richest juices, constituting the essence of its life itself, may be largely restricted in their application."

On Opium.—Constipating the bowels by means of opium has been thought reprehensible. The practice has almost universally been to keep up a looseness of the bowels, and to use repeated injections, from the date of the operation. This plan is still recommended by Mr. Skey, but I am sure he only needs opportunities of trying the opposite one to convince him it is a mistake. On the other hand, my practice of obtaining union of the parts in the first place, and of then opening the bowels, has the support of Dieffenbach, and more recently of Langenbeck and Verhaeghe and others. The presumed ill effects from the prolonged constipation and use of the opiate I have never seen; on the contrary, I maintain that the opium proves actually beneficial by allaying irritation, by controlling inflammation, and by generally favouring the healing process.

When I published my first paper on Ruptured Perinæum, my friend and colleague at St. Mary's Hospital, Dr. Handfield Jones, kindly furnished me with some interesting and valuable observations on the use of opium, from which I extract the following as applicable in this place:—

"Dr. Pereira notices the efficacy of small doses of opium (ten drops of laudanum three times a day), in such instances as the chronic or callous ulcer, the so-called varicose ulcer, in recent ulcers from wounds in which granulation proceeds slowly, and especially in elderly persons, and in those whose constitutions have been debilitated by disease, labour, spirituous liquors, &c. 'It appears,' he says, 'to promote the most genial warmth, to give energy to the extreme arteries, and thereby maintain an equal balance of the circulation

through every part of the body, and to animate the dormant energies of healthy action.'

"In the cases recorded in this paper, opium was given, not chiefly for the purpose of directly promoting the healing process, but of preventing its disturbance by mechanical and forcible disruption of the coalescing parts. For this it was freely given; and this most important end it well accomplished. But had not this end been all-important, I own I should have feared before trial, that the quantity of opium administered—three or four grains sometimes in a day—would have had the effect of disturbing, by its influence on the organic functions, that reparative healing process which issued in so beneficial and happy a result. For in these cases there does not appear to have been any marked asthenia, or undue irritability of the system. The terrors of surgical operations of earlier days, when the anæsthetic spell was unrevealed, may well have inflicted on the system a disturbing shock that opium alone could calm; but now there cannot be the same need for this potent agent.

"It is, however, clear that if in these cases opium did not promote the vital healing process, at least it did not retard it: or such obstacles as the first case presented would not have been overcome, and the second would not have progressed so steadily and favourably. This circumstance in itself is, I think, novel and instructive.

"Perhaps, however, if we consider the matter more closely, it may appear not difficult to understand why no unfavourable, but, on the contrary, a beneficial result was produced by the opium. The condition of an ulcer, healing by granulations, may first be referred to as an extreme instance, illustrating the great waste of plasmatic material which occurs in such cases, and more or less in all that approach to it. Much of the effused plasma—effused too rapidly to be organized—is cast off as effete matter, having taken the form of pus; much is organized into the low type of the granulation structure destined to future re-absorption. This waste is needless—nay, injurious, as a drain to the system, and if it can be prevented, as sometimes it may, by applications that exclude the air, or restrained and

limited, as is done by the common water-dressing, the reparative process goes on much better, and with less constitutional disturbance.

"Again, if, as in the cases before us, two fresh incised surfaces are brought together, and the aim is to induce them to unite by the first intention, what can be more prejudicial to this than the effusion of much plasma, or any, the least, approach to the above-mentioned condition? To form a connecting medium across which capillaries may anastomose and fibres unite, the thinnest film of exudation is sufficient, and the thinner the better; for the organizing process is of necessity slow, far slower than the exudative; the capillary loops must take many hours to unite, the opposed fibres some days to blend by means of the connecting material, and the further the old surfaces are separated, the longer this must be delayed, and the more of the exuded matter, which itself has produced the separation, will pass into the form of effete and purulent fluid.

"Now, this tendency to the excessive effusion of plasma, opium very probably restrains; somewhat, it may be, as it restrains a flux from a mucous surface; the hurried action is stilled, the vascular excitement tending to inflammation allayed, the sedative influence of the drug assisting Nature in her work, by preventing that which would mar or delay it. The imparting of energy to the extreme arteries, which Dr. Pereira speaks of, we know from observation to be the restoration of their tonicity, enabling distended, relaxed, and congested vessels to resume their natural calibre, and thus to transmit a due and not excessive quantity of blood in a current of proper velocity to the parts they supply. The restoration of the proper function of the arteries, 'the conductors and disposers of the blood,' as John Hunter accurately defined them, will manifestly tend greatly to prevent the excessive effusion of plasma, and thus remove at least one obstacle to the progress of reparation.

"It seems therefore reasonable to expect that opium, so long as it does not manifestly disorder the nervous system, or the organic functions, would tend powerfully to promote the

healing process, and this expectation is amply borne out by the results of the cases recorded."

Formerly I was in the habit of exhibiting two grains of opium immediately after the operation, and of repeating one grain every four or six hours; but experience has shown me that one grain given at once, and repeated every six hours, will serve every purpose. The primary object of the drug is to keep the bowels quiet, and it should not be pushed so as to produce decided narcotic effects, except only when pain or spasm calls for its full action. Moreover, the effects of the opium should be carefully watched by an experienced person, and its administration withheld, for a longer or shorter time, when any undue drowsiness supervenes; for there are certain cases of idiosyncrasy in which opium operates with peculiar energy, just as there are others in which it is difficult to obtain its narcotic effects at all. The habits and constitutional peculiarities of every patient should therefore be carefully inquired into, in order that our treatment, whether with opium or other medicinal agents, may be successful and secure against risks.

The need of these considerations has been suggested by the history of a case reported to me in a letter by Mr. G. Greaves, of Manchester. This able surgeon has adopted my mode of operating successfully in several cases of ruptured perinæum and of prolapsus uteri; but one patient, just alluded to, he lost from the effects of opium. He was giving one grain only every six hours; but the nurse in charge, although she observed the patient to be very drowsy, took upon herself to repeat the dose without troubling herself to ask the advice of the medical assistant who was watching the case. To explain the fatal consequence following this negligence and imprudence Mr. Greaves feels compelled to assume the existence in this patient of a peculiar idiosyncrasy, rendering her unusually susceptible of the soporific effects of opium. He insists on the necessity of putting the administration of the drug in the hands of a medical man capable of watching its effects, instead of leaving it to an uninstructed nurse, or other non-medical person.

The mode of treatment—operative and general—now set

forth is, in my opinion and according to my experience, applicable in all instances of rupture of the perinæum of an extreme degree. The opinions I maintain may be thus summed up :—

1. That the worst forms of lacerated perinæum, of however long standing, may be cured by the operation.

2. That immediately on the occurrence of the accident it may be resorted to, not only without danger, but with almost invariable success.

3. That the operation may even be performed three or four days after the accident, although the parts may be in an unhealthy condition; but there is then greater risk of pyæmia.

4. That those forms of perinæal laceration in which the sphincter is not involved should be cured to prevent prolapsus uteri and other pelvic derangements.

5. That the restored perinæum is not by any means necessarily torn by, nor prejudicial to, subsequent parturition.

Cases.

To keep my matter within compass, and to avoid enlarging the size of this volume unnecessarily, I have abbreviated the histories of the cases very considerably, avoiding particulars and daily records of progress, except in such instances as offer some special point for consideration. At the same time, it has seemed desirable to give two or three of my first cases more in detail, in order that the principles which then regulated my treatment, and the modifications increased experience has since suggested, may appear.

The order in which I propose to describe the following cases is pretty much that of the propositions above laid down. The fourth and fifth of these, indeed, are not to be illustrated by a particular class of cases, but by the previous and subsequent history of cases of each variety of ruptured perinæum. At the same time, I shall so group the cases that those of *complete* rupture come first, then those of *incomplete*, and lastly, those of *perforation*. Some of these cases have already been made

public, either in my printed Essay, or in papers read before the Medical Society of London, or published in the medical journals, but others have not before been detailed. The list might be much extended by the records of operations performed by several friends, which they have kindly furnished me with. This, however, is not called for.

Moreover, I may observe that not a few of the recorded cases of perinæal rupture, by being complicated with displacements of the pelvic viscera—of which indeed the rupture itself is a cause—serve also as examples of such pelvic lesions and of the treatment suitable for them.

I am now enabled to bring forward so great a number of cases, in which I have operated successfully, as to establish the value of the operation and general treatment advocated. Thus of the 112 cases presently detailed, as many as 104 were cured—*i.e.* had the integrity of the perinæum completely restored, along with the sphincter power of the anus, which in by far the largest proportion had previously been lost. Oftentimes, too, the restoration of the perinæum also effected the cure of subsidiary lesions—viz., of displacements of the uterus, bladder, and rectum, and thereby converted a life of constant misery and suffering into one capable of enjoyment and happiness.

Three deaths occurred, in each instance from pyæmia. The operation failed in only three patients: in one, a woman sixty-five years old, of enfeebled constitution (Case XIX.), in whom the lesion had existed twenty years; in a second (Case LXII.), in whom a fistulous opening remained; and in a third (Case III.), in whom the closure of the laceration was all but complete, and might readily have been made quite so.

Case I.—*Rupture complete, fourteen years' standing: Delivery two and a quarter years subsequently: Remarks.*—Mrs. A. T., æt. 37, came under my care in 1851, suffering from an extensive laceration of the perinæum, produced in her first labour fourteen years before, which was protracted for nineteen hours, and only terminated by instruments. She was unable to control the contents of the rectum when at all relaxed, and had in other respects no sphincter power. Any exertion would bring the uterus down to the os externum; and, on one occasion, when she was ascending a hill, it so far prolapsed that inflammation succeeded, requiring leeches, with rest in bed for some days, to subdue it. She could not stand for any length of time

without suffering severely; and riding in a carriage produced much uneasiness. Her health was good. On examination, I found a rent extending through the sphincter ani to the rectum in such a way that a triangular isolated flap depended from the front of the rectum and recto-vaginal septum. The last indeed was gone, most probably by sloughing, and hence a considerable chasm existed in the anterior part of the rectum. There were also prolapsus of the mucous membrane of the bowel, and a small polypus uteri.

Notwithstanding such extensive lesions and their distressing consequences, this lady had never had the nature of her case recognized, or at least pointed out to her, during the fourteen years which intervened between the accident and the time of her being submitted to my treatment. In this interval, moreover, she had given birth to five other children.

On a previous visit to London, I removed the protruding mucous membrane and polypus, and advised an operation to restore the perinæum. After consulting Sir C. Locock, she returned to the country for two months, and then came to town to place herself under my care.

On the 15th of August I proceeded to perform the following operation, assisted by Messrs. Coulson, Lane, and others; chloroform being administered by Dr. Snow.

Having placed the patient in the position for lithotomy, I pared the cicatrices on each side from mucous membrane to the extent of an inch in width, and about two inches in length. The edges of the bowel, which were drawn back (everted) by the absence of the anterior portion of the sphincter, I also denuded, and, after this was accomplished, brought the whole together by three quill-sutures in the manner heretofore described, finally stitching the outer margins by small interrupted sutures. On passing one finger into the vagina and another into the rectum, I found a space not in apposition; this I closed by the introduction of another suture through the vagina and rectum.

The operation lasted an hour. After sponging the parts perfectly clean, and having placed the patient in bed, cold-water dressing was applied to the wound, to be renewed every three or four hours; two grains of opium were given at once, and one grain ordered at 7 o'clock. The catheter was used every four or five hours. On each occasion the parts were carefully sponged with cold water, and every portion of secretion cleansed away.

16th. At 4 A.M., gave her some wine-and-water, after which she obtained four hours' sleep. There was no undue swelling of the labia. She was allowed wine-and-water, and coffee. One grain of opium given every four hours.

17th. No sleep to-day. A grain of opium given at 9 A.M., and at 1 and 10 P.M. Besides wine-and-water, some mutton was taken.

18th. Passed a bad night, having been disturbed. At 4 A.M., two grains of opium were ordered. At 11 A.M., wine and brandy were freely given to overcome faintness. Catheter introduced every five or six hours, day and night.

19th. Had a better night. Complains of an aching, and at times of a sharp pain within the vagina. There is a free discharge. 11 A.M.: the pain continues. I removed the last *external* suture. In the afternoon ordered warm fomentations and sponging. Two grains of opium in two doses were taken during the past night; one grain ordered this evening.

20th. When seen at midnight, she had great pain, especially about the orifice of the urethra, of a darting and aching character. On examining *per vaginam*, I found the now purulent discharge escaped by pressure from within through an opening close to the sphincter ani. She now told me, for the first time, that on the last two days wind had passed from the bowel

through the vagina. To close this recto-vaginal opening, I removed all the sutures, and divided the sphincter ani at the posterior part; the united portion of the perinæum was immediately drawn towards the vagina, and the fissure throughout closed most accurately. Half-past 1 P.M.: a very free discharge of a sanguineous character. She is much more free from pain. Towards the evening the discharge became more purulent. Catheterism every five or six hours.

22nd. Half-past 2 A.M.: great pain in the rectum from the matter not escaping freely. During the day this was assuaged, and healthy granulations were visible.

25th. On this, the tenth day, the patient was allowed to empty her bladder, supporting herself on her hands and knees.

26th. I consulted with Mr. Lane, and determined to pare the edges where mucous membrane existed. To do this, I placed the patient under the influence of chloroform.

27th. I injected some warm water into the rectum, first plugging the vagina, to prevent any escape of feculent matter into it, when the bowels were relieved for the first time since the operation twelve days ago.

31st. Has gone on well. The granulations springing up freely.

Sept. 1st—12th. Going on favourably. The catamenia have appeared.

19th. The catamenia having subsided for twenty-four hours, I examined carefully, and was pleased to find the fistulous opening by the side of the anus much less than it was a week since. The mucous membrane, however, had joined the skin on the left side of the opening, thus arresting all granulations there, and preventing union. I therefore determined to pare the edges of the opening, and then to bring them together by a good deep stitch with a double silk-suture. This I did to-day, and completely closed the passage. Two grains of opium were ordered at once, and one grain every two hours, to prevent pain and to arrest the action of the bowels. At 8 P.M. I emptied the bladder by catheter, and watched all night. The new perinæum produced was thick and sound.

20th. At 3 P.M. she was very sick, and vomited freely; after which she slept at intervals. At 11 A.M., on again using the catheter, several clots of blood came from the vagina. I directed her to pass the urine herself next time, by kneeling on the bed. 6 P.M.: has voided urine as directed, and some more clots have come away. There is no undue swelling of the sutured parts. She has taken some solid nourishment and some wine.

24th. I removed the suture, and found that only partial and slight adhesion had taken place close to the orifice of the anus, and that a sinus existed, the size of a goose-quill, between the vagina and perinæum.

25th. The bowels have acted by injections of warm water and a Seidlitz-powder. She has now perfect control over the contents of the rectum. I painted the orifice of the sinus with acetum lyttæ, to stimulate the granulations, and ordered the bowels to be kept gently relaxed.

29th. The sinus is diminishing, and the granulations filling up the space in front of the anus. The acetum lyttæ was again applied.

Oct. 5th. The process of granulation continuing very tardy, although the acetum lyttæ had been brushed several times during the last few days over the surface; and as the patient, feeling so nearly well, was extremely anxious to get home, I determined to make use of the actual cautery to deprive the surface of the sinus of all mucous membrane. This was done, and attended with success, and in a short time the sinus closed, and my patient was able to return home on the 7th of October, to enjoy a degree of comfort she had not known for years. There was a good strong perinæum, and the sphincter ani performed its functions accurately.

Nov. 1st. I have heard from my patient since her arrival home. She has greatly improved in health and strength, takes horse-exercise daily, and walks about with facility. Her bowels have acted comfortably, and no prolapse of the uterus has appeared. The case, therefore, must be deemed completely successful.

It will be seen that I did not divide the sphincter ani on the day of operation, but a few days subsequently. This was wrong. In my subsequent cases I have recognized this section as a leading principle in the operation, and have accordingly made it at once. Nothing could prove the importance of this procedure more clearly than this first case; for, although adhesion took place anteriorly very satisfactorily, still, prior to the division of the sphincter, the edges posteriorly became drawn asunder after the removal of the sutures; whereas, immediately on making the section, they were brought into contact, and steadily kept so. Further, in my first essays at operating for ruptured perinæum, I was of opinion that an incision on one side only of the sphincter was necessary, but subsequent experience has led me to prefer one on each side.

I am now able to add to the history of this my first published case the result of the test of delivery on the restored perinæum.

Jan. 17th, 1854. At 10 A.M. I was sent for to this lady, who was taken in labour at the full period of gestation. Its progress was slow. On making an examination, I found a natural head presentation. At 4 A.M. the membranes broke, and the head proceeded to descend on the perinæum, which was strong, safe, and dilatable; before labour it was $1\frac{1}{2}$ inch in length, and now, by the pressure of the head, it elongated to 3 inches. Unfortunately, the head was unusually large, and continued to rest on the perinæum for three hours, the pains forcing strongly. Fomentations and lard were applied, and the uterine contractions calmed by the administration of chloroform. At length a strong pain thrust the head through the outlet, causing a laceration of the perinæum, about an inch in length, in the median line. Great care was used in the delivery of the shoulders, but they were so large and broad that the rupture was extended half an inch farther—not in the median line, however, but to one side—the tear passing upwards obliquely, and leaving the sphincter and recto-vaginal septum intact.

After the removal of the placenta and of the clots of blood from the vagina, an interrupted suture was passed through the oblique fissure, and the quill-suture applied to that in the median line. The thighs, as usual, were afterwards brought and kept together, and the patient placed on her side. Every four hours the urine was ordered to be withdrawn, and a grain of opium given. January 21st. Removed the deep sutures; union established; the parts looking well. 26th. An enema administered; there is complete control over the sphincter, and the parts are well united. She went on very satisfactorily; and the perinæum was completely restored.

It seems clear from the extent to which the perinæum became dilated, and the length of time it withstood the pressure of the head forcibly propelled against it, that, had the head and shoulders not been of so great dimensions, the perinæum would have escaped even the partial rupture it suffered. I should state that the head was $14\frac{1}{2}$ inches in circumference, and the shoulders $17\frac{1}{2}$ inches.

Thus, although this particular case does not precisely prove the proposition advanced, that "subsequent parturition is possible without injury of the restored perinæum," it proves that the sutured parts do not form, as it has been said they must do, a hard, unyielding cicatrix; but that, on the contrary, they are sufficiently dilatable to afford the best hopes of delivery without injury, under ordinarily favourable circumstances; as much so, I believe, as uninjured structures.

Under no pretence, surely, can the result of this case be quoted as inimical to the attempt to restore a ruptured perinæum in a female likely again to bear children. This patient's existence had been embittered by the local injury for fifteen years; and by the treatment adopted she was entirely cured, and restored to the enjoyment of life, continuing well from October, 1851, to the date of her recent confinement. Moreover, notwithstanding the protracted and difficult labour, which would have equally jeopardized the integrity of any perinæum, the injury she sustained was not great, and was remediable with little trouble.

It may be just noticed that the history of the above case serves to illustrate each one of my propositions, more or less completely.

1865. This lady still continues well, with a sound perinæum and normal action of anus.

Case II.—*Rupture complete, of two years' standing: Cure.*—Ann J., æt. 40, admitted November 7th, 1851, into St. Mary's Hospital, with lacerated perinæum, which occurred two years since, when she had a difficult labour, and the vectis was used. A sudden pain came on, and drove both child and vectis through the perinæum. The sphincter ani is torn through, but there is a firm mucous band which separates the rectum from the vagina. She cannot retain her fæces; has had nine children, the last six or seven months ago; all her labours have been difficult, but she never had an instrument used until the above occasion. Her health has always been pretty good.

12th. The sides of the lacerated surfaces were denuded for three-quarters of an inch wide, brought together by quill-sutures, and then by very fine interrupted sutures. The spincter ani was divided, and water-dressing applied. The operation was performed under the influence of chloroform. As soon as she recovered from its effects, she was ordered opium, gr. i. directly; to be repeated every three hours. She was placed on her left side on a water cushion, the urine was drawn off every four hours; port wine, one ounce in water, and beef-tea.

13th. Has not slept, but has been quite easy. Pulse 76; tongue clean; skin cool. To have wine, two ounces, mutton-chop cut up fine.

14th. Pulse 100, tongue a little white; skin rather hot; appetite good; has slept very well; wound looking well; still some sanious discharge from the anterior part. Water drawn off every six hours. Wine and beef-tea and opium continued.

15th. Is quite easy and sleeps well; the discharge from the anterior parts is getting more purulent; pulse quiet. No pain; tongue slightly white.

16th. Going on well: no blood mixed with the discharge; the anterior part of the wound has not quite united; the posterior part seems to have done so; less œdema. Continue the pill night and morning.

17th. Rather flushed, with quick pulse; some little pain. Not to have a chop to-day, nor wine.

18th. Easier, though she still complains of being flushed occasionally; the quill-sutures were removed; there is much less swelling; the greater part appears to have united well. To go on with her chop and wine.

20th. Going on well; has frequent desire to pass her water, and occasionally lets a little dribble from her; urine still drawn off every five or six hours. The anterior part has not quite united.

21st. Union seems pretty firm. 10 P.M.: has passed a copious motion, without apparently disturbing the union, and without taking an aperient; feels now much more comfortable; still continues the opium.

23rd. The union seems quite firm; externally there is the appearance of

a small opening near the anus, but it cannot be felt on the inside with the finger; bowels have not been again open. This morning she, for the first time, passed her water herself, supporting herself on her hands and knees, and had the parts washed afterwards whilst in that position: she suffered no scalding or other pain; to omit the opium.

25th. Bowels open; the small opening still remains, and pus oozes out when pressed from the vagina inside; nitrate of silver was applied to it; the remainder has perfectly and firmly united, a mere line marking the junction.

26th. The fistulous aperture touched with tinct. cantharidis; appetite and spirits good. Wine and meat every day.

December 3rd. Three weeks since the operation. She is perfectly well, and the bowels act freely and are under entire control.

12th. This patient left the wards of the hospital, and returned into the country perfectly cured.

The progress of this case was highly satisfactory, union having taken place rapidly, without a single unfavourable symptom, and without any retraction of the sutured parts. This good success I attributed to the division of the sphincter; subsequent experience has taught me I was right in so doing.

Case III.—*Rupture complete, of seventeen years' standing: Previous operation and failure: Result.*—Mrs. D., æt. 45, admittted into St. Mary's Hospital January 30th, 1852. Seventeen years ago was confined with her first child. The labour being difficult, the surgeon (so the patient stated) used a boot-hook, instead of the usual instruments, and ever since then she has had no control over her bowels. Since the birth of this child she has had five others.

Fifteen months after the accident, an operation was performed. Her legs were kept tied together for ten days; the parts were stitched up with four quill sutures; the urine was not drawn off, but she passed it lying on her face; its escape was attended by much smarting pain; opium was given, and the bowels prevented from acting for ten days, at the end of which period the sutures gave way, the edges diverged, and the patient found herself in a worse state than before.

She has generally been unable to move about or to leave home; and has resorted to opium and burnt rum before daring to go out. On one occasion, being unable to control the dejections, she was seventeen hours and a half on the night-stool; and on another, a fortnight ago, ten hours.

The whole of the structures between the vagina and rectum have been torn through; there are no remains of the anterior half of the sphincter ani; and but little loose integument about the margins of the chasm in the perinæum, owing to the former operation.

An operation being now decided on for February the 4th, on the previous morning a purgative was given, the action of which prevented her leaving the night-stool from 7. A.M. till 1 P.M., and then only after taking opium and wine.

February 4th. After paring the edges of the fissure, the septum intervening between the vagina and rectum was next denuded; and then an incision carried through the sphincter ani on each side of the os coccygis, downwards and outwards, dividing the skin to the length of two inches. These free incisions allowed the sides of the fissure to be approximated much nearer. This done, three quill-sutures were introduced to secure apposition—the sutures being passed nearly an inch from the margins; these lastly were brought together by five interrupted sutures.

Anæsthesia had been kept up by chloroform, and so soon as this had passed off, two grains of opium were given, and one grain ordered every four hours. The catheter to be passed every four hours, and cold ablution practised each time; the usual water-dressing; ordinary diet; and port wine, three ounces per diem.

5th. Edges of wound uniting by the first intention. She has slept pretty well; towards morning became sick, and continued so at intervals till 12 o'clock. She lies on her side, with the knees drawn up and close together. The opiate continued.

6th. The sickness has ceased. She sleeps a good deal, and has very little pain. Wound looking well. The urine withdrawn every four hours.

7th. Going on well. Catheter used every six hours. She has a very troublesome cough, which distresses her much, by causing a strain upon the sutures.

11th. The deep sutures were removed on this, the seventh day from the day of operating. Progress favourable.

Without entering into further daily details of the progress of the case, I may observe, generally, that the principles of treatment laid down in the previous pages were carefully carried out. In this instance, I kept the bowels confined for no less than eighteen days.

When the patient quitted the hospital, a fistulous communication between the vagina and anus existed, which could have been easily cured if the patient had submitted to treatment. I afterwards learnt from the nurse that she never would remain quiet in bed, which would readily account for the partial failure.

Case IV.—*Rupture complete, eight months' duration: Previous operation and failure: Cure.*—Jane McJ., æt. 19, admitted into St. Mary's Hospital March 12th, 1852.

Eight months ago was delivered of a male child, after a protracted labour and the use of instruments. The perinæum was torn through to the rectum, and the sphincter divided.

Three weeks after the accident an operation was attempted, and failed. Castor-oil was given the day following the operation, and its action (as the patient represents it) caused the united parts to give way. The sphincter ani was not divided by the operator. The urine was not drawn off, but she was allowed to get up and pass it herself—this produced great pain.

She has now no control over her rectum, the anterior portion of its sphincter being lost.

March 17th. After the usual preparatory treatment, the operation was performed just as in the preceding case, and with the aid of chloroform. Three quill-sutures were used. Two grains of opium were ordered at once, and one every three hours afterwards. The urine drawn off every four hours.

Nothing occurred sufficiently peculiar to warrant a lengthened report. The patient progressed satisfactorily, and was discharged quite cured, having a good perinæum, and complete control over her bowels.

This case, like the last, had been previously operated on unsuccessfully, and a severe fissure remained. I took the precaution to make a very free incision on each side through the sphincter, involving the skin to the length of two inches. This allowed the adjoining tissues to be freely drawn towards the united edges of the wound, and thus prevented tension on the sutures.

I have subsequently (Nov. 1853) seen and examined this patient, and found the perinæum complete, and the anus perfect in its action.

Case V.—*Rupture complete, seven weeks' standing: Destruction of recto-*

vaginal septum: Cure.—Mrs. W., æt. 39, admitted 23rd April, 1852, into Boynton ward.

Seven weeks ago she was confined with her first child (male). She had a difficult labour: instruments were employed, and complete rupture of the perinæum. extending through the sphincter ani and recto-vaginal septum, ensued. From that period she has had no control over her evacuations.

On the 28th I performed the operation as usual. On account of the great deficiency of sphincter muscle anteriorly, the first deep suture was passed close to the rectum, so as to bring the pared edges at that part closely together, the usual incision through the sphincter having been previously made.

May 4th. Removed the deep sutures. A small recto-vaginal opening is discoverable; apply strong acetum lyttæ to its walls.

11th. The bowels were moved, on the twelfth day, by the usual means. The recto-vaginal opening not closing as quickly as could be wished, I submitted the patient to the influence of chloroform; and then, introducing a rectum speculum into the bowels, and a uterine speculum within the vagina, I obtained a perfect view of the fistula, and applied to it the actual cautery by means of a bent iron instrument.

After two or three weeks from this date the opening completely closed up; the patient had a perfect and strong perinæum, and entire control over the bowel.

This patient was subsequently confined without any laceration of the restored perinæum.

Case VI.—*Rupture complete: Destruction of recto-vaginal septum: Cure: Subsequent delivery.*—Harriet M., æt. 46, admitted into St. Mary's Hospital Feb. 25th, 1853. The mother of four children.

The birth of her first child was difficult, and effected by instruments, with the production of lacerated perinæum. Since that accident, her health has failed; she has been unable to retain her motions; suffered much from irritation of the parts and other concomitant evils, but not from bearing down or prolapse. Each succeeding labour has aggravated the local mischief; and there is now, besides ordinary complete perinæal rupture, a destruction of a portion of the recto-vaginal septum.

March 9th. Operated in my usual manner. A protruding piece of mucous membrane from the bowel had to be removed; great care was taken to denude the recto-vaginal septum, and a very free incision made through the sphincter ani. Lint saturated with oil was inserted in the sphincter incisions. The usual water-dressing was applied, and warmth to the feet. Her weak bodily condition demanded extra wine, and on the 15th, when the quill-sutures were removed, some sloughing was found about them.

18th. Some of the adhesions gave way, and the slough on the left near the sphincter incision came away, and revealed an opening into the cavity beneath.

April 5th. The anterior margin of the anus which was deficient is well granulating forwards; the rectum is quite separated from the vagina by the adhesions set up.

9th. I denuded the prominences on each side the gap, and brought them together by two sutures of silver wire. The patient inhaled chloroform during this process; she was afterwards ordered four oz. port wine, and a grain of opium every four hours.

May 3rd. Perinæum is strong; two inches deep. She can now control the bowels, even when suffering with diarrhœa, has no bearing down, and is sensible of the passage of the stools, which she formerly was not.

CASE VII.—*Rupture complete, eighteen months' duration: Subsequent delivery: Cure: Remarks.*—Mrs. C., æt. 26, the mother of two children. In her second labour, eighteen months ago, the perinæum was ruptured by the passage of the shoulders. No instruments were used.

On examination, the entire perinæum and the sphincter were found lacerated, and the control over the bowel lost. She was again three months pregnant. However, I determined to perform the operation.

Nov. 12th, 1852. After the operation was completed in the usual way, two grains of opium were immediately given, and one grain ordered every three hours following.

The only peculiarity in this case was that I had to tie a small artery at the edge of the rectum, cutting the ligature off close.

18th. Removed the sutures. Examined *per vaginam;* could discover no communication between the rectum and vagina. Washed out the latter by an injection, and removed some hardened coagula.

23rd. A dose of castor-oil, and four injections of it, mixed with water, produced a copious alvine evacuation without inconvenience, the restored sphincter acting perfectly.

29th. Is now convalescent.

This patient was introduced to me by Mr. Knaggs, of Euston-square, who, with Mr. Osmar King, Dr. Rogers, and others, was present at the operation. The second-named gentleman kindly sent me (June 1st, 1853) a highly gratifying communication, to the effect that Mrs. C. had been safely confined, and that no damage had resulted to the restored perinæum. I cannot do better than transcribe his account of the event. He writes :—

"I was sent for on the evening of the 24th of May : the pains were slow, but at pretty regular intervals of twenty minutes ; the os dilated to the size of half-a-crown, the membranes protruding ; presentation favourable. The vagina and os were excessively tender. Fomentations were used from this time. The waters were kept entire till they had well performed their duty ; and the head was protruded about an hour afterwards, safely, though a very large child. There was a slight tear of a quarter of an inch *laterally* at the fourchette, but the old cicatrix is uninjured. The bowels were relieved on the third day, and there was and is perfect control of their functions. Mr. Knaggs was present, and administered chloroform during the pressure on the perinæum and expulsion of the head. I confess I felt a little nervous as to the result, especially having been told by an eminent obstetrician, a short time previously, that 'go it would.'"

This patient was subsequently operated on in Oct. 1859, the perinæum having unfortunately been torn in a subsequent labour. The history of this second operation is now recorded, but it is dealt with as an independent case.

CASE VIII.—*Rupture complete: Cure.*—Mrs. C., æt. 34. This lady was operated on previously in November, 1852, as just recorded, and the perinæum perfectly restored. In two confinements following the perinæum remained uninjured, but in a third—the fifth in all (under the care of another surgeon)—it was completely torn through, and she became afflicted with loss of control over the rectum and prolapse of the womb.—Oct. 5th, 1859, I operated in the usual way, a few hours after the labour ; Mr. Knaggs, the patient's father, being present. She was very anæmic and weak, and required much support. Oct. 17th. The bowels have been freely relieved, and the control over the sphincter was found to be perfect. The perinæum was also completely restored. I have recommended that, if she again become pregnant, she should be delivered at the seventh month.

CASE IX.—*Rupture complete, of eighteen months' standing: Cure.*—Sarah S., æt. 22, admitted into St. Mary's Hospital Nov. 29th, 1852; states she has never been well since fourteen years of age. Complains of dyspeptic symptoms.

The perinæum was ruptured eighteen months ago, in her first and only confinement, when instruments were used. The laceration extends through the perinæum into the rectum, merely a band of mucous membrane separating the two canals. No operation has been attempted on account of her weak health.

Having by medical treatment been considerably improved in health, the operation to restore the perinæum was performed in the usual way on the 22nd of December.

The after-treatment was according to the plan described, and the satisfactory progress of the case offered no particulars worthy of a daily record. On the tenth day, a careful examination, *per vaginam* and *per rectum*, proved union to be complete and firm; and on the following, the eleventh day, the bowels were allowed to empty themselves, assisted by repeated injections of warm water. This case proved entirely successful.

CASE X.—*Rupture complete, of five years' duration: Result.*—Mrs. E., æt. 39, came under my care on January 13th, 1853, at the recommendation of Sir C. Locock.

Five years ago she was delivered of her first child; instruments were used, and laceration was the consequence. She has since had two other children, but never any control over her bowels.

The perinæum and anterior portion of the sphincter ani are destroyed; the uterus presses on the rectum, and ordinarily produces great difficulty in the passage of the fæces through the bowel, but when she takes medicine she cannot check the alvine discharge when once it begins. The catamenia did not appear at the last regular period.

On the 24th, I operated in the usual manner; Sir C. Locock, Messrs. Coulson and Nunn being present. The patient was submitted to the after-treatment advised, and everything went on well. On the 28th I removed the superficial sutures, and two days afterwards the deep ones. The edges of the fissure were firmly united.

24th Feb. Left town quite well, and wrote to tell me she had arrived at Cheltenham without the slightest inconvenience.

I have lately (1859) seen this lady, and found her quite well locally and generally.

CASE XI.—*Rupture complete: Destruction of recto-vaginal septum, of sixteen years' standing: Death: Autopsy.*—C. B., æt. 42, admitted February 12th, 1853, into St. Mary's Hospital. Has had four children. The accident happened in her first confinement with a male child, having a large head; no instrument was used. The laceration has been aggravated by the three subsequent labours, which were, like the first, rendered more difficult by the size of the heads of the children, who have in each instance been male. The injury has now existed sixteen years. The rupture extends through the perinæum and sphincter ani, and much of the recto-vaginal septum is lost. She cannot retain her motions: there is a constant dragging from the loins, and a bearing down, especially upon exertion. The general health appears tolerably good. No operation has hitherto been attempted. As an aperient I gave her pil. hydrarg. gr. iij., fel. bovin. gr. x., at bedtime.

On the 16th, I performed my operation in the usual manner, the patient being under the influence of chloroform. The operation presented no special

features to detail: immediately after it, I ordered two grains of opium, and one grain to be repeated every four hours. In the evening she was rather restless.

17th. Did not sleep last night. Eyes staring; expression wild; catheter introduced every four or five hours. Water-dressing to wound.

19th. Catamenia appeared. Parts looking very healthy; healed externally by the first intention. Complained in the evening of chilliness, and was restless; the face flushed and pulse quick. Omit the opium. Ordered, ℞ spt. ammon. arom. ʒj., mist. camph. ℥j., liq. opii sedativ. ♏ xx., to be taken at once.

20th. Still restless, with quick pulse. Says she has not any pain. ℞ conf. opii gr. v. ter die.

21st. Still feverish, with agitated, unquiet manner. Has hardly slept since the operation. Is thirsty. Tongue nearly clean. ℞ mist. potass. effervesc. ℥j. ter die. In the evening, as she was still without sleep and restless, a grain of acetate of morphia was given.

22nd. Slept well last night. Says she feels better. There is still, however, a restless manner and expression. The superficial sutures removed.

23rd. Passed a restless night. Had shivering this morning, and is now flushed and perspiring. Pulse quick, weak. Manner agitated. ℞ spt. ether. sulph. co. ♏ xv., spt. ammon. arom. ♏ xx., tr. hyoscyam. ʒ ss., mist. camph. ℥j. statim. This draught was repeated at noon, and spt. camph. co. ♏ xxx. ordered at bedtime. At 12 P.M. was sleepless, restless, and anxious; without pain. To have at once a grain of acetate of morphia.

24th. Slept but little last night. The wound this morning shows a tendency to slough. She has no pain nor tenderness of abdomen. Ordered brandy every four hours. Lotio nigra to the wound. R. potass. chlorat. ʒj., tr. cinchonæ f℥j., dec. cinchon. f℥j. ter die.

At four this afternoon had a distinct rigor, which lasted upwards of half an hour, with blueness of face and cold extremities. Pulse 168, small, feeble. Repeat the other draught, and take mixture every three hours. The deep sutures removed.

In the course of the night she became very restless, and the countenance anxious; face congested; abdomen tender on firm pressure being made, especially at the lower part; breathing hurried; expiration attended by a loud creaking noise at the base of both lungs; the heart's action hurried, feeble. Brandy was given freely, but it did not rally her, and she gradually sank, and died about six o'clock.

A post-mortem examination was made. The uterus was enlarged and much inflamed, but contained no pus. The Fallopian tubes were also highly vascular and inflamed, and contained pus, which oozed from their extremities. A small quantity of pus appeared in the pelvic cavity. The peritonæum and the intestines in the lower region of the abdomen were highly vascular. There was a slight serous effusion in the pericardium; a deposit of lymph, and congestion about the base and posterior part of the left lung.

This case suggests the necessity of examining into the previous history and condition of a patient, in determining on the advisability or prospect of success of operation. This poor woman was particularly leuco-phlegmatic, without tone or muscular vigour. Several years ago she had a whitlow lanced, which would not heal until after a sojourn at the seaside for two months; and she at all times exhibited a low vitality. Of these circumstances I was not informed until after her decease.

Case XII.—*Rupture complete: Cure.*—H. W., aged 48, admitted into St. Mary's Hospital July 2nd, 1854. About six months ago, on consulting Mr. World, of the City Road, for great pain and difficulty in passing water, and controlling the bowels, he recognized the fact that her symptoms proceeded from rupture of the perinæum, an accident which had happened a long time previously, but of which she was hitherto unaware. The perinæum proved to be completely torn through, but an imperfect closure of the sphincter ani, by a band of mucous membrane, gave her some slight control over the alvine discharges.

The operation took place on July 20th: opium was given, and the usual after-treatment followed in other respects. On August 24th she was discharged *cured.*

Case XIII.—*Rupture complete: five years' duration: Cure.*—J. A., æt. 27, admitted into St. Mary's Hospital Nov. 20th, 1854, at the recommendation of Mr. Peter Marshall, of Bedford Square: was confined of her first child five years ago; the labour lasted three days. Instruments were at length used; but after her confinement she found she could not control the action of the bowels. Six months afterwards she was operated upon, but, although kept to her bed for nine months, she obtained no relief. Her sufferings have been aggravated by some prolapse of the uterus. Dr. Lee having previously seen and examined her, the operation was performed on the 22nd of November, and she was discharged cured on the 22nd of the following month. At the time of her discharge, and two months after that period, when I examined her, she fancied there was an occasional escape of flatus into the vagina; but, although carefully sought after, no trace of a recto-vaginal aperture could be discovered. Moreover, the patient did not complain of the supposed escape as of the slightest moment to her comfort and well-being.

Case XIV.—*Rupture almost complete, fourteen weeks' duration: Recto-vaginal fistula: Cure.*—M. G., æt. 24, was placed under my care, with the view of being operated upon, by Mr. Harper, of Farringdon Street. The perinæum was ruptured during her first confinement, the expulsion of the child being rapid, fourteen weeks since. She shortly discovered the perinæal injury, and likewise the escape of the fæces and flatus from the rectum into the vagina.

Upon examination, the sphincter ani was found almost entirely torn through, some of its deep fibres only being left. A few lines higher up was a recto-vaginal opening, that had evidently been at first large enough to admit the forefinger, but was now reduced to the size of a probe-point. Besides the discharge of wind, and of fæcal matter, when at all fluid, through the fistula, the uterus prolapsed into the vagina.

December 7th, 1854. The usual operation performed. Mr. Harper and Mr. Hutchinson kindly assisted me. Nothing remarkable occurred in the future history of this case, and recovery followed, and was complete, by the end of December.

Case XV.—*Complete rupture: Cure.*—H. M., æt. 38, sent to me by Dr. Cape; is the mother of two children; the perinæum was torn in her first confinement, which extended over seventeen hours. On examination I found one half of the sphincter gone, and some portion of the recto-vaginal septum; the anus was drawn upwards by the action of the levator ani. Operated on 18th June, 1855, Dr. Cape and Mr. George Brown assisting. On the 22nd, the deep sutures having been removed on the previous day, she felt some

disposition to relieve the bowels ; to obviate this, as the period was too early, I introduced an opium suppository, and also gave her an extra dose by the mouth. This proved effectual, and the bowels were not moved until the 28th. July 11th, Dr. Cape saw the patient with me, and, on a careful examination, the perinæum was found to be perfectly sound and entire, and the sphincter power restored.

This lady was, two years afterwards, attended in her confinement by Dr. Cape, when the perinæum escaped quite uninjured.

Case XVI.—*Complete rupture, twelve weeks' duration : Previous operation : Second operation : Cure.*—E. J., æt. 28, recommended to me by Mr. J. C. Jonson, of Grosvenor Street, Eaton Square, was admitted into St. Mary's Hospital in July, 1855. The perinæum was torn in her first confinement, on the 5th of May, 1855. Two months after the accident her usual surgeon in Manchester operated upon her, but only partially succeeded, as she did not recover control over the evacuations when these were loose, and suffered from partial prolapsus uteri. On examination I found that the operation had succeeded in restoring the anus, but not the perinæum. The patient was weak and low, and complained of some difficulty in passing her water, especially if she retained it for long. This I found arose from weakness of the anterior wall of the vagina, and consequent partial prolapse of the bladder into the vagina.

On July 21st I operated upon her in the usual way. Union took place without one bad symptom, and in a fortnight she left the hospital to stay with a friend in the vicinity until her health should be quite re-established. I subsequently heard from her in September, when she wrote that she was in the enjoyment of excellent health and strength.

This patient has since been twice delivered by my friend, Dr. G. Stephens, of Manchester, and no injury has resulted to the perinæum on either occasion.

Case XVII.—*Rupture complete, six weeks' duration : Prolapsus uteri : Cure.*—Anne C., æt. 25, admitted into Boynton ward Nov. 6th, 1855, with her infant at the breast, was delivered of a female child, feet foremost, after forty-eight hours labour, six weeks previously. The pains were short, but very strong, and much force was used in removing the child. The perinæum was completely torn through, but a fibrous band had formed across the fissure at its posterior extremity, and the control over the evacuations was not completely lost, except when the bowels were loose, and then the fæces escaped involuntarily both through the ruptured perinæum and the vagina ; the uterus also prolapsed. On the 10th of November she was operated on without chloroform, on account of a very weak heart and slow pulse. On the 10th the deep sutures were removed, and on the 12th the superficial. On the 20th firm union had taken place, and she was discharged, cured, on the 2nd of December.

Case XVIII.—*Rupture complete, six months' duration : Cure.*—A. M. B., æt. 21, admitted Nov. 27, 1855, into St. Mary's Hospital. Six months ago was delivered of her first child after a tedious labour. At first she could not retain her urine, but latterly has somewhat recovered that power, though not completely. The fæces pass quite involuntarily whenever the bowels are at all relaxed. The uterus descends lower than is natural.—Nov. 28, operation performed. 30th, deep sutures removed. Dec. 3rd, the superficial withdrawn. 6th, bowels moved. 27th, discharged quite cured.

Case XIX.—*Rupture complete, twenty years' duration: Failure.*—M. D., æt. 65, admitted into Boynton ward Dec. 3rd, 1855. Twenty years ago was delivered of her first child, a breech presentation; from this time she could not retain her fæces when at all fluid. Had a second child eight years afterwards. Twelve months ago the uterus prolapsed, and added much to her sufferings. She is in the habit of taking opium, and, indeed, gets no sleep without it.—Dec. 3rd, usual operation performed. 8th, ulceration about the deep sutures, which were withdrawn. 9th, a good deal of bleeding occurred from the track of one of the sutures. 10th, bowels moved. Jan. 14th, discharged relieved, having gained increased power over the sphincter, although the operation has failed to restore the perinæum. The patient's health was so very bad, and her constitution so impaired, that I determined not to attempt to operate again upon her. She had a slight attack of paraplegia in the hospital after the operation. The passive hæmorrhage from the position of one of the withdrawn sutures was, no doubt, a consequence of the generally morbid state both of her blood and tissues, and itself added to her previous weakness. Her addiction to opium and gin-drinking was not found out until after the operation, otherwise this circumstance, in connection with her bad state of health and her age, would have operated in dissuading me from undertaking it.

Case XX.—*Rupture complete, two years' duration: Cure.*—Mrs. D., æt. 36, has had eleven children. At the birth of the tenth child the perinæum was ruptured, and all control over the bowel lost. An operation was performed with much relief by Mr. Bradley, of Greenwich, in Nov., 1854; but at the birth of the next child the parts gave way, and the patient was reduced to the same state as previously.—Jan. 26th, 1856. Although in the third month of pregnancy, I performed on this patient my usual operation, which by the 20th of February had perfectly succeeded in restoring the perinæum. I heard from Mr. Bradley, in December following, that she had been confined of a large child, and that the fourchette had given way for a short distance, but only required one suture to repair the tear and to make the perinæum again quite sound.

Case XXI.—*Rupture complete, thirty years' duration: Relief.*—Mrs. B., æt. 47, was referred to me by Sir C. Locock. Thirty years ago was delivered of her first child, when the perinæum was ruptured, the control over the bowels partially lost, and incomplete prolapsus of the uterus and bladder induced.—March 21st, 1856. Operated upon as usual, assisted by Dr. Jones and Mr. Laurence. 23rd, removed deep sutures. 25th, superficial removed. Ulceration took place about the sutures and prevented the complete restoration of the perinæum, but she regained power over the sphincter, and the partial prolapse of the womb was remedied. The case was aggravated by a remarkable retraction of the anus, at least two inches higher up than usual—a circumstance due to the patient having been born with an imperforate anus, and to the operation undertaken for its cure. The bladder still prolapses somewhat, and needs another operation to restore it.

Case XXII.—*Rupture complete, sixteen months' duration: Cure.*—Annette M'P., æt. 19, admitted into St. Mary's Hospital May 16th, 1856. Has had two children; perinæum ruptured in her first confinement in January, 1855; instruments used. Perinæum ruptured through sphincter, and control over the alvine evacuations lost.—On the 21st of May the usual operation was performed, under the influence of chloroform. Quill-sutures removed on the 24th, and the interrupted sutures on the 26th. On the 14th

June, she was discharged cured. Perinæum perfectly restored, together with the control over the sphincter.

Case XXIII.—*Rupture complete, sixteen months' duration: Cure.*—A. M., æt. 19, admitted into Boynton ward, St. Mary's Hospital, May 17th, 1856. She was delivered of her first child, with the aid of forceps, sixteen months ago; the perinæum was ruptured, and she entirely lost the control over the sphincter ani.—May 21st. Operated upon in the usual manner. 24th. Deep sutures, and two days after the superficial ones, removed. The bowels relieved on June 5th, and on the 14th she went out quite cured.

Case XXIV.—*Rupture complete, two weeks' duration: Cure: Second operation for recto-vaginal fistula: Subsequent delivery.*—Mrs. B., æt. 28. A fortnight since she was delivered of her first child, with forceps, but the laceration did not appear to occur until the child was propelled against the perinæum by a sudden violent uterine contraction. The fissure extended through the sphincter and far into the recto-vaginal septum. At the time she was seen by me, the torn parts were covered over with mucous membrane; and it was necessary to pare them, just as in an older case. The operation was performed on September 11th, 1856, without chloroform. The bowels were moved on the 26th, and then some fæcal matter escaped through a recto-vaginal fistula. To remedy this, a second operation was performed, and by the 1st of December the perinæum and septum were restored perfectly.

In this case, the proper course would have been to have operated at once upon the occurrence of the injury; but Dr. Murphy having been called in, advised a delay of eight days; a recommendation for which I can see no good reason. The child born to this patient was large, whilst she herself was of small figure, and with a small pelvis: hence I recommended her not to go her full time, but to have labour induced at the end of the seventh month. This advice she neglected, and the perinæum was again ruptured during her confinement in 1858. The record of this and the treatment pursued are given under Case XLVII.

Case XXV.—*Rupture complete, fifteen weeks' duration: Cure.*—Alice M., æt. 17, admitted into St. Mary's Hospital on the 15th of July, 1856. Confined of her first child (a male) on the 30th of March, 1856, after eighteen hours' labour. Attended by a midwife. Perinæum was completely ruptured, and the control lost over the action of the bowels. Operated upon in the usual manner on the 8th of October, chloroform being inhaled. Deep sutures removed on the 10th, and the bowels opened by castor oil and an enema on the 19th. By the 30th she was quite well.

This patient was previously operated upon, but, having been seized on the second day after with scarlet fever, and being seriously ill, it was considered expedient to remove the sutures.

Case XXVI.—*Rupture nearly complete, nearly nine months' duration, with much injury to the rectum: Relief.*—S. C., admitted into St. Mary's Hospital on September 11th, 1856. She was delivered of a large male child on January 28th, 1856, by the aid of instruments. Soon afterwards she found a portion of her motions passed into the vagina, and she suffered excruciating pains. About four months before her confinement she had severe pain in the lumbar region, with frequent tenesmus, agonizing pain in, and discharges of blood and pus from, the rectum. This continued up to the period of her confinement. On examination it was found that a portion of the perinæum and two inches of the rectum had sloughed away, a slight band

of perinæum and a few fibres of sphincter remained. The margin of the rectal laceration was cartilaginous in feeling, and permitted the intrusion of the finger with difficulty.—September 13th. The perinæal band with some fibres of the perinæum were divided, giving the patient much relief in emptying the bowels. On October 29th, the coccygeal attachments of the sphincter and levator ani were divided by subcutaneous incision, and by means of these operations the action of the bowels was unattended by pain, and a degree of comfort afforded to this poor patient, more than she had experienced for many months previously. It was quite impossible to do more ; for no amount of ingenuity could restore the perinæum, and repair the extensive loss of tissue which had taken place. The incisions removed the tension and pain of the parts, and allowed the edges of the fissures to approach nearer and to heal farther up.

Case XXVII.—*Rupture complete, six months' duration: Cure.*—A. M., admitted into St. Mary's Hospital October 7th, 1856. Was confined of her first child (a male), on March 30th last, by a midwife. On the following day she discovered she had lost control over her evacuations ; this has persisted ever since. Oct. 8th. Usual operation performed. On 30th she was discharged quite cured.

Case XXVIII.—*Rupture complete, eight years' duration: Cure.*—Mrs. T., æt. 35. The perinæum was torn during her confinement with her first child, eight years ago, the forceps having been employed ; the laceration was extended at the birth of her second child. The perinæum and sphincter were torn through, and the control over the sphincter ani lost.—Oct. 9th, 1856. This lady lived at Birkenhead, and I performed the operation there, and at this date she had advanced to the second month of pregnancy. On the 11th, Dr. Walker, her usual medical attendant, removed the deep sutures. The bowels were moved on the 25th ; and on the 20th of November she was reported as perfectly cured.

She has since been twice pregnant, and been delivered at the full term without any injury to the restored perinæum.

Case XXIX.—*Rupture complete, twenty-one years' duration: Second operation: Cure.*—L. B., æt. 40, admitted into Boynton ward, St. Mary's Hospital, on October 21st, 1856. Has had eleven children ; was confined of her first twenty-one years ago, after a tedious labour, and has never had proper control over the rectum since. Each successive labour made matters worse.—Oct. 22nd. Performed the usual operation. 24th. Fever and diarrhœa came on, which necessitated the removal of all the sutures, and materially retarded union of the parts. However, after many days' diarrhœa, she sufficiently recovered to leave the hospital, having regained partial power over the evacuations, and having the fissure partially closed. However, when the bowels were relaxed, the fluid fæcal matter escaped, some of it through the rectum into the vagina.

January 13th, 1857. She was re-admitted into the hospital, and on the 16th the operation was performed *de novo*. All went on well, and on the 21st of February she was discharged quite cured.

It turned out on inquiry that she had suffered with diarrhœa for four months previously to her first admission and the first operation.

Case XXX.—*Rupture complete: Cure.*—Mrs. D., æt. 30, came from Baltimore, in the United States, and consulted me on account of suffering from a completely lacerated perinæum, with its usual consequence, the

loss of power to retain the fæces. The accident happened during her fifth confinement, when, as the head of the child became impacted, the forceps were resorted to, and rupture took place during the passage of the head. She was operated upon for this lesion by Dr. Buckle, and all went on well until the bowels were moved, when the recently adherent parts gave way.—On 20th of November, 1856, I operated, and on the 16th of December she passed from my care quite cured, and proceeded to make a tour on the Continent. On her return to London, for a few days, before returning home, I saw this lady, and she complained of occasionally suffering from inability to control the bowels when very relaxed; this, I assured her, time would completely cure.

Case XXXI.—*Rupture almost complete, eight years' duration: Cure.*—Mrs. P., æt. 41, mother of eleven children; all her labours severe, owing to the size of the children. During her eighth labour the perinæum gave way at the moment of the passage of the head over it. Prolapsus uteri supervened and added to her sufferings. The laceration of the perinæum took place eight years ago; but it did not pass through the sphincter. The usual operation performed on the 8th of December, 1856, and resulted in complete restoration of the perinæum by the 24th of the same month, the general health also greatly improved. I had the benefit of the assistance, during the operation, of Mr. Hutchinson, of Oxford-street, and of Mr. Philip Harper.

Case XXXII.—*Rupture complete, four years' duration: Cure.*—Mrs. M. S., æt. 25, came under my care in March, 1857, on Sir C. Locock's recommendation, who stated it was one of the worst cases he had seen. Four years before she was delivered, by the aid of forceps, of her first child, after a tedious labour. Two years after she had a second child, but ever since the birth of the first suffered from a rupture of the perinæum, which deprived her of proper control over the action of the bowels, and indirectly seriously affected her health.—On March 21st I operated, the patient being put under the influence of chloroform. Removed the deep sutures on the evening of the 23rd, and the superficial on the 26th. On the 2nd of April, when the bowels were suffered to act, a small recto-vaginal fissure was discovered, but this was perfectly healed up in another week by the daily application of acetum lyttæ. From this time her recovery advanced, and she regained good health, and was once again enabled to enjoy horse exercise, which she had not been since her first confinement.

Sir Charles Locock examined the patient, and found the integrity of the perinæum restored in the most perfect manner.

In August, 1860, this lady was delivered at 7½ months, by the advice of Sir C. Locock, by Dr. Greame, who wrote me subsequently, in answer to my inquiry, that so perfect was the perinæum, and the absence of all traces of previous laceration, that he felt unable to credit the assertion of the patient that she had ever been so seriously injured as she stated. Moreover, he added, the perinæum continued quite uninjured throughout the labour, although no special precaution was taken to prevent injury. To quote Dr. Greame's own words from his letter, "I could not discover traces of either the original damage you mention or the result of an operation," and "during delivery no great pains were necessary to prevent injury."

I have since heard, from the lady herself, that she is in all respects as well now as before her last confinement.

Case XXXIII.—*Rupture complete: Failure of first operation: Success*

of second.—S. Ll., æt. 28, admitted into St. Mary's Hospital in May, 1857. The perinæum was completely ruptured at the time of her first confinement. Three months ago she was operated upon, but an attack of severe neuralgia with fever came on afterwards, and compelled the removal of the sutures. The consequence was an incomplete restoration of the perinæum and recto-vaginal septum ; I therefore, on May 13th, 1857, passed a bistoury, and divided the imperfect membranous septum between the rectum and vagina, and thereupon performed the ordinary operation, omitting, however, to divide the sphincter ani so deeply as usual. The edges were very carefully pared to remove all condensed cicatrized tissue, as such does not heal satisfactorily. The deep sutures were removed on the 15th, and the superficial on the 19th May. At the end of June the parts were restored. The patient had a feeble constitution, and the reparative process was less active than usual.

Case XXXIV.—*Rupture complete: Duration four years: Cure.*—M. H., æt. 27, admitted into St. Mary's Hospital July 15th, 1857, was delivered of her first child in November, 1853, by a midwife, who hastened the labour, and dragged at the child without waiting for "pains"! In 1855 she was confined with a second child. Ever since her first labour she lost control over the bowels, and, when examined, the perinæum was found torn completely through the sphincter. The operation for restoring the ruptured perinæum was performed on the 1st of July ; the deep sutures removed on the 3rd ; but the superficial ones were let remain until the 20th, as the parts were rather unhealthy, and she required to be sustained by bark and wine. On the 26th of August she was discharged with a sound perinæum, and quite well in every respect.

Case XXXV.—*Rupture complete: Duration thirty years: Cure.*—A. P., æt. 55, admitted into St. Mary's Hospital October 15th, 1857. The perinæum was ruptured thirty years since, in her first confinement, and she has continued to suffer from entire want of control over the evacuations, rendering her life perfectly miserable.—On the 21st of the month she was operated upon ; the deep sutures were removed on the 24th, and the superficial on the 30th. She rapidly recovered, with complete power over the restored sphincter, and a good, firm perinæum. She was discharged cured on the 21st of November.

Case XXXVI.—*Rupture complete: Duration ten years: Cure.*—Mrs. K., æt. 40, sent to me by Sir Charles Locock. The perinæum gave way on the birth of her first child, after a tedious labour, ten years ago. She has since had four children, but from the time of the accident has had but slight control over the bowel ; occasionally, when relaxed, none at all. She has also suffered much from partial prolapse of the womb, leucorrhœa, and profuse menstruation. The sphincter was half destroyed, and the recto-vaginal septum torn to the extent of two inches, in a triangular form. The mucous membrane of the bowel was very lax, and lapped much over the torn edges. This state of things rendered it doubtful if a complete restoration of the parts could be effected by one operation.

On Nov. 3rd, 1857, I therefore determined to repair the torn septum first, and with this object carefully pared the edges of the fissure, at the same time separating the mucous membrane slightly, so as to increase the raw surface, and then introducing three hare-lip pins at short intervals, brought the edges together by silk twisted over the pins in figure-of-8 form. Nov. 6th. I carefully withdrew the needles. There was slight bleeding, but

the parts appeared united. All went on well until the bowels were moved, when the adhesions gave way along a great part of the fissure. As the menstrual period was at hand, I determined to defer operating until that had passed ; but I took the opportunity to pass a ligature around a large mass of relaxed mucous membrane. This much facilitated the subsequent operation, which was undertaken on the 24th Nov. I pared the edges, and denuded the mucous surface of the sides of the vagina and the surface of the recto-vaginal septum, carrying the former farther back than usual, on account of the extent of the fissure. Besides the two deep sutures usually inserted, I passed a third through the mucous membrane of the septum, and fastened it to the posterior of the two others. By this means, when the deep sutures were tied, support was given to the denuded portion of the recto-vaginal septum, and an exact apposition obviating the lax mucous membrane falling between the approximated parts. I divided the sphincter deeply. On the evening of the 26th, the deep sutures were removed. Solid opium produced sickness in this case, and I substituted for it laudanum and chloric ether. The patient being of a weak constitution, and the parts flabby and rather bloodless, she was allowed extra diet, and a bottle of wine in the twenty-four hours. She progressed satisfactorily, but a small aperture remained between the vagina and rectum, covered by a piece of mucous membrane, which acted as a sort of valve. This opening was treated with acetum lyttæ, and became closed so much that nothing passed through it except a little flatus and thin fluid matter, when the bowels were relaxed. The general health of this lady improved very much afterwards ; and she wrote me, several months after her return home, that she was scarcely aware of the presence of any opening, and did not suffer the slightest inconvenience from it.

This was one of the worst cases I have ever met with, owing to the great depth and width of the fissure in the recto-vaginal septum, and the loose, relaxed state of the mucous membrane around.

1859. I have frequently heard from this lady, and she states that she has continued quite well ever since, and is strong and able to take long walks.

Case XXXVII.—*Rupture complete of perinæum, extending into the rectum : Duration ten years : Cure.*—Mrs. B., æt. 40, brought to me by Mr. Ellis, of Sloane-street, at the recommendation of Dr. Henry Bennett. The forceps were used in her first confinement, ten years ago, and the perinæum ruptured. She has had four children subsequently, but has been the victim of frequent uterine disorder, chiefly ulceration and enlargement of the os uteri. She also has never had perfect control over the rectum for the whole eighteen years ; the fæces frequently coming away involuntarily. Not only was the perinæum torn through, but the rent, moreover, extended an inch up the rectum.—On Nov. 4th, 1857, I operated after the usual manner, paring the parts, however, much more deeply, on account of the extent of the fissure. The deep sutures were removed on the 6th ; and, as an erysipelatous condition appeared on the next day, nitrate of silver was rubbed over the parts, and wine with a mixture of nitric acid and bark given frequently. On the 11th, the superficial sutures were removed, and union was advancing favourably. 26th. The perinæum firm, and the power over the sphincter recovered. Dr. H. Bennett examined the parts, and was very much gratified at the success which had attended the operation. Shortly afterwards she returned to her home in North Wales in excellent health, and able again to enjoy walking exercise after ten years' inability to do so, as well as pretty constant confinement to the house and in the recumbent posture. This case indicates, like many others, the dependence of uterine lesion upon ruptured perinæum, and the necessity of healing the latter

before attempting or hoping for the cure of the former. This lady had not been treated by Dr. Bennett for the uterine derangements, but she had for many years been in the hands of another London physician, often for several months at a time, the rupture of the perinæum being overlooked for a long period, and the treatment, therefore, directed to the uterine symptoms, the patient being much tormented by caustic applications to the os uteri. At length the assistant, who applied leeches, discovered the injury; and she subsequently placed herself under the care of Dr. Bennett, who referred her to me.

Case XXXVIII.—*Rupture almost complete: Duration two years: Cure.*—S. C., æt. 42, admitted into St. Mary's Hospital Nov. 23rd, 1857. Has had ten children, the last of which was born two years ago, when the perinæum was ruptured. Has since suffered from incomplete prolapsus uteri, rendering it incumbent upon her to lie down much. When the bowels are relaxed, she is unable to retain the fæces. The perinæum was found torn through, and also the superficial fibres of the sphincter. The uterus almost protruded.—Nov. 25th. The usual operation was performed: on the 28th the deep sutures were removed, and on Dec. 5th the superficial. Dec. 7th. Discharged, with the perinæum perfectly restored, and relieved from the prolapse of the womb.

Case XXXIX.—*Rupture complete, with laceration of the recto-vaginal septum: Prolapse of rectum: Duration thirteen years: Cure.*—C. R., æt. 42, admitted into St. Mary's Hospital March, 1858. She has had three children, the first of which was delivered by craniotomy; the second by forceps; and the last, thirteen years ago, the presentation being abnormal, required to be turned. A few days after this last confinement she discovered the injury, but, although enduring so much misery, she never mentioned it to any medical man until she came under the care of Mr. Spencer Wells, who recommended her to me. On examination, not only was the perinæum and sphincter found torn completely through, but the recto-vaginal septum was lacerated to a great extent; and, to add to her sufferings, the rectum was much prolapsed.

March 8th. The patient being placed under the influence of chloroform, I tied the prolapsed bowel, by passing a needle through three several parts, armed with a double ligature, and carefully tying every portion of the prolapsed coats. She went on very well until the 15th, when severe gastro-enteric irritation, with diarrhœa, supervened, and after the more urgent symptoms were overcome, she was sent home to recruit her health.

May 8th. Re-admitted in good health. The perinæal injury was now taken in hand, and operated upon. In applying the sutures, it was found necessary to draw the deep posterior sutures more tightly than usual, in order to obtain a complete closure of the recto-vaginal septum. Œdema resulted from this very shortly, but was soon subdued by a few punctures. Opium was given as usual, and the catheter introduced and left in the bladder, having a bag suspended to it to catch the urine. As the pulse was feeble, 4 oz. of port wine were ordered daily.

After this date nothing special occurred, and on June 9th she went out of the hospital quite cured; having perfect control over the bowel, and being relieved from all uterine discomfort; restored to a state of health and activity to which she had been a stranger for thirteen years.

Case XL.—*Rupture complete: Duration seven weeks: Cure.*—E. E., æt. 33, admitted into St. Mary's Hospital March 13th, 1858. Seven weeks

ago was delivered of her eighth child, with instruments, after having been in labour for thirty-one hours. A few days subsequently she found that her motions passed involuntarily. The perinæum was torn through, as well as the sphincter, and the recto-vaginal septum to the extent of one inch. The operation performed on March 17th ; the deep sutures withdrawn on the 19th, and the superficial on the 24th. On the 26th, the bowels were opened, and the sphincter acted perfectly. April 16th. Perinæum quite restored. Discharged cured.

Case XLI.—*Rupture complete, with laceration of the rectum : Three operations : Cure.*—Mrs. L., æt. 38, came under my care on April 23rd, 1858. After a labour lasting three days, she was delivered of a dead child, by Dr. Rigby, with the aid of the forceps. The patient being very fat, and the tissues lax, the perinæum gave way, and the laceration extended two inches up the rectum. The parts did not look very healthy, but I decided on operating. Dr. Rigby administered chloroform, and Messrs. Mawer and Musgrave assisted me. I dissected off the unhealthy granulations, and pared the edges of the fissure, and brought them together by sutures of silver wire. I did not, however, attempt to close the rent in the rectum, as the vagina was very sloughy. The fæces passed through the vagina on the second day. On the 25th, I removed the deep sutures. On the 30th, solid and copious evacuations were passed, which tore asunder the adhesions of the perinæum : still the parts granulated healthily. May 13th. I resumed the operation, and pared the edges of the long laceration up the rectum. This was rendered difficult by the bleeding which ensued, and by the rent in the recto-vaginal septum, which extended two inches. However, I succeeded in inserting four silver sutures through the fissure of the rectum, and fastened these, by means of shot, to a piece of lead two inches long and half an inch broad. In ten days' time I removed the plate, and found the union complete. On the 9th of June I operated for ruptured perinæum on the ordinary plan. A greater difficulty than usual was experienced on account of the depth of the laceration. On the 12th the deep sutures were removed, and the surfaces were found united throughout, except a very small place which constituted a recto-vaginal fissure. This was touched with acetum lyttæ, and soon closed up, and the patient was quite restored in every respect at the commencement of July. In November, 1859, she remained quite well, except in being subject to an irritable and loose state of the bowels.

In this case, had the operation been performed at once, how much misery the poor patient would have been spared !

Case XLII.—*Rupture complete, two years' duration : Cure.*—Mrs. W., æt. 28, suffered rupture of the perinæum at the birth of her second child, two years since, and since then has not been able to restrain her motions, and has suffered much from vomiting. Her health, also, has much suffered. The rupture was complete, except that a mucous band was left crossing the fissure at the anterior half of the torn sphincter. Operation performed on March 25th, 1858 ; deep sutures removed on the 27th. She went on uninterruptedly well, but at the end of a fortnight, I found a fistulous opening through the perinæum into the vagina, but this gradually closed up by the application of acetum lyttæ. The perinæum was completely restored, and also the function of the sphincter.

Case XLIII.—*Rupture complete, with laceration of the rectum : Three days' duration : Two operations : Cure.*—Mrs. R., æt. 22, was delivered,

after a tedious labour, by forceps, on June 30th, 1858. Two days afterwards she had no control over the action of the bowels, and on examination the perinæum was found torn through, together with the sphincter and the rectum to the extent of two inches. I proceeded to operate (as in Case XLI.), closing the rectal fissure with silver-wire sutures fixed to a leaden plate. On the tenth day this plate was removed, and the ordinary operation for ruptured perinæum carried out. In this I was assisted by Dr. Parkinson; Mr. Taylor, of Bocking; and Dr. Bozeman, of Montgomery, U.S. In a fortnight from this time she was convalescent, and had regained the normal control over the sphincter ani, and in six weeks from her delivery she was down stairs. The cure was rapid and complete in this instance, notwithstanding the considerable laceration of the rectum, and a copious lochial discharge going on.

Dr. Hodges, of Rochford, has since attended this lady in a confinement, at the full term, and no damage to the perinæum occurred.

Case XLIV.—*Rupture complete: Cure.*—W. B., æt. 41, admitted into the "London Surgical Home" on October 1st, 1858. Has had six children, and ever since the birth of the first has suffered from much dragging of the uterus and debility. She hurt herself about nine months ago by lifting a heavy weight, and afterwards had severe flooding. I found the perinæum torn through the sphincter, leaving, however, a few fibres of that muscle. Oct. 4th. The usual operation performed; iron wire sutures being used instead of twine. At the end of a month she was discharged with a firm and sound perinæum, and perfect control over the alvine evacuations.

Case XLV.—*Rupture complete: Cure.*—H. B., æt. 23, admitted into St. Mary's Hospital on October 2nd, 1858, was delivered of a dead child, by forceps, after being in labour for three days, a midwife having attended her. When she got about, she found she had very imperfect control over the rectum, and suffered much from bearing down of the uterus. The perinæum was found lacerated, and two-thirds of the sphincter torn across. Oct. 6th. The usual operation was performed; wire sutures being employed in place of twine. On Nov. 6th she was discharged perfectly cured.

Case XLVI.—*Rupture complete: Cure.*—S. P., æt. 31, admitted into St. Mary's Hospital on Nov. 26th, 1858. Has eight children. Her last labour lasted two days, and was terminated by instruments. Soon after, she discovered her inability to control the evacuations. On examination, I found the perinæum torn through, and the anterior fibres of the sphincter destroyed. A mucous band assisted in completing the circle around the anal orifice. Dec. 1st. Performed the usual operation. Perfect recovery was effected by the end of the month.

Case XLVII.—*Rupture complete, one month's duration: Cure.*—Mrs. B., æt. 30, admitted into the "London Surgical Home" on December 27th, 1858. She had her perinæum ruptured with her first child, and her case has already appeared (*see* Case XXIV.). The previous operation took place in September, 1856, and restored the integrity of the perinæum. Taking into consideration her general figure and the extremely large size of the head of her first child, I recommended her, when she passed from my hands, to have labour induced at the seventh month, instead of going her full time. This advice, however, she did not follow, and on her next confinement, in November, 1858, with a large male child, the perinæum gave way its whole length, so that the recto-vaginal septum was lacerated more deeply than usual.

Dec. 31st, 1858. I performed my usual operation, but, owing to the depth of the fissure, had much difficulty in getting the edges into apposition. Healing, however, proceeded very favourably, except at a small spot, where it was imperfect, and left a recto-vaginal fistula. This little aperture, however, was of no further annoyance than that it allowed the occasional escape of a little flatus. The sphincter was quite restored to its function.

Case XLVIII.—*Rupture complete, five weeks' duration: Cure.*—M. M., admitted into the "London Surgical Home" on January 21st, 1859. She was delivered of her first child five weeks previously, after three days' labour, and with the aid of instruments. When Mr. Godfrey, of Herne Bay, saw her, he found one arm through the anus and the vertex presenting. The rupture of the perinæum was therefore inevitable, and the laceration extended into the rectum. January 22nd. Performed the usual operation. The parts afterwards looked flabby and unhealthy, but under the use of opium, of nitric acid and bark, and good diet with wine, the granulations became healthy, and she was quite cured at the end of a month. This patient was subsequently delivered by Mr. Godfrey, when the perinæum, which, as that gentleman described it, was like soaked pasteboard and perfectly undilatable, gave way through its entire length. This patient should, when the perinæum is again restored, be delivered in any future labour at the end of the seventh month.

Case XLIX.—*Rupture complete: Cure.*—C. E., æt. 26, admitted into the "London Surgical Home," March, 1859. The perinæum was ruptured during her first labour, which lasted two and a half days, and was terminated by instruments. At the commencement she was attended by a midwife. The power over the sphincter was lost, and incontinence of urine also supervened. Five weeks ago was confined of a second child. I found the rupture of the perinæum extended through the sphincter, but only a short distance into the bowel. On March 17th I performed the usual operation. All went on well until April 4th, when she had an attack of rheumatic fever; this yielded to treatment, but retarded her convalescence from the operation.

Case L.—*Rupture incomplete—Rectocele: Cure.*—Mrs. D. The perinæum was ruptured up to, but not through the sphincter; a skin union had taken place for about an inch in front of the anus, so that on a casual examination her perinæum might appear entire. A tumour also was felt pressing into the vagina, and partially protruding through the labia, which proved to be the rectum pressed forwards. She had constant bearing down, and difficult defæcation. The os uteri was enlarged and ulcerated. March 18th, 1859. The usual operation was carried out; she progressed very satisfactorily, and at the end of a month was quite restored.

Case LI.—*Rupture complete, eight years' duration: Pyæmia: Death.*—Mrs. S., æt. 28. In her first confinement, eight and a half years since, the perinæum was torn through the sphincter. No instruments were used. She has had three children since. The alvine evacuations escape involuntarily when at all fluid. April 12th, 1859. I performed my usual operation. Among others present were Messrs. Turner, of Brighton, and Wilkins, of Norwood. On the 13th appearances of sloughing showed themselves, and great restlessness. I now learned that she had been in the habit, for many years, of taking laudanum to keep the bowels quiet, and so prevent involuntary alvine discharges. This explained the failure of the two grains of opium I administered after the operation, as well as of the one-grain dose

repeated on three occasions, to produce any effect. The next day the sloughing was extending, and I removed the deep sutures. To sum up the details in as few words as possible, the sloughs, which had formed along the cut edges of the perinæum, separated ; and under a tonic and generous regimen, granulations sprang up, and bade fair to close up the laceration. However, the powers of the patient proved unequal to the task, and no considerable progress in restoration was made. Three weeks after the operation she began to complain of great pain in the right shoulder-joint, which became very tender and much swollen. The tongue was dry and red, and much restlessness was present with well-marked rigors. A few days subsequently the left hip became similarly affected, then the knee, and afterwards the right hip. Six weeks after the operation (with the concurrence and assistance of Sir C. Locock and Mr. Fergusson, each of whom daily saw the patient with me), I opened the abscess which had formed in the hip, and let out two pints of unhealthy pus. The other hip required the same treatment a few days afterwards, and from both about a pint of unhealthy pus was discharged daily. Afterwards the pus was replaced by hæmorrhage from both hips, which proved intractable, and induced fatal exhaustion seven weeks after the operation.

Had I known that this patient had been accustomed to the daily use of laudanum for many years, I should have delayed operating for several weeks at least, and have placed her under medical treatment to improve her health and constitution. Had this been done, I feel confident she would not have died ; and much blame must attach to the friends of the patient for withholding that information which might have saved her life. I need not say that in every subsequent case I have made it my business to inquire minutely into the habits of patients, and particularly with reference to this habit of opium-taking.

Case LII. *Rupture complete : Cure.*—Mrs. M., brought under my care by Mr. Warwick, of Southwell, at the recommendation of Sir C. Locock. The perinæum was lacerated eight years ago, but not by instruments ; and since then she has had no control over the rectum when there has been looseness of the bowels. The rupture had extended through the sphincter, but a mucofibrous band had stretched across it, and completed the circle of the anus. May 11th, 1859. The usual operation was performed, and within a fortnight perfect union had taken place, with perfect control even over the flatus. She has continued quite well ever since.

Case LIII.—*Rupture complete, eleven years' duration : Cure.*—Mrs. H., æt. 35, came under my care at the recommendation of Sir C. Locock and Mr. Harvey. Eleven years ago, after a long labour with her first child, the child and placenta were expelled simultaneously. Since that period she has had no control over her bowels when relaxed, and seldom over the flatus : has had six children since. The rupture of the perinæum involved the destruction of half the sphincter. There was great retraction of the anus. June 21st, 1859. Performed my usual operation. Mr. Smith, of Redditch (the patient's ordinary attendant), Mr. Evans, of Torquay, and Mr. Harvey, with others, being present. The case proceeded without an unfavourable symptom, and a complete restoration of the perinæum was accomplished.

In July, 1860, she was again confined. Mr. Smith, of Redditch, attended her. The labour passed off very well, without any injury to the restored perinæum—a circumstance which I was able to confirm by an examination of the part ; but at a subsequent delivery, before Mr. Smith could arrive, the perinæum was again torn.

CASE LIV.—*Rupture complete, five years' duration: Cure.*—Mrs. N., of Birkenhead, was recommended to me by Mr. Godden; she is 27 years old, and mother of three children. Five years ago she was confined of her first child: before assistance was procured the perinæum was lacerated, and ever since she has been almost constantly confined to the sofa, unable to take her place at table from having no power over the action of the bowels. Her health has also suffered much, and she is thin and depressed in spirits. Mr. Godden, Dr. G. Walker, and two other surgeons of Birkenhead, were present at the operation, which took place on September 7th, 1859. The deep sutures were removed on the evening of the second day: the bowels opened on the fourteenth day. After the bowels were relieved she could hold the injection for some time, and in a month she regained almost complete power over the sphincter. Her health and strength improved wonderfully, and she gained in flesh, "and appeared (as Mr. Godden reported to me in December) better than he had ever seen her before."

She subsequently complained of a little flatus escaping into the vagina, and, on a careful examination, I found a very small fistulous aperture covered by a fold of mucous membrane; this, after denuding the edges, I closed by a single silver suture, and completely relieved her from this small source of discomfort.

CASE LV.—*Rupture complete: Duration one year: Cure.*—C. A., æt. 24, admitted into the "London Surgical Home" October 24th, 1859. Had a tedious labour last November, ending with rupture of the perinæum. No instruments were used. There has since been much bearing down of the uterus, and a want of power over the escape of the alvine evacuations. The laceration extended completely through the perinæum, and a short distance into the rectum. October 27th. Usual operation performed. Nov. 3rd. Union had taken place throughout the whole length of the perinæum; and, at the end of the month, she was discharged completely cured.

CASE LVI.—*Rupture complete: Pyæmia: Death.*—F. G., æt. 21, admitted into the "London Surgical Home" Nov. 1859; a tedious labour of fourteen hours with her first child was terminated by the use of instruments, and the perinæum gave way. She was operated upon in the country three weeks subsequently, but with no material benefit. The perinæum proved to be torn through, with the sphincter also, and the usual concomitant, the loss of power over the bowels, had followed. Nov. 10th. Usual operation performed. 16th. Was slightly delirious during the night; the countenance became anxious, and the pulse increased in rapidity. The wine and nourishment were increased, and opium, ether, ammonia, and bark were administered. On the 18th, has been very sleepless; pulse weak, intermitting, and scarcely to be counted; countenance very anxious; delirium and restlessness. The parts operated on are healing well and firmly. 19th. Got lower: a typhoid state appeared, and she sank on the morning of the 20th.—She was in a weak state when admitted, having just weaned a child. In another such case I should delay the operation for some weeks, to give time to improve the general health and strength, and until all traces of milk had left the breasts. In the case just given, the patient had come from an agueish district of Kent.

CASE LVII.—*Rupture complete, four months' duration: Cure: Subsequent laceration: Second operation immediately after the accident: Cure.*—Mrs. J., æt. 27. The uterine contractions being too weak, her first labour was prolonged for sixty hours, when turning was practised; but as the arms were

being brought through the os externum, the perinæum gave way in its entire length, the laceration, moreover, extending through the sphincter into the rectum. This happened in December, 1859, and involved the common consequences, loss of sphincter control, &c. April 7th, 1860. The usual operation was proceeded with satisfactorily. The deep sutures were removed at the end of fifty-six hours ; the bowels moved on the 20th, and the sphincter power was found to be regained. She soon after became quite restored.

At the time of the operation she was two months advanced in pregnancy ; and on the 26th of November following, labour came on at 12 P.M., and was over at 9 A.M. The smallness of the pelvic outlet, and the circumstance of the funis being wound around the child, conspired to prevent the passage of the child beneath the pubic arch, and the perinæum became torn as far back as the sphincter, not through it. I immediately introduced two deep and two superficial sutures ; and having thus brought the parts into accurate apposition, enjoined perfect rest, and carried out the usual after-treatment. The sutures were removed on the second day, and the parts found entirely united. This was one of those cases where no child of the ordinary size could be born without involving laceration of the perinæum ; therefore no blame could attach to the surgeon who attended her in her first confinement, for then precisely the same state of things must have existed.

CASE LVIII.—*Rupture almost complete, two years' duration : Cure.*—Mrs. B., æt. 37, was placed under my care by Mr. George Reece. In her second labour, in June, 1858, delivery took place before the arrival of her medical attendant ; the perinæum was ruptured, and she was deprived of the power of retaining the alvine evacuations except when these were constipated. The laceration had passed through the whole length of the perinæum, and partly through the sphincter.

This patient came under my care in May, 1860, when I carried out my usual operation with complete success. On the third day following I removed the sutures, and the union of the parts proceeded very favourably. She soon recovered, with a sound perinæum and complete sphincter power. I saw her some months afterwards, and was glad to learn that she remained quite well in every respect.

CASE LIX.—*Rupture complete : Cure.*—E. D., admitted into the "London Surgical Home" June 14th, 1860. Since her first confinement, five years ago, which lasted ten hours, but was suddenly terminated, and caused laceration of the perinæum, she has never been able to control the alvine evacuations. Two years afterwards, however, she had a second child. On examination, the rupture was found to have extended through the sphincter.

June 21st. The ordinary operation was performed. 23rd. Deep sutures removed. The patient progressed favourably, and went out, quite cured, on the 21st of July.

CASE LX.—*Rupture complete : Cure.*—A. B., æt. 42, admitted into the "London Surgical Home" June 16th, 1860. Has had ten children. In her last labour, five years ago, she was attended by a midwife : the perinæum was lacerated, and the power over the sphincter ani lost to a considerable degree. The laceration I found to be complete.

June 21st. I performed my usual operation ; on the 23rd the deep sutures were removed. The healing advanced most kindly, and on the 28th of July she was discharged completely cured.

CASE LXI.—*Rupture complete : Cure.*—Mrs. L., æt. 26, sent to me by

Mr. Priest, of Waltham Abbey. Her fourth labour was very rapid, and the child was propelled through the external parts into the chamber utensil on which she was sitting before any assistance could be obtained. Sixteen months from the date of this occurrence she came under my care for operation, being sadly distressed by the laceration, as it deprived her of control over the alvine evacuations. The usual operation was carried out on July 15th, 1860. On the third day afterwards the deep sutures were removed. Union took place very favourably, and she recovered within a month from the date of the operation, with a perfectly restored perinæum and sphincter power. In November, 1860, I had the opportunity to ascertain that the restored parts were still perfect.

Case LXII.—*Rupture complete, two years and a half duration: Result incomplete.*—Mrs. R., æt. 33, was confined of her first child in February, 1858, with a breech presentation. After her labour she found she could not retain the fæces, but some improvement afterwards took place in this respect, dependent on a partial adhesion of the sides of the divided sphincter by means of a muco-fibrous band. On the 6th of August, 1860, at 5 A.M., she was delivered, by the aid of forceps, of another child, a male; this band gave way, and the rent extended itself an inch up the rectum. At half-past 3 on the same day I operated in my customary manner, assisted by my brother, Mr. George Brown, and Mr. Harper. On the 11th, the deep sutures were removed. The perinæum did not heal up perfectly, but a very small aperture was left about its middle, having no communication, however, with the rectum. This will be readily cured when she has done suckling, against which time I am waiting.

Case LXIII.—*Rupture complete, with vesico-vaginal fistula: Cure.*—E. B., æt. 41, admitted into the "London Surgical Home" July 30th, 1860. Has had thirteen children. Her last labour, on the 1st of April last, was prolonged fifty-two hours, and was terminated by craniotomy. She was very ill after the confinement, suffered with diarrhœa, and discovered that the fluid evacuations escaped involuntarily. The same thing has happened ever since, when the bowels have been loose. An examination showed the perinæum to be ruptured through the sphincter, and that the laceration extended a short distance into the bowel. There was also a large vesico-vaginal fistula. The patient was in so weak a state that I kept her for several weeks under medical treatment, and gave her steel and bark to improve her health. I likewise made the closure of the vesico-vaginal opening a preliminary affair. Being now in very fair health, I operated on the 18th of October in the usual fashion. On the 20th, removed the deep sutures. On the 27th, the bowels were moved by half an ounce of castor oil, and she found she could control the evacuations. Nov. 12th. Left the Home quite cured.

Case LXIV.—*Rupture complete: Immediate operation: Cure.*—Mrs. G. I was sent for by the husband of this lady, a medical man residing in St. John's Wood. She had just been delivered of her first child. The uterus had refilled from internal hæmorrhage, and the perinæum was completely ruptured. I immediately put in two deep quill, then two interrupted sutures, and divided the sphincter. One grain of opium was given immediately; to be repeated every six hours.

The laceration had taken place by the onset of powerful uterine contractions, after previous inefficient ones, and during the temporary absence

of the surgeon. The cord was twisted around the neck of the child, but it was not till the shoulders passed that the perinæum gave way.

Dec. 30th. Has passed a good night. Catheter used every six or seven hours. To take beef-tea and milk. Jan. 1st. Quill sutures removed; strong adhesion of united surfaces. 4th. Opium discontinued; a dose of castor oil this morning, followed by an enema, relieved the bowels without injury to the restored parts. 5th. Is convalescent: sphincter power complete.

I subsequently delivered this lady of a child at the full period, and no rupture of the perinæum took place, and she has ever since had a perfect control over the sphincter.

CASE LXV.—*Rupture nearly complete from abnormal condition of perinæum: Immediate operation: Subsequent delivery: Cure.*—Mrs. D., æt. 35, was delivered of her first child, after forty-eight hours' continued labour, the perinæum all the while having the character of soaked pasteboard, and being unyielding. No amount of grease and fomentation availed anything; and, during the escape of the head, the perinæum gave way in its entire length, and with it also the superficial fibres of the sphincter ani.

On the completion of delivery, I at once applied sutures, but did *not* divide the sphincter. The perinæal tissues united superficially, but some of the untorn deep fibres of the sphincter kept up a constant dragging, and a tendency to retraction of the united parts, the consequence of which was a very prolonged case, and it was not till after two months that the perinæum was firmly and entirely restored.

August 27th, 1852, I was summoned to this patient in labour at 2 A.M., and found the os uteri the size of a shilling, thin, but dilatable, and the bag of waters protruding. The perinæum was very thick and unyielding. I determined to wait, and to make an examination but seldom.

At 3 A.M., the bag presented at the os externum; at a quarter-past, the waters escaped, and the head of the child then descended on the perinæum. A crescent-like band was now felt stretched across the vagina in the position of the constrictor vaginæ, very unyielding and tense, like a catgut cord, resisting the advance of the head. It was clear, therefore, that unless great care was used, and the opposition removed, the head would tear through the perinæum between this transverse band and the sphincter ani, especially as the pains now came on forcibly. I therefore gave chloroform: this quickly relaxed the band, and then gradually tearing through its extremities with my forefinger, the necessary dilatation of the canal was obtained. Still keeping the patient under the action of chloroform, I pressed with my left hand against the head, so as to direct it downwards and forwards, whilst by means of the two forefingers of my right hand underneath, the head was prevented from pushing against and stretching the transverse band. The result of these proceedings was most satisfactory, for by half-past four the head passed, and afterwards the shoulders and body without the slightest laceration, though the child—a male—was above the average size.

This case affords a good illustration of the fifth proposition.

CASE LXVI.—*Complete rupture of the perinæum: Immediate operation: Subsequent delivery: Cure.*—Mrs. V., æt. 29, came under my care in her first confinement, in October, 1851. She had been in strong labour for twenty-four hours, and the practitioner in charge of the case had just previously to my arrival used the forceps, and the perinæum and the superficial fibres of the sphincter ani were ruptured.

I at once proceeded with the operation to bring together the edges of the fissure by the quill sutures: but having with me no bougies for the purpose,

I was compelled to employ instead pieces of lint tightly rolled up. I did not in this instance divide the sphincter, which omission I afterwards regretted, as union was much slower than it would have been if I had done so. However, the case did perfectly well, and a sound perinæum was restored.

On November 12th, 1852, I attended this lady in her second confinement. The labour was natural; the bag of waters remained entire until the complete expansion of the os uteri; there was a copious secretion to lubricate the parts, and the perinæum yielding kindly, the child was safely born without the least laceration.

This case again, therefore, satisfactorily illustrates the second and third propositions.

Case LXVII.—*Rupture nearly complete: Immediate operation: Cure.*—J.R., æt. 30. After being in labour for forty-eight hours, the forceps were applied, but before traction was made a sudden pain expelled the child, causing the perinæum to give way before it. This occurred on August 24th, 1856, when, as I was out of town, my friend and assistant Mr. Philip Harper went in my stead, and performed the usual operation at three o'clock, six hours after the accident. The patient went on very well, and on the 30th she was quite cured.

Case LXVIII.—*Rupture complete: Immediate operation: Cure.*—Mrs. L. N. Labour commenced, with her first child, on the 15th of January, 1860, but she did not send for medical aid until the 17th; when the application of the forceps was found necessary. During the withdrawal of the head, the perinæum was torn through the sphincter ani and as much as half an inch up the rectum.

Having been called in eighteen hours after the accident, I operated in the usual manner, using silver wire, however, for both sets of sutures. On the 22nd January I removed the deep sutures, and from this date everything went on so favourably as to offer nothing for particular remark. The restoration of the sphincter and perinæum was completed within a month from the date of the operation.

Case LXIX.—*Rupture complete: Operation on fifth day after the accident: Parts unhealthy: Cure.*—Mrs. M., æt. 38, on June 7th, 1855, came under my care at the recommendation of Dr. Jones, of Manchester Square. She had a difficult labour; the forceps were applied, a sudden pain came on and drove the child and instruments through the external parts, causing laceration. This happened before Dr. Jones saw her. On examining her five days after the injury, I found the parts œdematous and unhealthy, and the labia much swollen; the lochial discharge considerable, and the milk decreasing.

The patient was most anxious to have something done for her relief at once. I explained to her, that from her present state and the condition of the parts, there could be but small hope of success, and that should an operation be attempted, it would be unadvisable, in her weak state, to administer chloroform. I could not, therefore, recommend operative proceedings at present. Still I did not see cause for apprehending increased mischief from an operation, and as she still pressed it upon me I yielded, and proceeded forthwith, omitting, however, the inhalation of chloroform. The edges were pared, and two deep and three interrupted sutures introduced. Dr. Jones and Mr. Lawrence assisted me. On the 9th, the parts looked healthy, and the deep sutures were removed. She went on satisfactorily, and on the 15th the edges had completely united. On the 22nd, the improvement in her general

health was very marked, although she had continued to suckle her child ; the bowels acted regularly, and she very shortly became quite convalescent.

CASE LXX.—*Complete rupture of perinæum, six weeks' duration : Operation : Cure.*—F. N., æt. 38, admitted into the "London Surgical Home." Confined six weeks ago of a still-born child. Married six years. Has lost all control over her motions. Examination showed complete rupture of the perinæum. June 4th. Operation as usual. 6th. Deep sutures removed. 10th. Superficial sutures removed. July 7th. Discharged quite well.

CASE LXXI.—*Complete rupture of perinæum, with prolapsus uteri, thirteen years' duration : Operation : Cure.*—M. A., æt. 35, admitted into the "London Surgical Home." Has been a widow ten years, had three children, and her perinæum was ruptured thirteen years ago. On examination, the perinæum was found ruptured, and the uterus prolapsed. April 7th. Usual operation performed. May 16th. Discharged quite well.

CASE LXXII.—*Complete rupture of perinæum, two years' duration : Operation : Cure.*—J. W., æt. 27, admitted into the "London Surgical Home." Married three years. Instruments were used in her first and only labour, which lasted three days and a half, and happened two years ago. Has no control over her motions. Examination showed complete rupture of the perinæum. May 12th. Operation as usual. June 21st. Discharged quite well.

CASE LXXIII.—*Complete rupture of the perinæum, ten years' duration : Operation : Cure.*—A. C., admitted into the "London Surgical Home." Married twelve years ; two children ; the last born ten years since. Instruments were used at her first confinement, but not at the last, which was easy. She, however, says the injury was done in her last labour. The perinæum was completely ruptured. May 12th. The usual operation. June 20th. Discharged quite well.

CASE LXXIV.—*Complete rupture of perinæum, three years' duration : Operation : Cure.*—M. B., æt. 26, admitted into the "London Surgical Home." Married four years ; two children. First confinement, three years ago, lasted forty-eight hours. Instruments were used. Has no control over her motions. Examination showed the perinæum to be completely ruptured. May 12th. Operation as usual. June 4th. Discharged quite well, having made a very rapid recovery.

CASE LXXV.—*Complete rupture, six weeks' duration : Operation : Cure.*—L. J., æt. 25, admitted into the "London Surgical Home." Married one year ; confined six weeks since of a male child by a midwife. Has not the slightest control over her fæces. The perinæum was completely ruptured, and a portion of the placenta still adherent. July 7th. Operation as usual. July 30th. Discharged cured.

CASE LXXVI.—*Complete rupture, five months' duration, with fissure of the rectum : Operation : Cure.*—L. G., æt. 29, admitted into the "London Surgical Home." Married twelve months. Five months ago delivered of a child prematurely ; shoulder presentation. Has but partial control over rectum and bladder. Examination showed the perinæum completely ruptured up to, but not through, the sphincter, and a painful fissure of the

rectum. November 25th. Usual operation for the ruptured perinæum, and the fissure of the rectum divided. December 14th. Discharged quite well.

CASE LXXVII.—*Complete rupture of perinæum, five years' duration: Operation: Cure.*—C. L., æt. 34, admitted into the "London Surgical Home." Married seven years; three children; the second born when at stool. It was at this time that the accident happened. Examination showed complete rupture of the perinæum. December 22nd. Usual operation. January 20th, 1865. Discharged cured.

CASE LXXVIII.—*Complete rupture of perinæum, two months' duration: Operation: Cure.*—Mrs. S. L., æt. 23. Admitted into the "London Surgical Home" April, 1861. Was confined two months since; the labour only lasted twenty hours, and she was delivered without instruments. Has no control over her motions if at all relaxed. The rupture was found to extend through the whole perinæum and half the sphincter, only a cicatrized band supplying its place. April 25th. Operation performed in the usual manner. Deep sutures removed on the third day. Superficial sutures removed on the eighth day. The patient was discharged May 30th, with a perfectly sound perinæum.

CASE LXXIX.—*Complete rupture of perinæum, two years' duration: Operation: Cure.*—Mrs. A. E. S., æt. 35 years. Admitted into the "London Surgical Home" April, 1861. Was delivered two years ago of a dead child, with instruments, after three days' active labour. Was very ill for many months afterwards. Has never had any control over her motions from that time. The sphincter was found to be completely torn through. April 12th. Operation as usual; three deep sutures were required. Deep sutures removed on third day; superficial ditto on the 10th. Notwithstanding a severe attack of diarrhœa, she was discharged cured at the end of six weeks.

CASE LXXX.—*Complete rupture of perinæum and prolapsus uteri, twelve years' duration: Operation: Cure.*—Mrs. C. B., æt. 34. Admitted into the "London Surgical Home" February, 1861. Accident happened to her twelve years ago, in her first labour. Was attended by a midwife; the labour being quick and natural. Has since had four labours, all very easy. Has not the least control over her bowels. The sphincter ani was completely torn through and the uterus prolapsed. February 21st, 1861. The operation was performed as usual. Deep sutures removed on third day. Superficial sutures removed on twelfth day. On the fifth day the bowels were opened by castor oil, with perfect control over the motions. April 16th. Discharged cured.

CASE LXXXI.—*Complete rupture of the perinæum, three months' duration: Operation: Cure.*—M. J. K., æt. 27. Admitted into the "London Surgical Home." Married a year, and confined of her first child three months ago. Was in labour about twenty-four hours, and a month afterwards found that she had lost all control over her motions. On examination, the perinæum was found completely ruptured through the sphincter. May 14th. Operation as usual. Deep sutures removed on third day; superficial on seventh. June 30th. Discharged with complete power over the bowel.

CASE LXXXII.—*Complete rupture of perinæum, four months' duration: Operation: Cure.*—M. J. D., æt. 28. Admitted into the "London Surgical Home." Has been married eight years, and had three children. The last born

four months since. Was two days and a night in labour. Has no control over her motions. The perinæum was found completely ruptured, with only a small mucous band in place of the sphincter. April 30th. The usual operation. Deep sutures removed on third day; superficial on the seventh. June 1st. Discharged cured.

Case LXXXIII.—*Complete rupture of perinæum, six years' duration: Operation: Cure.*—Mrs. M. A. Q., æt. 34. Admitted into the "London Surgical Home" April 27th, 1863. Has been married sixteen years. Perinæum was ruptured six years ago, at birth of second child, after a labour which lasted two days and a half. Has no control over her motions. On examination, the perinæum was seen to be ruptured completely through the sphincter. May 7th. The usual operation. Deep sutures removed on third day; superficial on seventh day. June 6th. Left quite well.

Case LXXXIV.—*Complete rupture of the perinæum, nine years' duration: Operation: Cure.*—Mrs. C. G., æt. 32. Admitted into the "London Surgical Home" March 17th, 1863. Has been married twelve years, and had two children, the last born nine years ago. Labour short, easy, and natural; but has been unable to retain her motions since that time. On examination, the perinæum was found completely ruptured through the sphincter. March 19th. Operation as usual. Deep sutures removed on the third day; superficial on the seventh day. Discharged April 22nd, perfectly well.

Case LXXXV.—*Complete rupture of perinæum, three years' duration: Operation: Cure.*—Mrs. B., æt. 32. Admitted into the "London Surgical Home" June 30th, 1862. Her second confinement took place three years ago. The child was very large, and born after four hours' labour. Since she left her bed has had no control over her motions. Has had one child since the accident. Examination showed the perinæum and sphincter completely ruptured. The patient was very emaciated, and required preliminary treatment. July 17th. Operation as usual. Deep sutures removed on the third day; superficial on the seventh day. August 14th. Discharged quite cured, and very much improved in her general health.

Case LXXXVI.—*Complete rupture of the perinæum, three years' and a half duration: Operation: Cure.*—Mrs. V., æt. 35, admitted into the "London Surgical Home" June 23rd, 1862. Three years and a half since was confined of her first child. Was in labour sixteen hours, during fourteen of which she states that the head was partly born. No instruments were used, and the child was alive. Has never retained her motions since that time. Examination showed the perinæum completely torn through, as well as the sphincter ani, a mucous band only existing. July 10th. Operation as usual. Deep sutures removed on the third; superficial on the sixth day. August 5th. Discharged quite well, and with perfect control over her motions.

Case LXXXVII.—*Complete rupture of perinæum, with vaginal rectocele and cystocele, twenty-two years' duration: Operation: Cure.*—Mrs. A. W., æt. 52, admitted into the "London Surgical Home" December, 1861. Delivered of her first and only child twenty-two years ago; has since had no control over her motions, and suffers from leucorrhœa, bearing down of the womb, and pain, both on defæcation and micturition. On examination, both the bladder and rectum were seen protruding, and the sphincter completely torn through. Dec. 19th. Operation as usual. Deep sutures removed on third; superficial on ninth day. On twelfth day bowels opened naturally, without

pain, and with perfect control. January 22nd, 1862. Discharged quite well in every respect.

CASE LXXXVIII.—*Complete rupture of perinæum, but not through the sphincter, two months' duration: Operation: Cure.*—Mrs. M. H., æt. 32, admitted into the "London Surgical Home" March, 1861. Three years since was delivered of her first child, without instruments, after a labour of twenty-four hours. The perinæum, however, was ruptured. She was operated on, and made a good recovery, but suffered from prolapse of the womb. Was delivered three months since of a second child, after a labour of five hours. The perinæum was again torn. On examination, there was found nothing between the vagina and anus but a tight cicatrized band of no thickness. The sphincter was not torn. April 3rd, 1862. Operation as usual; the patient was suckling, and continued to do so. Was discharged perfectly cured three weeks after the operation. This case is remarkable, as the suckling did not interfere with the progress of the case.

CASE LXXXIX.—*Complete rupture of perinæum, eighteen months' duration: Operation: Cure.*—Mrs. R., æt. 22, admitted into the "London Surgical Home" November, 1861. Was delivered of a live female child by forceps, eighteen months since, having been in labour fifty-six hours. The child was of normal size, but the head large. Has had no control over her motions since that time unless they are very constipated. Suffers very much from pain in the back. Examination showed the sphincter completely torn through. December 5th, 1861. Operation performed in the usual manner. Deep sutures removed on the third; superficial on the fourteenth day. Bowels opened by castor oil on the nineteenth day, with perfect control. December 27th. Discharged cured.

CASE XC.—*Complete rupture of perinæum, fifteen years' duration: Operation: Cure.*—Mrs. C. G., æt. 39, admitted into the "London Surgical Home" October, 1861. First confinement took place fifteen years ago: delivered by forceps after three days of hard labour. One eye of the child was lost by the application of the instruments. Has had nine children since that time. All her motions have passed *per vaginam* since her first confinement. On examination, the sphincter was seen completely lacerated. October 24th. The usual operation. Deep sutures removed on the third; superficial on the twelfth day. Discharged cured, November 28th.

CASE XCI.—*Complete rupture of perinæum, eleven years' duration: Operation: Cure.*—Mrs. B., æt. 37, came under my care September 17, 1863, by the recommendation of Dr. Lipscombe, of St. Albans. Had been married twelve years, and had nine children. Had no control over her motions since her first confinement, many years ago. Examination showed a very severe form of ruptured perinæum, as bad as it possibly could be. October 14th. I performed my usual operation, Dr. Lipscombe and other gentlemen assisting me. She made a capital recovery, and was quite well in less than a month after the operation.

CASE XCII.—*Complete rupture of perinæum: Operation: Cure.*—Mrs. C., æt. 27, came under my care from Liverpool, October 13th, 1863. Mother of three children. Perinæum ruptured in last confinement. Examination showed the perinæum to be torn completely through the sphincter. I performed my usual operation. On the second day severe rigor and rapid pulse, indicating pyæmia, occurred. Having induced perspiration, I gave quinine, and the patient rapidly recovered. I found afterwards, that before each

menstrual epoch a similar rigor took place. She was quite well in a month after operation.

CASE XCIII.—*Complete rupture of perinæum: Operation: Cure.*—Mrs. C., æt. 43, married, came under my care April 24th, 1862, by the recommendation of my friend Mr. John Taylor, of Earl's Colne. Was confined early last January—face presentation; the forceps were used, and the perinæum gave way. Has no control over her motions. Examination showed a complete rupture of the perinæum. The usual operation was performed with complete success, and the patient was subsequently delivered of a child without rupture of the perinæum.

CASE XCIV.—*Complete rupture of the perinæum.*—Mrs. B., æt. 33, married twelve years, and mother of six children, came under my care April 15th, 1862. Has been out of health for some time. Three weeks after her last confinement she had an attack of jaundice, and was obliged to wean her baby. Had a miscarriage last September. Catamenia regular since, but so profuse that she is obliged to lay up entirely during the time. Had ergot given in her first confinement, and the perinæum was torn. Has had no control over her motions since that time. On examination, I found a complete rupture of the perinæum right through the sphincter, with a thin band of mucous membrane across the anterior half of the anus. April 21st. I performed my usual operation, in the presence of Dr. Handfield Jones, Messrs. Wratislaw, Harper, and my son. The case was completely successful.

CASE XCV.—*Complete rupture of the perinæum, twenty years' duration.*—Mrs. R., æt. 63, was sent to me by Sir Charles Locock, May 6th, 1861. Had been delivered of a very large child in 1841. Perinæum then torn, but more so at her second confinement, a year later. Has no control over her bowels when the least relaxed. This lady was operated upon in the usual manner, and fully recovered.

CASE XCVI.—*Rupture incomplete, of three years' standing, with fissure of the rectum: Cure.*—E. T., æt. 37, admitted into Boynton ward, St. Mary's Hospital, March 26th, 1852. At her first confinement, three years ago, the perinæum was ruptured by the sudden descent of the head, at the moment of its extrusion, in the absence of medical assistance. The tear did not go through the sphincter or recto-vaginal septum, and she therefore did not suffer from incontinence of her motions, but very much from procidentia uteri. The uterus not only partially projected from the vagina, but also constantly pressed on the rectum, and produced fissure of that bowel. These evils exerted an injurious effect on the general health of the patient, causing nervous depression and dyspepsia, besides the mere local inconvenience.

I first cured the fissure of the rectum, by dividing the sphincter through the fissure itself. After the complete success of this step, I applied the usual remedies for the restoration of the health, and also for the procidentia uteri. With the latter I failed, on account of the defective perinæum, and accordingly determined to operate for its restoration.

April 7th. On this day I sutured the ruptured parts in the ordinary manner, and pursued the usual after-treatment.

On the 24th of the month she was discharged cured, having a sound perinæum, and no procidentia uteri. I have seen her frequently since, and ascertained the permanence of the benefit derived.

This case presented two or three interesting and instructive features. In the first place, the production of fissure of the rectum by the mechanical

pressure of the uterus against it; in the second, the origin of the prolapse of the uterus from the absence of the perinæum,—the natural floor of the vagina, and support of the pelvic viscera against their necessary tendency to descend,—and the cure of the displacement by renewal of the perinæum; in the third, the restoration of the bodily health, by attention to the mechanical causes of its decline.

CASE XCVII.—*Rupture incomplete, five months' standing: Prolapsus uteri: Result.*—E. A., æt. 23, admitted July 2nd, 1852, into St. Mary's Hospital. She was confined with her first child nearly five months ago, after a labour lasting three days. No instruments were used, but the perinæum was ruptured; the sphincter ani, however, escaped injury. She complains of discomfort from the dragging of the uterus, which prolapses to some extent; and from its pressure on the rectum, the margins of the fissure are a good deal congested, and numerous condylomata are scattered over them. The operation in this instance was therefore called for to remove the prolapse of the uterus, and its ulterior injurious consequences.

July 7th. The opposed surfaces of mucous membrane were dissected off, and the edges brought together by quill sutures. The sphincter was divided on both sides. The after-treatment pursued was in accordance with the principles laid down. On the 12th of July a small central opening was discoverable in the centre of the united edges, but this quickly closed up after the application of tincture of lytta a few times, and on the 30th she was discharged cured. The division of the sphincter in a case of this sort I should not resort to at the present day.

CASE XCVIII.—*Incomplete rupture of perinæum: Operation immediately after the accident: Cure.*—Mrs. W., æt. 22, March, 1854. In labour with her first child. The head large; outlet small; perinæum unyielding, and the expulsive pains strong. The constrictor vaginæ suddenly gave way, and the perinæum was torn as far back as the sphincter ani, leaving that muscle intact. So soon as the placenta had escaped, I applied one very deep interrupted suture, and followed the usual after-treatment.

After three days I removed the ligature, and found the union of the parts perfect. The subsequent progress of the case was very successful, and presented no circumstances worth recording.

CASE XCIX.—*Incomplete rupture: Vaginal rectocele, and prolapse of the uterus, nine years' duration: Cure.*—Mrs. F., æt. 24, was married when only fifteen, in India, and had the first child before she was sixteen years old. In the course of delivery the perinæum was much torn, and ever afterwards standing was attended with pain. Fourteen months after the birth of a second child the womb came down and protruded externally. It was replaced, and she was kept in the recumbent posture for some time. In the course of the following year (1846) she miscarried at the eighth month. In October, 1847, she was confined with another child, and a fourth was born in 1849. She had a miscarriage in 1850, and another in June, 1851.

She states that during each pregnancy something constantly protruded from the vagina (except when in the recumbent posture), the length of a finger, having a smooth surface, and feeling like a bladder.

The existence of this tumour, and the state of the perinæum and uterus, caused her so much trouble, annoyance, and pain, that she made the journey to England for further advice. For the last three or four years she had been almost constantly confined to the recumbent posture. By the kindness of Sir C. Locock she was referred to me.

On examination, I found incomplete rupture of the perinæum; prolapse of the vagina posteriorly, or rectocele; displacement of the uterus, so that the os was directed against the rectum, and the fundus tilted forward; moreover, unless supported by a pad and bandage, the vagina in its entire circumference prolapsed.

Notwithstanding this complication of complaints, I came to the conclusion, that by restoring the perinæum, and by contracting the dilated relaxed vagina, the condition of the patient might be most materially relieved, if not entirely rectified.

On the 19th of January, 1854, I operated as usual for laceration of the perinæum when incomplete; rather more integument at the junction of the skin and mucous membrane was removed than usual, on account of the greatly relaxed state of the perinæum. The inclination to bleeding from the vagina was controlled by the insertion of a small piece of ice. The patient was placed on her side, the urine drawn off every three hours, and a grain of opium given every four hours.

Jan. 20th. There has been great irritability of the stomach, with repeated vomiting, and consequent prostration. A mustard poultice was placed on the stomach; an opium (gr. iij.) suppository introduced, and a teaspoonful of brandy and cold beef-tea ordered every hour. There was no tension of the parts operated on. 23rd. The suppository repeated every night; good nourishing diet prescribed; deep sutures removed; the parts looking well, and union by the first intention set up. 25th. Removed interrupted sutures. Union complete. The patient takes plenty of nourishment; is allowed wine and bitter ale. 29th. The bowels relieved for the first time. She has gained in flesh and strength considerably. 30th. The integrity of the parts quite restored; the ruptured perinæum united; the rectocele cured, and also the prolapsus uteri; and the patient can stand and walk with ease and comfort. One of my perinæal bandages to be worn for some months to sustain the newly-formed tissue.

Remarks.—This case illustrates the bad effects likely to ensue from neglecting to restore the perinæum, even when the rupture is but partial. The displacements of the uterus and vagina may be here attributed to it.

Case C.—*Rupture incomplete, four years' duration: Vaginal rectocele: Cure.*—Maria L., æt. 32, admitted in St. Mary's Hospital Jan. 6th, 1854. Has had two children; the last three years ago. The perinæum was lacerated in her first confinement, four years since, after a most painful labour, lasting forty-eight hours. No instruments were used. The power to control the evacuations was retained, but she had almost constant tenesmus and leucorrhœa, and her general health suffered. When standing or walking, a tumour projected through the vagina, which she concluded to be the womb; and she felt a fulness, with bearing-down pains. On examination, the perinæum was found lacerated as far back as the sphincter. A rounded reddish tumour projected between the labia, and proved to be the rectum bulging forward into the vagina, or a rectocele.—Jan. 11th. Operated upon in the usual way. Some œdema of the sutured parts occurred on the 13th, which was relieved by a few punctures, and the perinæum became quite closed up, and the rectocele removed at the end of the month.

Case CI.—*Rupture incomplete: Cure.*—L. F., æt. 20. Admitted into Boynton ward on October 12th, 1855. The rupture of the perinæum, which did not extend through the sphincter, occurred during her first labour, which lasted between three and four days. Prolapsus uteri soon after supervened. October 13th. Operation performed; on 16th, deep sutures removed; on

18th, the superficial. 21st. Bowels moved. January 13th, 1856. Discharged quite cured.

Case CII.—*Rupture incomplete, duration seventeen days: Cure.*—Mrs. G., æt. 24. Confined seventeen days since, after a tedious labour, with her first child. No instruments were used, but the child's head was large, and ruptured the perinæum when passing over it. March 16th, 1858. The ordinary operation performed; but, as the injury was so recent, the edges did not require paring, and I did not consider it necessary to divide the sphincter. Deep sutures removed on the 18th; the superficial on the 21st. At the end of the month, the perinæum was healed up, and quite restored.

Case CIII.—*Rupture incomplete, vaginal rectocele, six months' duration: Cure.*—M. A. H., æt. 25, admitted into the "London Surgical Home" Nov. 1859. Was delivered, by the aid of forceps, of her first child six months ago. Has experienced ever since much bearing-down, inconvenience in moving about, and difficulty in defæcation. The sphincter ani was not torn through, but the rectum pressed forward into the vagina, and formed a pouch, in which the fæces accumulated. This rendered it necessary, when at stool, either to press back the pouch by the finger, or to favour its evacuation by a change of position. Hence much annoyance, pain, and difficulty.

Nov. 10th. Operation performed as usual, and union proceeded favourably, so that at the end of a month the patient left recovered, able to relieve the bowels daily without difficulty, and with the bearing-down sensation removed.

Case CIV.—*Rupture incomplete, prolapsus uteri of some years' duration: Cure.*—M. M., æt. 49, admitted into the "London Surgical Home" Nov., 1859. Has had seven children and four miscarriages, and for some years has suffered from prolapse of the womb, which for the last three years has protruded externally, incapacitating her for her duties, and disabling her from moving about, except with the support of napkins applied so as to keep the uterus up. The perinæum is torn through, but not the sphincter.

Nov. 10th. Usual operation. The only exception to the onward progress of the patient was the formation of a sore on the hip, two days after the operation, which, together with her weak state of health, called for extra diet and tonics. The perinæum was quite restored, and with this the procidentia uteri was also cured.

Case CV.—*Rupture incomplete, thirty-six years' duration: Prolapse of the uterus and anus: Two operations: Cure.*—E. P., æt. 65, admitted into the "London Surgical Home" on the 14th of November, 1859. After a severe labour, thirty-six years ago, the perinæum tore, and the womb prolapsed, and afterwards the rectum, which also became affected with hæmorrhoids, and added much to her distress. Two years ago the uterus protruded externally, her health suffered much, and she was incapacitated for pursuing her usual employments. The rupture of the perinæum had not extended through the sphincter. As her general health was so indifferent, she was placed under treatment before any operation was attempted.

Nov. 24th. The prolapsed bowel was tied at three places, and the external piles excised. This operation having succeeded, I proceeded to restore the ruptured perinæum, after my usual manner, on Dec. 15th, 1859. All went on well, and she was discharged on Jan. 18th, recovered from all her disorders.

Considering the duration of the injury, and the advanced age of the patient, success in this case was most gratifying.

Case CVI.—*Rupture incomplete, two years' duration: Cure.*—Mrs. K., admitted into the "London Surgical Home" May 14th, 1860. Has had five children. All her labours have been very tedious. Since the last, which happened two years ago, she has suffered very much from bearing-down of the womb, and other pelvic derangements. Examination showed the perinæum to be ruptured up to the sphincter, but not through it. The uterus descended so far as to press through the external parts.

May 17th. Operation performed in the manner prescribed for this variety of laceration. 20th. Deep sutures removed; on the 23rd the superficial. June 14th. Went out perfectly cured.

Case CVII.—*Ruptured perinæum, between the vaginal outlet and the anus, or perforation of the perinæum: Cure.*—Mrs. O., æt. 20. In her first confinement, the rigidity of the os externum was so great that the head rested against the perinæum, and, before instruments could be procured, it was forced through it, leaving both the vaginal and rectal sphincters intact. As the fissure did not promise to close up, I was sent for, a fortnight afterwards, on April 22nd, 1860, by Mr. Lawrence, of Wandsworth, and then found an opening large enough to admit the three fingers. Mr. Lawrence kindly aided me in this operation, along with my son. Having pared the edges, I introduced two deep interrupted sutures of iron wire, and, instead of dividing the rectum, I cut through the perinæal fourchette in front. The patient rapidly regained the integrity of the perinæum perfectly.

In this case, the accident arose from the extreme rigidity of the fourchette and vulva; and it is advisable, in similar instances, to relieve the rigid tissue by an incision into it, to obviate the recurrence of severe laceration of the perinæum. Probably two oblique incisions would be preferable to a single one in the median line.

I have lately seen and carefully examined this patient, and found her perinæum sound.

Case CVIII.—*Incomplete rupture of perinæum and fissure of rectum: Cure.*—Mrs. E., æt. 36, came under my care, by the recommendation of Dr. Corbett, of Southampton. Is the mother of four children, and has had two very bad miscarriages. Said she was hurt in her first confinement, and since then the womb has come down, for which she has worn a pessary; suffers great pain when sitting down. On examination, I found the perinæum partially ruptured, *i. e.*, up to, but not through, the sphincter ani, and a fissure of the rectum. The sphincter was not divided in this case. Recovery was complete.

Case CIX.—*Incomplete rupture of perinæum, four months' duration: Operation: Cure.*—Mrs. L., æt. 42, came under my care January 7th, 1861. History: was confined September 27th, 1860. In labour forty-eight hours, and delivered by craniotomy. Could hold no water for six weeks, and since she has been able to retain that, she still feels a laxness of the whole vagina and genital organs. Examination showed no fistula in the bladder; but the perinæum was torn half through, and there was a general laxness of the whole vagina. The usual plastic operation was performed on January 11th, 1861. I was assisted by Mr. Ross and Mr. Harper. She made a good recovery, and in a month was quite well.

CASE CX.—*Incomplete rupture of perinæum, with fissure of rectum and external hæmorrhoids: Operation: Cure.*—Mrs. B., æt. 26, from Chester, came under my care June 18th, 1861. Was confined of her sixth child in the preceding April, and has never been well since. Cannot walk fifty yards without feeling sick, and has a dragging sensation about the womb. Had dysentery (?) seven days after her confinement, and has had frequent attacks of diarrhœa since that time. Examination showed the perinæum to be ruptured up to, but not through, the sphincter. There was also a fissure of the rectum, and a fringe of external piles. Operation performed in the usual manner, the piles being cut off and fissure divided. The patient made an excellent recovery, and left for the country a month afterwards.

CASE CXI.—*Incomplete rupture of perinæum, eighteen months' duration: Operation: Cure.*—H. D., æt. 25, admitted into the "London Surgical Home." Married seven years; perinæum ruptured in confinement eighteen months ago. Examination showed the perinæum ruptured, but not through the sphincter. August 20th. Operation as usual, not dividing sphincter. 22nd. Deep sutures removed. 24th. Superficial sutures removed. October 2nd. Discharged quite well.

CASE CXII.—*Incomplete rupture of perinæum, twenty-eight years' duration: Operation: Cure.*—F. S., æt. 54, admitted into the "London Surgical Home." Married thirty-three years, and had nine children. Perinæum partially ruptured twenty-eight years ago; male children always very large. On examination, the perinæum was seen to be partially ruptured. March 10th, 1864. Operation as usual. 12th. Deep sutures removed. 16th. Superficial sutures removed. April 29th. Discharged quite well.

CHAPTER II.

PROLAPSE OF THE VAGINA.

This condition presents itself under three forms, according as it affects the anterior or posterior wall, or the entire circumference of the canal. Each form involves displacements of the viscera connected with the vagina, and derives its importance from them. The yielding of the anterior parietes of the vagina suffers the bladder to fall down, and produces "prolapsus vesicæ," or "cystocele;" the giving way of the posterior wall induces "rectocele;" whilst the descent of the entire circumference presents a true prolapse of the vagina, and almost necessarily involves more or less displacement of the connected pelvic viscera. This last will need no consideration distinct from that of prolapse of the uterus.

Now the operation proposed, where operative proceedings are called for, is based upon the same principle in each of the three forms of displacement just mentioned; viz., cystocele, rectocele, and prolapsus uteri. That principle is to give support below, in the direction in which the displaced viscus protrudes; and this is done by lengthening the perinæum and contracting the vagina. In a large proportion of the cases of prolapse, it is the withdrawal of such natural support, by the more or less complete laceration of the perinæum, that has been the immediate or exciting cause. In such, therefore, the restoration of the torn perinæum is the proceeding naturally indicated and demanded. In other instances again, the stretching of the vagina by labour and a persistent state of relaxation, usually coupled with a generally relaxed and weakened condition of body, concur to produce prolapse, especially of the uterus. The radical cure here also is, whilst improving the



PROLAPSE OF THE VAGINA.

general health, to contract the canal through which the displacement occurs, and to insist upon absolute rest for such time as is necessary to confirm the displaced viscus in its normal position.

I need not here extend my observations on the principle of the operative measures proposed as applied to each variety of prolapse viewed in reference to its exciting cause. Suffice it to say that an operation is not to be indiscriminately performed, but only when the history and circumstances of each case have been duly considered, and an indication for it found. For instance, cases of recent prolapse make no demand for immediate operation, except where they owe their cause to lacerated perinæum, and then the operation cannot be performed too soon. In cases having another origin, the predisposing and exciting causes must be carefully ascertained and removed as far as practicable, and in general the restoration of the displaced parts should be favoured by rest in the recumbent posture, and the improvement of the health be undertaken by appropriate medicine and hygienic measures.

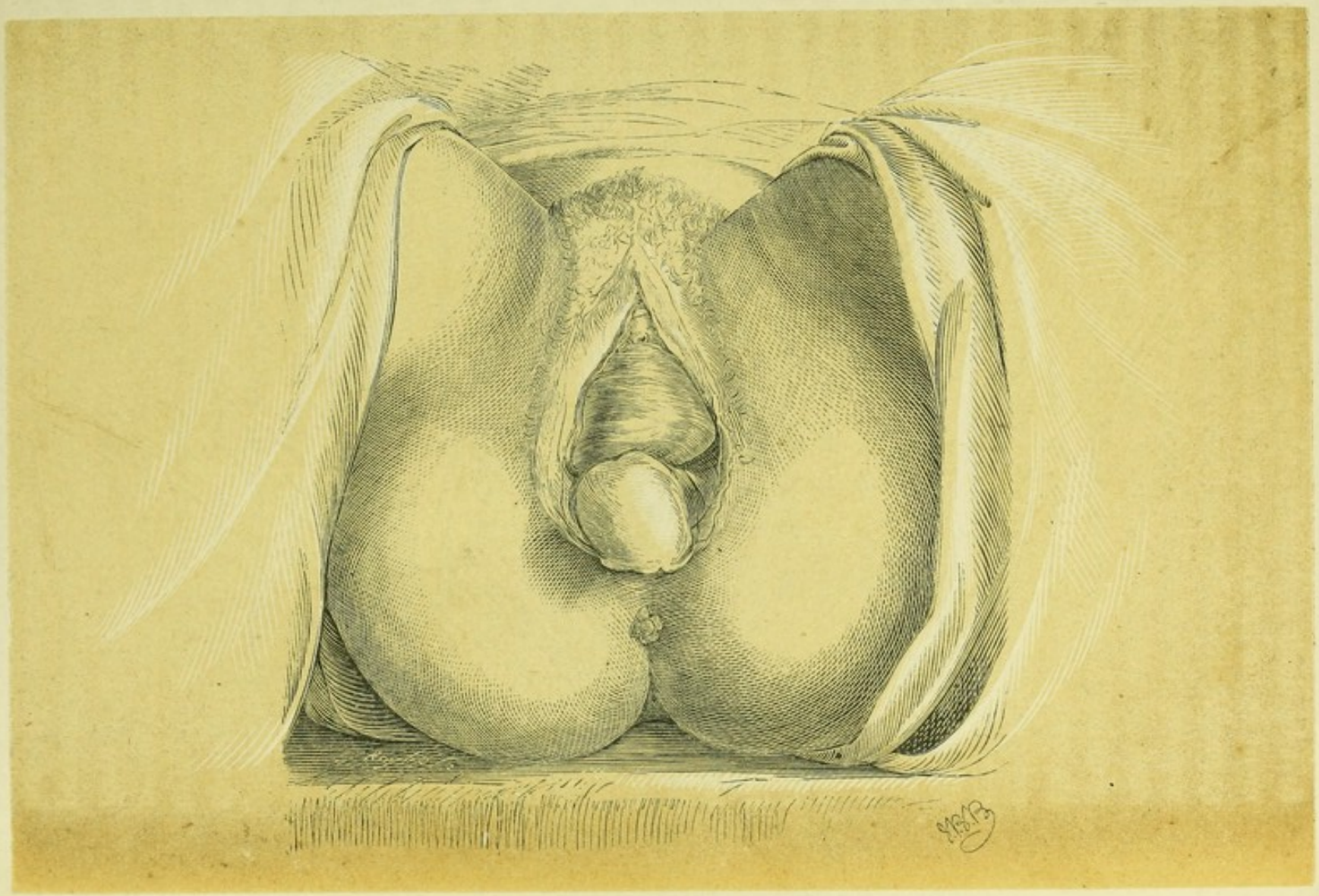
However, with regard to rectocele and cystocele we are not likely to encounter any difficulty as to the time of operating, since from the usual slowly progressive production of those displacements, they do not offer themselves for treatment until considerably advanced and chronic. And the same fact holds true generally of cases of prolapsus uteri, although other means of treatment are oftener demanded for them than for the other forms of vaginal prolapse. Whilst recognising the necessity of learning the history of a case, of taking into account all the conditions connected with the displaced organ and the surrounding viscera, and of deciding whether it can be cured as promptly and as effectually without surgical means, we must further inquire whether there are any actual contra-indications either to operating at the time or to operating at all.

The recent existence of the lesion and an impaired state of health have already been noticed as calling for postponement. But there are also positive contra-indications to operating, as, for instance, stone in the bladder, or stricture of the urethra,

in cases of cystocele, and fissures or stricture of the rectum, or hæmorrhoids, in cases of rectocele. These conditions must first be dealt with before an operation to relieve either displacement is undertaken. So, likewise, it would be useless and improper to endeavour to cure prolapsus uteri whilst there was any inherent cause of displacement in the uterus itself, such as congestion and enlargement, or as fibrous tumours growing from it. Lastly, malignant disease affecting any of the pelvic viscera would render operations to restore cystocele, rectocele, and prolapse of the womb, useless and unjustifiable, unless there was good ground for anticipating eradication of the disease by surgical or other means.

The principle of the operation being one and the same in each form of vaginal prolapse, the proceedings adopted require only slight modifications to suit either variety. They consist mainly in the removal of a portion of the mucous membrane from the lower and lateral parts of the vagina, of about an inch in width, and of a horse-shoe shape (Plate 3), and then in bringing the edges of the cut surface together by sutures, so as to secure their permanent adhesion, and the consequent contraction of the calibre of the vagina and the extension of the perinæum forward for half an inch or more (Plate 4).

The principal modification required is in the case of cystocele, in which the amount of surface denuded is narrower, or, in other words, not carried so far backward, as is necessary in rectocele and prolapse of the uterus. The sutures used are deep quill sutures and superficial interrupted sutures. For the deep sutures, pieces of bougie or cane serve the best, with well-waxed twine. I have tried metallic wire, but found it more unmanageable in application, and it is often apt to cut, from the tightness necessary to secure perfect adaptation. However, for the interrupted sutures metallic wire is preferable to twine or other material. The after-treatment is alike for each form of the operation, and resembles that advised for ruptured perinæum. This general account of the operation will suffice here, the particular application to each form of prolapse being described in subsequent sections illustrated by appropriate diagrams.



PROLAPSE OF THE VAGINA.

All the operations for prolapsus of the uterus, bladder, and rectum were first suggested to my mind by observing that displacements of those viscera, when associated with ruptured perinæum, as they often were, were cured by the ordinary operation for that lesion. Having this fact before me, I sought to discover whether the idea of treatment it suggested for the cure of prolapse had ever before been entertained by any medical man, and found that Dr. Marshall Hall had proposed and adopted, in cases of prolapse of the womb, the plan of diminishing the calibre, though not the outlet, of the vagina, by taking off some strips of mucous membrane, and then bringing the cut edges together by interrupted sutures, so as to produce a mechanical impediment against future displacement. In this plan I saw a partial realization of my own views, and by repeated trials, where the prolapse was unconnected with lacerated perinæum, I convinced myself of the utility of a plastic operation such as that I have described.

At this time (1853) I was not aware that a similar proceeding had been attempted by any other surgeon. I afterwards discovered that Fricke, of Hamburg, had practised a somewhat similar operation, differing nevertheless in several essential particulars, and especially in this, that he merely took off a portion of skin and mucous membrane from just within each labium, and then brought the edges of the denuded surface together. He thus restricted his attempts, to narrowing the vulva, a procedure which could produce only transitory results, and so differed materially from the one I advocate, which makes the contraction of the vagina the essential element of the operation to cure prolapse of the womb. Further, no medical practitioner in this kingdom, so far as I can ascertain, had at this period carried out any similar surgical operation to cure the displacement; but in 1855, Dr. Savage was induced to adopt the plan, and was very successful with his cases. He also informed me that he had discovered in the library of the College of Surgeons a notice of an operation by Dr. Geddings, of America, which was similar to mine; and his experience had taught him, what it had also taught me, that, in attempting the cure of prolapsus uteri, the

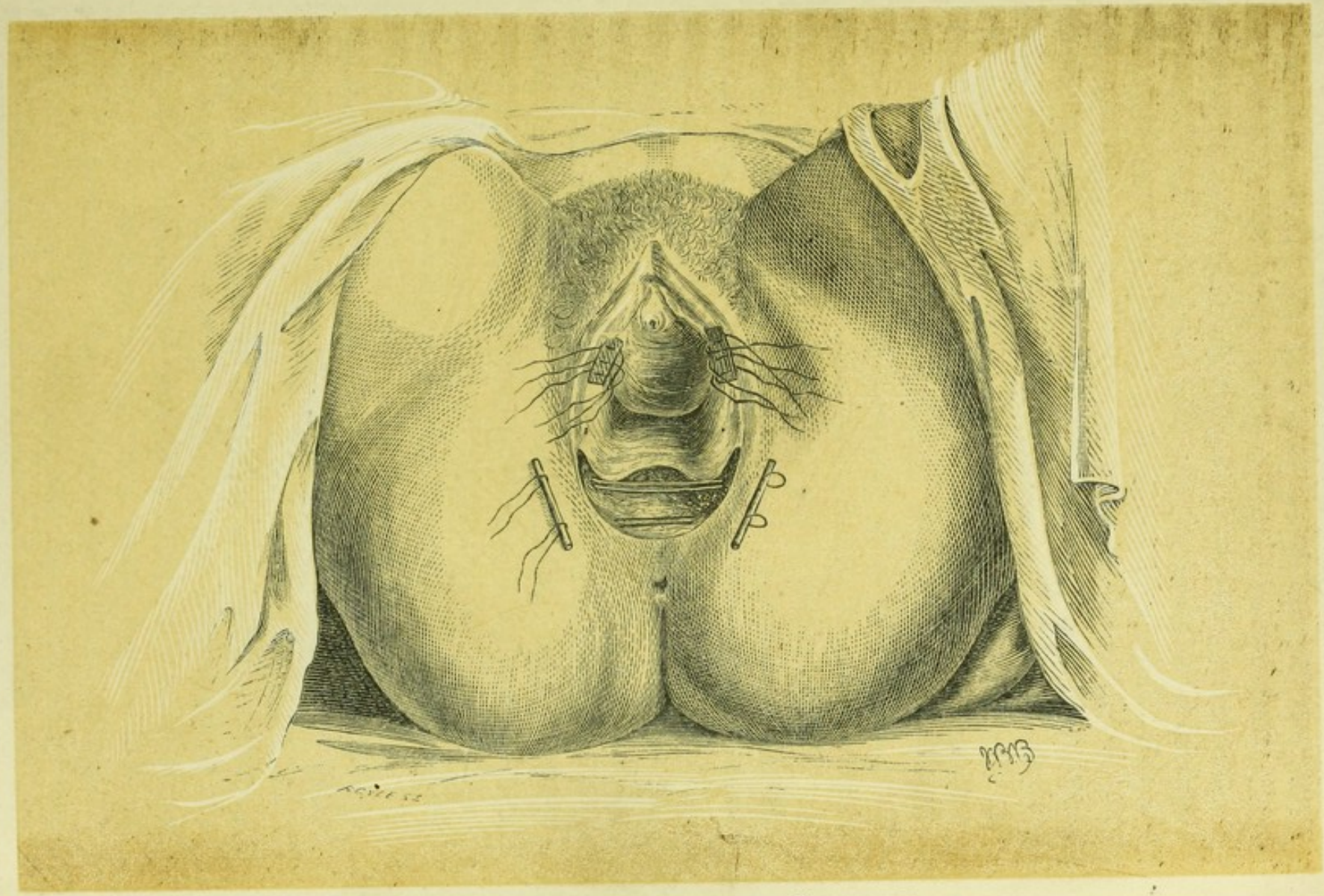
denudation of the mucous membrane should be carried farther back into the vagina than was done in my earlier operations.

Taking the result of the operation advocated for each form of prolapse of the vagina into consideration, one of the first questions to arise will be, whether it is not detrimental to women who may subsequently have offspring. To this apprehension experience answers in the negative; for many of the patients who have been operated on by me have subsequently been delivered of children, under the care of various practitioners, and, as a rule, no injury has occurred to the perinæum. At the same time particular care and precaution are needed, especially in the passage of the child through the external parts, for it cannot be denied that the elongated perinæum does predispose to laceration.

In conclusion, I may remark that the operative measures suggested by me for the radical cure of cystocele and rectocele had, to the best of my belief, never been devised or executed by any other medical man before me. At the present day these measures are resorted to all over the world, and I am in the frequent receipt of letters from surgeons in different and often remote parts, telling me of the success which has attended their adoption of them, and confirming the soundness of the principles upon which they are based. Previous attempts to deal with these rectal and vesical displacements were, though severe and painful (consisting usually of the application of caustics and escharotics to destroy the mucous membrane, and so to produce contraction) mostly unsuccessful and discouraging.

A.—*Prolapse of the Anterior Wall of the Vagina.—Prolapsus Vesicæ or Vaginal Cystocele.—Cystocele.*

This not uncommon accident usually results from the stretching of the parts by repeated, or by difficult labours, and it becomes progressively worse when left to itself. It may vary in degree from a slight bulging of the front wall of the vagina to the production of a tumour filling or stretching the canal, or even extending from it and hanging between the



OPERATION FOR RECTOCELE AND CYSTOCELE.

...posteriorly, and the

thighs. A ruptured perinæum, by removing the natural support of the pelvic viscera, frequently predisposes to this, and indeed to each variety of prolapsed vagina, as a reference to the cases recorded in the last chapter abundantly demonstrates.

Protracted labour is a common exciting cause of cystocele, particularly when the bladder is allowed to remain full. Sometimes, also, pregnancy tends to produce it, owing to the enlarged uterus pressing upon the bladder, and frequently causing, in addition, difficult micturition and undue repletion. But without the coincidence of pregnancy or labour, habitual over-distension of the bladder, so common among females, —who sometimes travel a whole day without relieving themselves,—will lead to a stretching of the anterior vaginal wall and eventually to cystocele; a result hastened, moreover, by violent exertion when the bladder is distended.

The relaxation of the vagina in part, however produced, causes an alteration in the position of the bladder and of its meatus, so as to impede the evacuation of its contents. This interference with the escape of urine again leads to imperfect emptying of the bladder, and to excessive accumulations, by the weight of which the vagina is stretched still further, and thrust downwards and forwards. Instead of the urethra rising upwards behind the pubes, it becomes curved backwards more and more, until eventually, in complete prolapse, its course is actually downwards and backwards, and its orifice external to the labia. (Plate 3.)

As might be presumed, the extruded bladder is liable to injury, aud may become the seat of ulceration or of other morbid process.

Symptoms.—The patient complains of weight and bearing down, and sensations of dragging in the lower part of the abdomen; uneasiness and pain in walking, and more or less dysuria,—the bladder having, to a great degree, lost its power of contraction. Some patients are obliged to replace the bladder before they can evacuate the urine, or to pass their water resting on their hands and knees with the hips elevated as much as possible. On examination, a soft, elastic, fluctuating tumour is felt at the orifice of the vagina; it is of

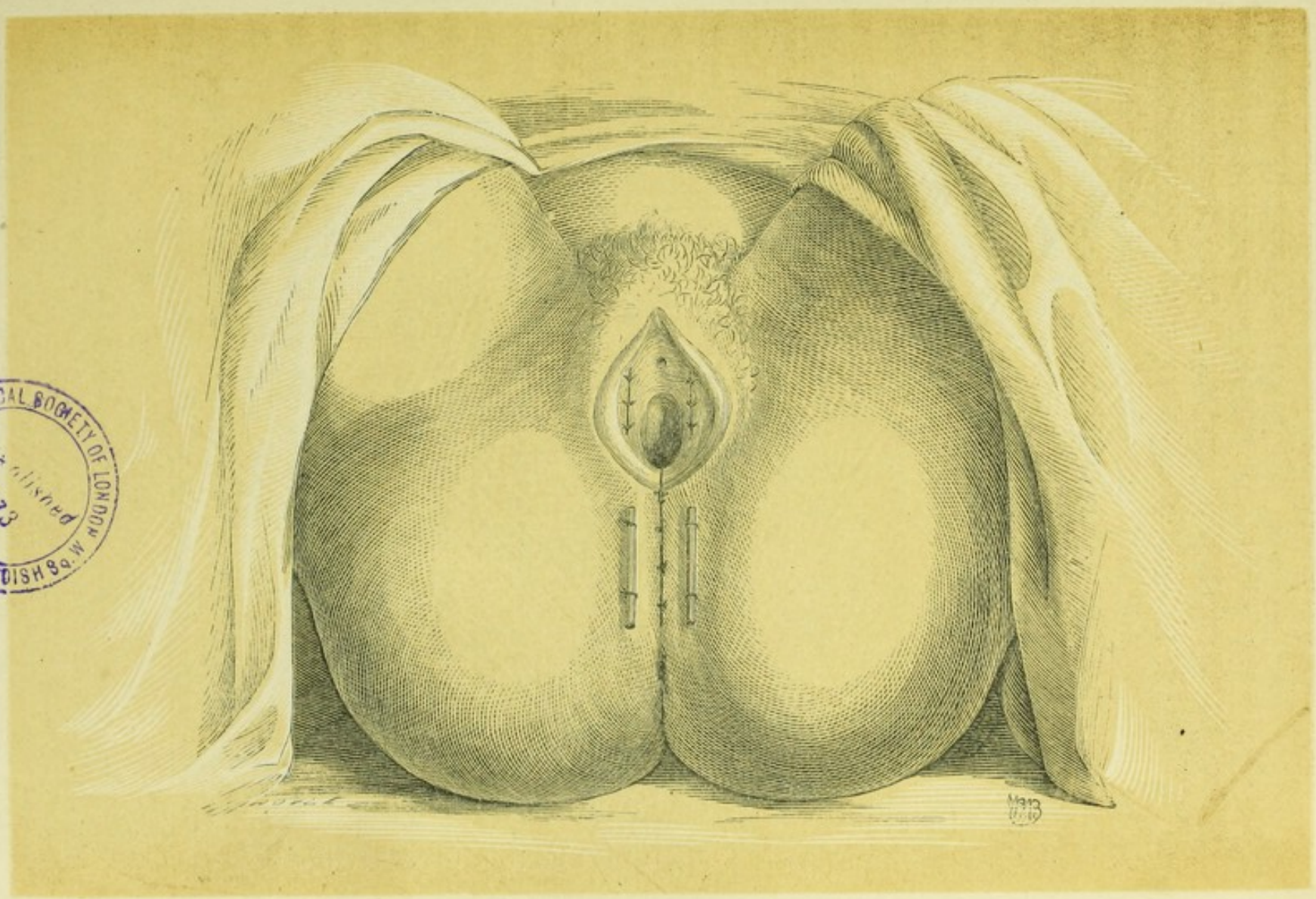
a red or bluish-red colour, and can be greatly diminished by catheterism: the finger can be passed into the vagina below the tumour, and the os uteri can be felt behind, nearly in its natural situation. The surface of the tumour, when distended, is smooth, moist, and shining; but when the bladder is empty, it is thrown into transverse folds. There is always very considerable mucous discharge, which is exceedingly irritating to the labia and soft parts; and there is sometimes a very distressing irritability of the bladder, and the urine, when passed, is fœtid, and contains much ropy mucus. This arises from a small portion of the urine being always left in the bladder, and the consequent decomposition of that secretion.

Cystocele may be easily distinguished from prolapse of the uterus; it is soft and yielding to the touch, and on introducing the catheter, the point will be felt through the walls of the tumour, towards the anus; and, on passing the finger upwards, the os uteri is found in its natural position. It can also be easily distinguished from prolapse of the posterior wall of the vagina or rectocele, or from inversion of the uterus, this last condition preventing the passing of the finger into the vagina at all.

Treatment.—This will depend on the extent and duration of the prolapse. If it be of recent date, and occurring in young females, the treatment should be frequent catheterism, the recumbent posture, astringent injections within the vagina of alum, tannic acid, oak-bark, infusion of galls, sulphate of iron, cold water, &c. An additional means is to keep constantly in the bladder a bent metallic or gum elastic catheter, or where this causes irritation, a male gum elastic one, with an elastic bag attached, and a sponge tent within the vagina to uphold the bladder. The injurious accumulation of urine is thereby prevented, and opportunity afforded to the relaxed parts to recover themselves.

By this mode of treatment I have seen much benefit result. A lady, æt. 24, the mother of two children, who had cystocele of some standing and severity (which, by the way, had been mistaken for uterine prolapse) was much improved by it.

If, however, the prolapse be of long standing, and occurs in



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Showing all the parts brought together after the operation is completed.

females beyond the period of child-bearing, the treatment must, to be successful, be more severe and radical. Some recommend plugging the vagina with pessaries, made especially for this condition; but such a measure is but palliative at best, and is often inapplicable on account of the irritation set up: hence the greater need for a surgical procedure. It was recommended by Dr. Marshall Hall to remove a triangular slip of the mucous membrane, the base being towards the orifice of the vagina, and to bring the edges together by sutures, and thus to contract the calibre of the vagina. Others advise the use of the actual cautery so as to produce a slough, and subsequent cicatrization and puckering. M. Jobert (de Lamballe) applies caustic around a more or less considerable oval space, on the posterior surface of the vagina, so as to form an isolated spot, and repeats the application of the caustic till the mucous membrane is destroyed. He then pares the edges of the sore with scissors or a bistoury, draws them together, and maintains them in apposition by means of straight needles (the points of which are removed) and a twisted suture. He operated thus on a patient in July, 1838, and subsequently on two others with success.

These operations proceed on the principle of contracting the vagina, and of thereby mechanically preventing the protrusion of the bladder. My principle of operating also is similar. Recognising the prolapse of the bladder to be due to the relaxation of the anterior wall of the vagina, I endeavour to remove this cause by a "plastic" operation, which will be sufficiently described by the history of the following cases. But I may here remark once for all, that incisions into the sphincter ani are not needed, either in the operation for cystocele, or in that for rectocele, or for prolapsus uteri.

CASE I.—*Cystocele: Nine years' duration: Cure.*—M. T., aged 52, has had ten children. Admitted into St. Mary's Hospital February 14th, 1853, suffering from severe prolapsus of the vagina and bladder, which first began to trouble her nine years ago, after her last labour. On walking, or even on standing, or on coughing in the recumbent position, the tumour came down and protruded through the external orifice of the vagina, to the size of a large fist. On lifting up this tumour, when so extruded, there were

seen on the under and posterior surface of the os uteri, which was dragged down by the vagina, two or three ulcerated spots produced by friction against the posterior wall of the vagina. The patient could, when reclining on her back, replace the tumour. She had a winter cough, and complained of weakness.

This patient being a servant, suffered greatly from her condition, and was obliged always to wear a bandage to prevent the extrusion of the tumour: but this very support, by the friction and heat, rather increased than diminished the suffering. Her spirits were depressed, and the poor woman became an object of great pity and commiseration. Mr. Clarke, of Gerrard-street, recommended her to my care.

Operation.—The bowels having been previously emptied, the patient was on February the 15th placed under the influence of chloroform, and then put in the position for lithotomy, each leg being held by an assistant, a third assistant holding up the tumour with Jobert's bent speculum, and pressing it under the pubes into its natural position. A piece of mucous membrane, about an inch and a quarter long and three-quarters of an inch broad, was dissected off longitudinally from the vagina just within the labia, the upper edge of the denuded part being on a level with the meatus urinarius. (See Plate 5.) The edges on each side of the vagina were drawn together by three interrupted sutures, and then at the next stage of the operation the mucous membrane was dissected off laterally and posteriorly in the shape of a horse-shoe, the upper edge of the shoe commencing half an inch below the lateral points of denudation, care being taken to remove all the mucous membrane up to the edge of the vagina where the skin joins it. (Plate 5.) Two deep sutures of twine were then introduced about an inch from the margin of the left side of the vagina, and brought out at the inner edge of the denuded surface of the same side, and again introduced at the inner edge of the pared surface of the right side, and brought out an inch from its margin. In this way the two vascular surfaces were brought together and retained by means of quills, as in the operation for ruptured perinæum. The edges of the new perinæum were lastly united by interrupted sutures (Plate 6), and the patient placed in bed on a water-cushion. Two grains of opium were given directly, and one grain every six hours; simple water-dressing applied to the parts; beef-tea and wine for diet. A bent metallic catheter, to which was attached an elastic bag to catch the urine, was introduced into the bladder: by this means the bladder was constantly kept empty. This patient progressed satisfactorily from day to day without a single bad symptom; and, on the 22nd, the parts were found firmly united.

February 26th. Deep union perfectly sound; lateral wounds well contracted; the tumour not brought down by coughing.

March 8th. Parts all firmly healed; the patient much improved in health, and cheerful. She could walk about without inconvenience, and no amount of exertion produced any prolapse. She could empty her bladder with comfort; and all the leucorrhœal discharge, which was so distressing before the operation, had entirely subsided; the offensive smell of the urine had also departed. On passing the finger into the vagina, the os uteri could be easily felt in its normal position, and the ulcerated spots which formerly existed on its surface were healed.

On the 10th she was discharged cured, and resumed her duties as a domestic servant.

Remarks.—The object sought in this operation was the contraction of the calibre of the vagina, which, as may be imagined, was exceedingly large and flabby. The first step of the operation was directed to the contraction of the vagina laterally, so as to prevent the tumour from falling down from above;

the second step of the operation was for the purpose of contracting the vagina posteriorly. By contracting the orifice of the vagina at least two-thirds, and thereby adding to the extent of the perinæum, should the prolapsus not be restrained by the lateral contractions, it could not extrude beyond the orifice of the vagina, but must necessarily fall upon the new perinæum. As was proved by the result, all the objects sought had been fully attained; and it was scarcely possible to imagine a more satisfactory result from any operative procedure. The principle of this operation is equally applicable, as will be hereafter shown, to the cure of prolapse both of the posterior wall and of the entire circumference of the vagina; and also, with some slight modifications, to the relief of prolapsus uteri.

After-treatment.—This in most particulars resembles that pursued after the operation for ruptured perinæum. Opium is given to allay irritation and pain, and to prevent defæcation; the strength is supported by nourishing diet and wine; water-dressings are applied; and perfect repose is enjoined. The use of injections is, however, contraindicated; for the sutured parts must not be interfered with in any way. It is of the greatest importance to keep the bladder emptied; and this point is best secured by retaining a catheter in the bladder, with a bag to receive the urine as it escapes. After the seventh or tenth day, according to the integrity of the union of the parts, the patient may pass the urine resting on her hands and knees.

The time for the removal of the sutures must be regulated by the circumstances of each case; but, in general, the deep ones may be withdrawn on the third day, the others a few days afterwards.

Case II.—*Cystocele: Cure.*—Mary Ann R., æt. 47, admitted into St. Mary's Hospital April 29th, 1853. Has had nine children, and two miscarriages; her labours were protracted; her youngest child is now seven years of age. Her general health has been bad. Twelve months since she had much bearing-down with pain, and for the last month has experienced a much increased difficulty in passing water. She noticed that the bearing-down was accompanied by the appearance of a tumour the size of a small apple, which she took to be the womb. The urine has varied in quantity on different days, and she experienced most pain when but little escaped. Any exertion increased her sufferings, and even walking was painful. The catamenia have been regular and abundant; the appetite is good; the bowels usually act properly; the urine is of natural colour and appearance.

On examination, a tumour, the size of an orange, was seen protruding through the vulva, and occupying two-thirds of the vaginal canal, which was extremely relaxed.

May 4th. I performed the operation after the plan described; and in the after-treatment gave her opium, nourishing diet, and after a few days port wine. On the 14th, her state demanding it, she had a mixture of quinine and iron.

The case did well. On the 25th of June, on an examination of the parts, no prolapse was seen; there was strong union of the sutured parts, and the patient was able to get about with ease and comfort, without any dragging or pain being felt, and had perfect and painless action of the bladder.

Case III.—*Cystocele: Five years' duration: Cure.*—M.A.M., æt. 45, admitted into St. Mary's Hospital April 30th, 1853. Has had five children; her labours have been easy, but as a servant she had much hard work. For above five years she has suffered much inconvenience from the bladder occasionally protruding into the vagina after exertion; for the last five or six months, however, the displacement has been nearly constant, and conse-

quently a cause of much pain amd distress, entirely disqualifying her from holding any situation.

From her bodily sufferings and her mental anxiety at being precluded from gaining her livelihood, she was in a low and nervous condition.

The state of the parts corresponded pretty nearly with that described in Case II.

May 10th. Operated in my usual manner, and placed the patient under the same after-treatment. She went on well. The deep sutures were removed on the 14th of May : on the 25th she appeared quite well, and was ordered to be discharged. The adhesions set up were strong; there was no prolapse, no difficulty or pain in making water, and no bearing-down when walking.

I may state that this patient has continued perfectly well, and able to perform the arduous duties of a cook at the hospital.

Case IV.—*Cystocele : Cure.*—Mary H., æt. 55, a laundress, admitted into St. Mary's Hospital April 4th, 1854. Has had seven children ; the youngest now twelve years old. All her labours she described as quick and favourable. About eighteen months ago she experienced a dragging pain in her back, which, during the last three months, has become much worse, and she has now a soft, fluctuating tumour protruded between the labia, and of the size of the fist. She attributes her present condition to her having strained herself by lifting a heavy weight eighteen months ago.

April 5th. Was operated upon in the usual way. The bowels were opened by castor-oil on the 18th ; and on the 4th of May she was enabled to stand up without suffering any protrusion, although there were bearing-down pains. She went out of the hospital, and was ordered to keep the horizontal posture for a fortnight. On the 23rd she presented herself. There was no protrusion, and the pain had ceased ; and she was enabled to resume her employment.

Case V.—*Cystocele : Cure.*—Ellen McK., æt. 28, admitted into St. Mary's Hospital May 6th, 1854. Has had three children. About six months after her second confinement she experienced a fulness and pain in the vagina, which she attributed to her having got about too soon. These symptoms were relieved by her lying down ; but her condition grew worse, and a tumour about the size of a hen's egg protruded through the vagina externally. On her becoming again pregnant her symptoms were alleviated, and the tumour disappeared ; to return, however, in an aggravated manner after her confinement, as her occupation compelled her to move about. At this time the bladder is seen pressing downwards and forwards the anterior wall of the vagina so far as to constitute a considerable tumour, extending through the external parts to the size of the fist, receding, however, when she lies down. Her condition is rendered worse, and her health weakened, by profuse leucorrhœa, and she cannot make water unless she presses the tumour backwards. Since only a small quantity is passed at a time, she is troubled with a frequent desire, which augments her sufferings. The os uteri can be seen behind the cystocele. The perinæum was entire.

May 31st. The usual operation and after-treatment were carried out, and she progressed steadily and satisfactorily in every respect, until the date of her discharge, six weeks afterwards, when she was quite relieved of the prolapse and concomitant symptoms.

Some time after quitting the hospital she was delivered of a fourth child, without any recurrence of the lesion she formerly laboured under.

Case VI.—*Cystocele : 13 years' duration : Cure.*—Anne S. F., æt. 34, admitted

into St. Mary's Hospital March 30th, 1858. Has had three children. Thirteen years since, whilst pregnant with her second child, she felt as if something gave way in the pelvis as she was walking up hill, and shortly afterwards discovered a tumour protruding between the labia about the size of a fist. During her next pregnancy it was much better, but returned after her confinement as bad as before. She had tried to wear a pessary, but could not retain it.

March 31st. Operation for cystocele performed. April 2nd. Deep sutures removed. May 3rd. A fungoid excrescence at the meatus urinarius, which caused her great pain, was removed. May 5th. Discharged cured.

Case VII.—*Cystocele: fifteen years' standing: Cure.*—Eliz. J., æt. 35, admitted into St. Mary's Hospital July 6th, 1858. Has had six children and five miscarriages. After the birth of her second child, fifteen years ago, she noticed a descent of what she conceived to be the womb. The tumour has progressively increased, and, for the last five years, she has been unable to empty her bladder until she has partially replaced it by pushing it upwards.

July 7th. Operation carried out. 9th. Deep sutures removed. By Aug. 7th she had got quite well, and was discharged perfectly cured of the displacement.

Case VIII. *Cystocele: Cure.*—Mrs. H., æt. 35, mother of four children. Has lived in India for many years, and has long suffered from bearing-down of the bladder and difficulty in passing water. When the bladder is full, the tumour projects from the vulva very considerably, and obliges her to push it upwards before she can empty it.

May 15th, 1859. Operation performed. 20th. Deep sutures removed.

No particular features occurred to deserve recording; but she went on well, and was quite cured of her distressing complaint.

Case IX.—*Cystocele: two years' duration: Cure.*—(From notes by Dr. A. Octavius Grosvenor, House Surgeon.)—Mrs. H. P., aged 44, admitted into the "London Surgical Home" March 16, 1866. Has had five children and ten miscarriages. Nine years ago suffered from placenta prævia at her confinement. Has since that time been subjected to great pain in the lower part of the back, with a considerable vaginal discharge, apparently leucorrhœa. The bladder has prolapsed for more than two years. She has worn an instrument, but has not derived the least benefit therefrom.

On examination there was found a large tumour, formed by the bladder and anterior wall of the vagina, which protruded through the vulva. (See Plate 5.)

March 29th. Mr. Baker Brown performed his usual operation for cystocele. 31st. The deep sutures were removed. April 6th. The superficial sutures were removed. 28th. The patient was discharged quite well. She passed her water without difficulty, and had lost all her former painful symptoms.

B.—*Prolapse of the Posterior Wall of the Vagina.—Vaginal Rectocele.—Rectocele.*

This condition is generally gradual in its formation, and, like the preceding, tends, if left alone, to become worse; mechanical

causes seconding the operation of the primary one, namely, relaxation of the posterior wall of the vagina. The accident varies in extent from a mere encroachment of the vaginal wall, to the expansion of it into a tumour projecting between the labia. Its more aggravated stage involves other organs; and the uterus is at length dragged downwards and displaced.

Causes.—Rectocele may be produced by:—

1. Habitual and prolonged constipation. The undue stretching of the rectum by fæcal accumulation brings about a relaxed and loose condition of its tissues; and the same cause stretching the parietes of the vagina, produces a like looseness of that canal.

2. Persistence in the use of strong purgatives in persons of lax fibre.

3. An enlarged or a displaced uterus, so pressing on the rectum as to impede the evacuation of its contents, causing thereby an overloading and an over-extension of the muscular fibres of the rectum, and the relaxation of the tissues of the vagina, especially behind.

4. Stricture of the anus, or repeated spasmodic contraction of the sphincter at the time of defæcation.

5. Rupture of the perinæum, when this extends to, but does not involve, the sphincter ani. The action of this cause may be explained by supposing the detachment of the sphincter fibres from their connexion with the perinæum, to produce their relaxation, and thereby a deficiency of the natural support to the recto-vaginal septum, especially during the evacuation of the bowels. The perinæum is the normal antagonist to the diaphragm, counteracting its downward thrust of the intestines, particularly in the efforts at stool. Hence the perinæum being destroyed, the force of the diaphragm tends to displace the intestines and pelvic viscera, and will be more particularly felt on the anterior wall of the rectum. Sometimes, on a *casual* examination, the perinæum will appear to be uninjured; but, on a *careful* one, it will be seen that all the deep tissues are lost, and that merely skin is present superficially; so that, in fact, this false perinæum gives no support to the rectum during defæcation.

Symptoms.—The general symptoms attendant on this affection resemble those met with in the preceding displacement. The patient complains of pain in the parts and in the back, with bearing-down and dragging sensations from the loins, aggravated by walking and exertion of any sort, and giving rise to various sympathetic ailments. The special symptoms are tenesmus; the frequent recurring desire to empty the bowels, generally fruitless and attended with much pain; the evident increase of the vaginal tumour, and more or less inconvenience or difficulty in emptying the bladder. The patient will commonly tell you that she is obliged to push back the tumour with her finger to enable her to evacuate the rectum, and that she empties the bowel best if she sits on a very low stool.

Diagnosis.—This tumour, so soon as perceived, is usually mistaken by the patient for a descent of the womb, but a manual examination will soon detect its real nature.

The patient being placed on her back, the finger is found to pass into the vagina in front of the tumour, instead of behind it, as in *cystocele*, and to reach the os uteri higher up towards its usual position, thus proving that it is not the uterus prolapsed. Again, on introducing the finger within the rectum, it enters into a cul-de-sac of its anterior wall, or in other words, into the cavity of the apparent tumour in the recto-vaginal septum, and it pushes the tumour out through the vagina. (Plate 4.)

Treatment.—It is of great importance to cure this affection early; otherwise, by its continuance, it will drag down the uterus, increase the misery of the patient, and, of course, render relief more difficult.

In the early stages of the displacement we may hope for benefit from the recumbent posture, attention to the bowels to prevent constipation, astringent injections, perinæal bandages, and such-like expedients. If these fail, however, recourse to surgical measures should not be delayed. The operation I recommend and practise resembles in principle that for cystocele, and needs no detailed description. I may add, however, that there is no surgical operation more certain in its

successful results, and which affords more speedy relief to the patient. The narration of the following cases will serve in illustration. It is requisite to say that I now remove the deep sutures on the third day, instead of leaving them, as in my early operations, for four or five days:—

CASE I.—*Rectocele: Cure.*—Hannah H., æt. 49; married. Admitted May 6th, 1853, into Boynton Ward, St. Mary's Hospital. Has had six children, the youngest now twelve years old; and has been six years under treatment.

She complains of violent pain in the loins and side of the belly; pain when she passes water and when she has a motion; the latter can only be procured by aperients, and its passage is attended with much difficulty. The straining causes the appearance of a "lump" in the vagina, which she has taken to be the uterus or a tumour from it. The endeavour to walk causes the tumour to prolapse from the vagina, and hence she is obliged almost always to keep in the recumbent posture. She has suffered from considerable leucorrhœa, and from heat and soreness about the vagina. Intercourse with her husband is impeded by the tumour. The urine is thick and ropy.

On examination, the tumour was found to be a prolapse of the posterior wall of the vagina. On introducing the finger into the rectum, it passed forwards into the tumour projecting from the vulva. The perinæum had been torn in some previous labour, and was shorter than natural by imperfect reparation. The leucorrhœal discharge was found to come from the upper part of the vagina and os uteri, the surfaces of which were abraded by friction, the uterus having been displaced obliquely forwards, so that its mouth pressed against the posterior wall of the vagina.

On the 7th of May, having previously cleansed the rectum by an enema, I proceeded to operate (anæsthesia being produced by chloroform) on the same general plan as in cystocele, omitting as unnecessary in this prolapse, the anterior denudation and sutures. This will be at once understood by referring to plate 3. Paring off the mucous membrane, and insertion of the interrupted sutures, are the parts of the operation for cystocele omitted in that for rectocele; since the object of the latter operation is chiefly to contract the posterior wall of the vagina. The denudation should, however, be much deeper than in cystocele; indeed, it should be carried as far back, if possible, as the protruding walls of the rectum. (See Plate 8.)

The patient after the operation was placed as usual in bed, a water-cushion being placed beneath the pelvis, and a grain of opium was ordered to be taken every six hours.

On the 13th the pulse was quick and feeble; there had been some slight sickness, and excitement of manner, with free perspiration. Opium omitted, and a draught with five grains of the citrate of iron and quinine ordered three times a day. In the afternoon there was a forcing of the rectum, when an opium suppository was used.

14th. Feels better generally, but the tissues between the two quills look red and inflamed. This afternoon the quill sutures were removed, as rigors had occurred, with some bleeding: this last was arrested with ice. The wound indicating a tendency to slough, a lotion of liquor sodæ chlorinatæ was ordered. At 7 P.M. rigors still troubled the patient; the pulse was 120; tongue moist; skin perspiring; tenderness over lower part of abdomen, and a forcing of the bowels. To have an enema containing an ounce of castor oil,

at once ; and to take a saline draught, and a powder of hydr. c. cretâ and pulv. ipecac. co., every four hours.

15th. The shivering and pain have ceased. The left side of the wound looks puffy.

16th. Is better. Pulse 100 ; countenance more cheerful ; appearance of wound healthier.

After this date the case proceeded satisfactorily ; firm adhesions were set up, and the prolapse was cured. On the 12th of April she was discharged. I have since seen her, and find that she remains quite well.

Case II.—*Rectocele : two years' duration : Cure.*—Anne H., æt. 33, admitted into St. Mary's Hospital June 12th, 1857. Was delivered of her first child three years ago, and has ever since suffered from what she has supposed to be a descent of the womb. She has been a patient in the Westminster Hospital, where an operation undertaken for her relief failed.

On examination, the tumour (of the size of a duck's egg) was found to consist of a protrusion of the anterior wall of the rectum through the labia. The uterus maintained its normal position. The vagina was much relaxed.

June 17th. Operated on in the usual manner for rectocele ; went on well, and was discharged cured on the 31st of August.

Case III.—*Rectocele : Cure.*—Mrs. Fr. has been for eighteen months under medical treatment for bearing-down pains, costive bowels, and painful defæcation. Besides these symptoms a tumour is felt protruding forward into the vagina.

May 9th, 1858. Operation performed in the usual manner. On the 11th the deep sutures removed. All went on well, and she became perfectly restored.

Case IV.—*Rectocele : Cure.*—Hannah H., æt. 35, admitted into St. Mary's Hospital November 12th, 1858. Was confined about thirteen years since, and a few years afterwards experienced much bearing-down and difficulty in relieving the bowels. These symptoms increased, and at length she could not manage to empty the rectum until she had pressed back the tumour from the vagina.

Nov. 17th. Operation as usual. 19th. Deep sutures removed.

A small fistulous opening remained posteriorly in the perinæum, close to the anus, but not communicating with the rectum. Acetum lyttæ was applied to its edges several times, but as this failed to secure its closure, the edges were pared and then brought together by silver wire and shot, which quickly effected a perfect cure.

Case V.—*Rectocele : Cure.*—Eliza B., æt. 22, admitted into the "London Surgical Home" July 12th, 1859. Has had two children ; the prolapse occurred after the birth of the first, nearly three years since. Whenever she strains at stool, the rectum bulges forwards into the vagina, forming a tumour, which she is obliged to push backwards before she can empty the bowel. She also suffers from some difficulty in passing water.

July 21st. Operation performed. 24th. Deep sutures removed. At the beginning of August she had quite recovered, and was discharged cured.

Case VI.—*Vaginal Rectocele : Cure.*—Mary A. H., æt. 25, admitted into the "London Surgical Home" in November, 1859. Shortly after confinement, a few months since, she experienced a bearing-down, as she supposed of the uterus ; but there was also a difficulty in emptying the bowels, and a tumour

(the rectum) appeared between the labia, which augmented in size with straining at stool, or otherwise. Besides the rectocele there is also a partial rupture of the perinæum.

Nov. 10th. Operation.

On the 12th, deep sutures removed; and in the first week of December she was perfectly restored, and discharged cured.

Case VII.—*Rectocele: upwards of twenty years' duration: Cure.*—Mrs. R. N., æt. 47, admitted into the "London Surgical Home" June 20th, 1859. Her only child was born more than twenty years ago; soon after which she experienced great pain and difficulty in defæcation, frequently being obliged to push back the bowel from the vagina, before she could be relieved. On examination a large vaginal rectocele was found. June 26th, 1859, my usual operation was performed, and in a month the patient was discharged quite cured.

Case VIII.—*Rectocele with Internal Hæmorrhoids: Cure.*—Mrs. A., æt. 34, admitted into the "London Surgical Home" November 3rd, 1862. Has been married three years and a half. Has had two children. Has suffered from "bearing down of the womb" since her first confinement, which was tedious. Has had great difficulty in defæcation, and for many years has suffered from piles. The rectum was found prolapsed into the vagina, and there were several large venous piles projecting from the anus. November 6th. The usual operation for rectocele was performed, and three ligatures were applied to the piles. November 8th. The deep sutures were removed, and on November 11th the superficial. November 14th. The bowels were opened by enema with great relief. November 26th. Discharged quite well.

Case IX.—*Rectocele: Cure.*—Mrs. Sarah J. M., æt. 36, admitted into the "London Surgical Home" June 9th, 1853. Married when sixteen years of age. Has not had any children. About twelve months ago had a miscarriage, followed by severe flooding. Since that time has suffered great "bearing-down pain," difficulty of defæcation, &c. Is a woman of very relaxed fibre. June 13th. The usual operation for rectocele was performed. It was followed by unusual hæmorrhage. The patient, however, did well, and was discharged July 13th quite cured.

Case X.—*Rectocele, with Fissure of the Rectum: many years' duration: Cure.*—Harriott F., æt. 26, admitted March 10th, 1864; has been married eight years and has had six children. For many years suffered from the usual symptoms of rectocele, accompanied by considerable leucorrhœa. She was operated upon in the usual manner. March 24th a fissure of the rectum was also divided. She made an excellent recovery, and was discharged cured April 23rd.

Case XI.—*Rectocele: nineteen months' duration: Cure.*—Mrs. J. B., æt. 32, admitted into the "London Surgical Home" September 27th, 1863. A year and seven months ago was delivered of her first and only child. Since that time has suffered great difficulty at each effort to defæcate, as the loaded rectum protrudes into the vagina. Wore a pessary for three months, but it produced ulceration, and seemed rather to aggravate the malady. An examination showed a very large rectocele and general laxity of the vaginal walls. The usual operation was performed on October 15th. A month later the patient was discharged *cured*.

Case XII.—*Rectocele with Fissure of the Rectum: Cure.*—Agnes S. R., æt. 22, admitted into the "London Surgical Home" April 2nd, 1864. Has been

married fourteen months and had one child. Was twenty-four hours in labour, and delivered without instruments. A fortnight after delivery felt pain in back and side whenever she walked, with difficulty in defæcation. Examination showing rectocele and a fissure of the rectum. I operated for both these lesions April 6th. May 14th she left the Home quite cured and much improved in her general health.

Case XIII.—*Rectocele: many years' duration: Cure.*—Sarah E., æt. 36, admitted into the "London Surgical Home" July 30th, 1864. Married ten years—four children. Since birth of last child has suffered great pain in the womb, loins, &c., with feeling of prolapse. Has worn a pessary but without much benefit. Examination showed that the perinæum had been ruptured many years ago. It had united superficially without an operation; but, in so doing, a vaginal rectocele had been created. August 4th. Usual operation. This patient made a rapid recovery, and was discharged cured on August 27th.

Case XIV.—*Rectocele: long duration: Cure.*—Mrs. Mary Anne R., æt. 29, admitted into the "London Surgical Home" December 7th, 1864. Has had five children and two miscarriages. After the birth of her third child, she first suffered inconvenience in her endeavours to empty the lower bowel on defæcation. Also suffers from incontinence of urine. Has not menstruated for four months. Examination showed a large rectocele. She was operated upon on the 8th for this affection, and on January 7th she was discharged cured.

Case XV.—*Rectocele, with Fissure of the Rectum: Cure.*—(From note sby Dr. A. Octavius Grosvenor, House Surgeon.)—C. C., æt. 45 years; married. Admitted into the "London Surgical Home" January 2nd, 1866. Has had eight children, and one miscarriage. Has been ailing, and treated for uterine ulceration, &c., for nearly four years. Catamenia regular till the last twelve months, since which time she has only menstruated once, and then very scantily. The bowels are invariably constipated, and after motion there is always hæmorrhage. Defæcation is both difficult and painful. On examination, a large rectocele was found, and an old partially-healed rupture of the perinæum. There was also a fissure of the rectum. January 11th.—Mr. Brown performed his usual operation for rectocele and divided the fissure. January 13th.—The deep sutures were removed; and on January 18th, the superficial. February 1st.—The patient was examined: found quite cured, and discharged.

Cases of Rectocele with Cystocele.

(Plate 4.)

Case I.—*Rectocele, with slight Cystocele: Cure.*—Mrs. J. M., æt. 48. Admitted into the "London Surgical Home" December 8th, 1861. Had been delivered of seven children, and had ceased menstruating six years ago. For many years has suffered from a dragging pain in the back. Bowels regular; delivered without pain. Great irritation about the anus. On examination, a pouch of the rectum was seen protruding through the vagina; the bladder also had a tendency to prolapse. December 12th, 1861.—The usual operation for rectocele and cystocele was performed. On the 15th, the deep sutures removed; and on the 21st, the superficial. January 10th, 1862.—The patient was discharged quite well.

Case II.—*Rectocele and Cystocele: Cure.*—E. S., æt. 40; married. Ad-

mitted into the "London Surgical Home" July 5th, 1862. Married seven years, and has had three children, the last born nine months ago. Menstruation rather frequent. Has suffered from difficulty in defæcation, dysuria, and lumbar pains since her first confinement. On examination, both the anterior and posterior walls of the vagina were found to be prolapsed, but not the uterus. July 10th, 1862.—The usual operation was performed. On the 12th, the deep sutures were removed; and on the 16th, the superficial. August 7th.—Discharged quite well.

CASE III.—*Rectocele and Cystocele: three years' duration: Cure.*—Catherine M., æt. 36; married. Admitted into the "London Surgical Home" April 7th, 1863. Has been married four years, and had one child three years ago, after having been in labour nearly three days. Has suffered very severely from the usual distressing symptoms of rectocele and cystocele. On examination, besides the ordinary evidence of prolapsus vaginæ there was a large fluctuating tumour above the pubes, which at first sight might have been taken for ovarian; but on introducing the catheter, a chamber utensil full of urine was withdrawn, and the tumour then disappeared. The uterus did not prolapse. April 9th.—The usual operation for rectocele and cystocele was performed. On the 11th, the deep sutures removed; and on the 15th, the superficial. May 15th.—The patient was discharged cured.

CASE IV.—*Cystocele, with Prolapse of the Uterus and Rectocele, and partially ruptured perinæum: three months' duration: Cure.*—Mrs. L., æt. 25, having returned from Sierra Leone to England, on account of her health, was recommended to see me by Sir C. Locock.

At her confinement with her first child, three months since, the perinæum was partially ruptured. Since then she has suffered much from bearing-down of the womb and prolapse of the bladder and recto-vaginal septum. She states that the urine was once retained in the bladder for forty-eight hours, and she dates the aggravation of her sufferings in that organ from that time. She has wasted considerably, and become low, nervous, and sometimes hysterical. Has had no connexion with her husband since her confinement, and has not nursed the child. She cannot sit up or walk without great local distress. She had constant sickness on her voyage home, which greatly increased her sufferings.

I ordered generous diet, and steel with belladonna in pills, with her meals. I proposed to operate in a week.

February 14th, 1854. The operation carried out, and also the after-treatment, were similar to what has been already described, with the single exception that the catheter was not retained in the bladder, on account of the irritation it caused. The patient was convalescent in a fortnight, and the local inconvenience so much relieved as to enable her to get down-stairs. The result was a complete cure.

The foregoing cases of cystocele and rectocele alone, or occurring together in the same case, will illustrate the success which attends the method of operation which I pursue. I could add many other cases to the series if it were requisite. Several, complicated with ruptured perinæum and prolapse of the womb, will be found in the chapters devoted to those lesions.

CHAPTER III.

PROLAPSE OF THE UTERUS.

Of this displacement there are two varieties, distinguishable as *complete* and *incomplete*, according as the uterus descends so low as to appear, when the patient is in the erect posture, through the external parts, or as it is still retained within the vagina, and so does not protrude. The former, or complete variety, is often designated Procidentia Uteri, and the latter, the incomplete form, Prolapsus Uteri. In practice, however, the terms prolapsus and procidentia are generally applied indifferently to both forms of displacement.

The immediate causes of prolapse of the uterus are—

1. Relaxation of the Ligaments of the Womb.
2. Laceration of the Perinæum.
3. Fibrous tumours of the Uterus, and Polypi.
4. Congestion of the Uterus.
5. Mechanical injury, dragging, or straining.

M. Huguier, of Paris, asserts that an elongated cervix is a frequent cause. To remedy the prolapse arising from this source, he proposes, apparently as a general measure, to excise the cervix.

Cases of this nature almost always occur in the unmarried female, and they are caused by habits of delection. They are not benefited by any plastic operation. The elongated cervix assumes, as it were, the character of an erect penis, and it will protrude through even the smallest opening, after the vagina has been contracted by surgical interference. At the present time I never adopt a plastic operation to remove the cervix. I extirpate it by the actual cautery, according to a suggestion also made by Huguier.

Prolapse of the womb is often a consequence of general

debility; or it may arise from mechanical dragging in the course of parturition, the ligaments being stretched so that the organ cannot regain its normal position. On the other hand, the fault may be in the supporting parts beneath, and the displacement may depend on laceration of the perinæum, or on a relaxed and dilated state of the vagina.

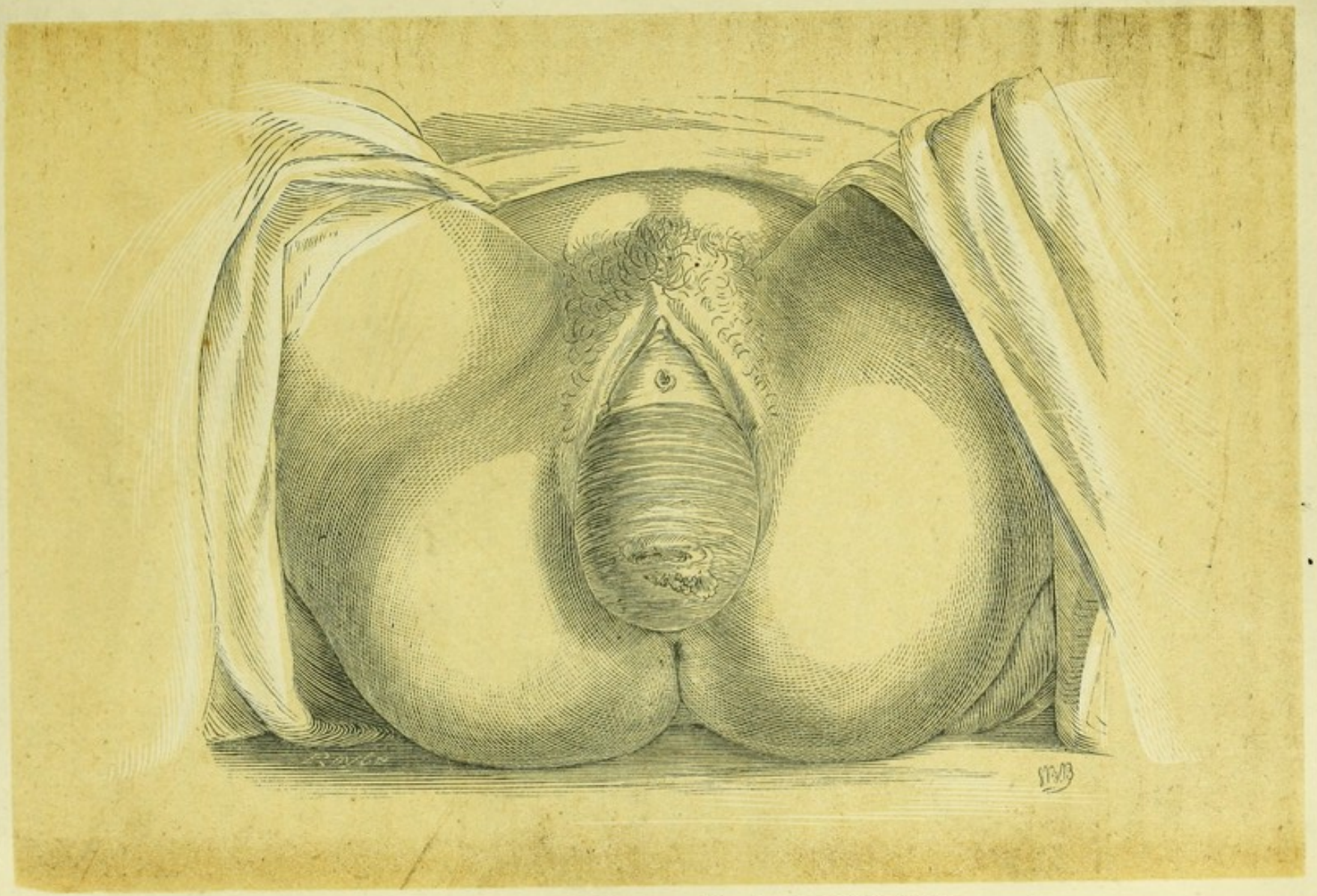
Again, the cause of descent may be found in the uterus itself. The organ may be congested, and then by its increased weight, and indirectly by the effects of the morbid state on the ligaments, it tends to sink downwards towards the vulva. In a like manner, fibrous tumours in the walls of the womb and pedunculate tumours or polypi drag down the uterus. Lastly, excessive straining, as in lifting weights, may induce prolapse.

Predisposing causes are found in the existence of a roomy pelvis and a large pelvic outlet; in a weakening and stretching of the pelvic ligaments and fasciæ, or in a flaccid state of the vagina, or a dilated state of that canal from repeated child-bearing; and generally, in a leuco-phlegmatic habit favouring the occurrence of leucorrhœa.

One most common cause is the too early adoption (speaking generally, before the end of the third or fourth week) of the erect posture after delivery or miscarriage, the uterus and its connexions not having recovered their position, size, and tone. Again, a violent cough at, and after, labour tends to thrust down the uterus by the strong action of the diaphragm in the act of coughing, when, too, the vagina has not regained its tone and can render little support.

Single women who have not been pregnant, however, are not exempt from this accident, and in them mostly, from the nature of the causes, cure is more difficult to effect.

Symptoms.—One of the first symptoms of prolapsus uteri is pain in the back, succeeded by more or less uneasiness in the groins and labia, in which also there is a feeling of fulness. The pain in the back soon assumes a dragging character; there is a sensation of bearing down or of weight, "as if" (as patients will describe it) "everything were dropping through." Together with these symptoms there are an in-



COMPLETE PROLAPSUS UTERI, with abrasion about the Os.

creased mucous discharge from the vagina, often a frequent desire to micturate, and sometimes a degree of strangury, irregularity of the bowels, and interference with the process of defæcation, sympathetic disorder of the stomach, loss of, or capricious appetite, dyspepsia, and distension of the abdomen.

With the pain and other local evils, and with the general bodily disorder, it is not to be wondered at that the spirits flag, that every occupation becomes tiresome, and life oftentimes burdensome.

Diagnosis.—With a little care, the os uteri may, by manual examination, be detected; and by observing its position and relations, the diagnosis may be readily made from polypus uteri, and from either variety of vaginal prolapse. (Plate 7.)

Treatment.—For a long period, in the progress of most cases, the uterus returns of itself, or otherwise is easily replaced, on the patient assuming the recumbent posture. Hence, in the early stage, this posture, with the hips considerably elevated, must be insisted on, and continued for a long time; attention being at the same time given to maintain perfect quiet. The food should be unstimulating, and opium be administered by the mouth to prevent the action of the bowels, and so to keep the parts quiet; injections, however, being occasionally used. So soon as all inflammatory symptoms have subsided, cold, astringent, and stimulating injections may be employed; the cold douche over the abdomen is especially beneficial. At the same time the system will require to be braced by tonics, change of air, and good or generous diet. Let the introduction of pessaries be avoided. I will here state my objections to them, whatever their form, as mechanical supporters. As a general rule they are bad; they are prone to produce irritation and excoriation, and with these leucorrhœa; they are incompatible with perfect cleanliness; and when they afford any relief at all, they stretch and tend to keep up the relaxation of the canal. To give local support I find nothing so useful as the form of perinæal bandage which I devised and described some years back, and have constantly used, made by Mr. Spratt, 2, Brook-street, Hanover-square.

Should these measures, auxiliary to the efforts of nature in

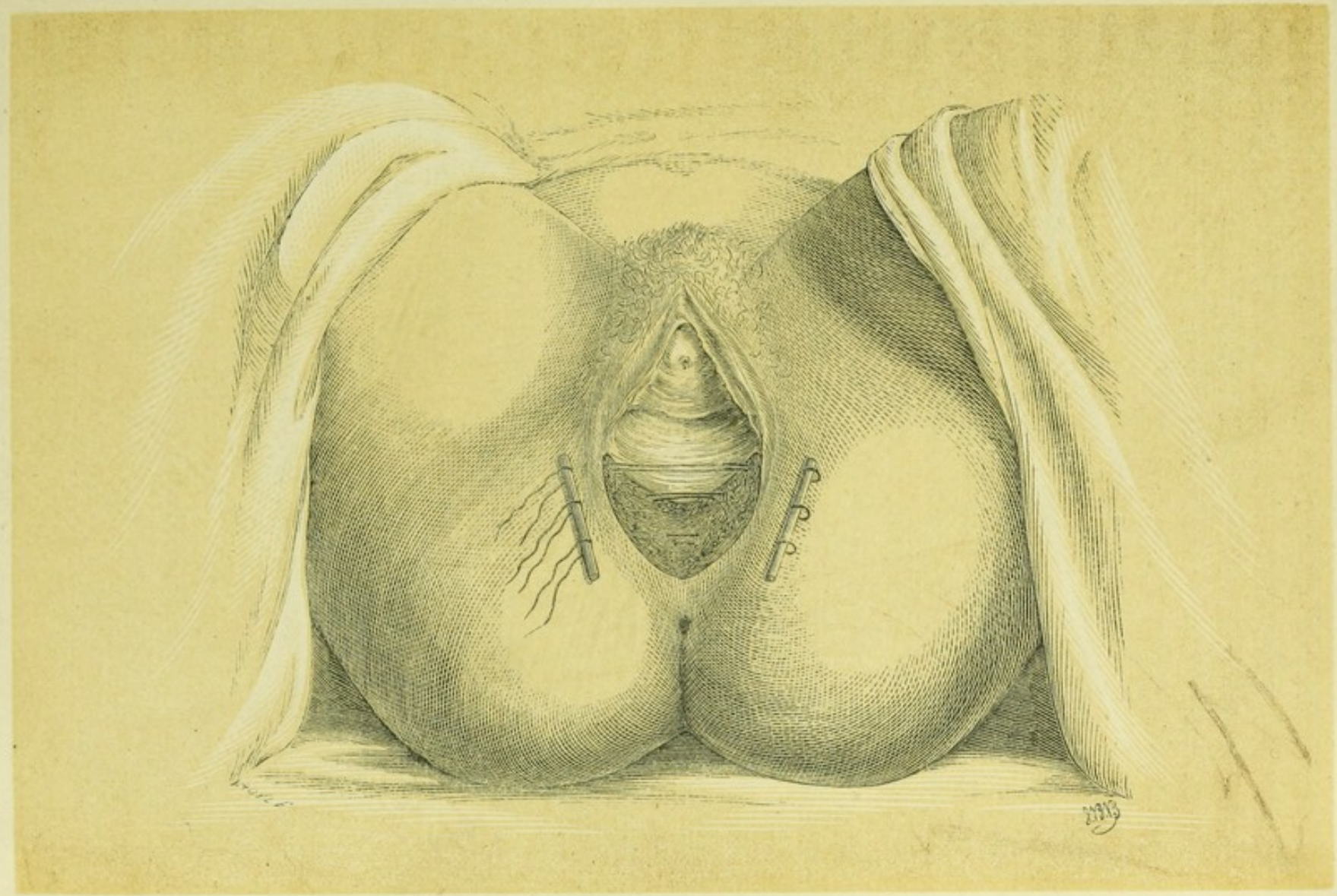
recovering the normal tonicity and status of the parts, be unsuccessful; or should the diseased condition have been previously neglected until no longer amenable to medical treatment, then we may seek a cure by surgical means. The measure I propose resembles in principle the one I have adopted for prolapse of the anterior and posterior walls of the vagina; viz., mechanically curing the displacement by contracting the relaxed, loose mucous canal. With this object I suggest the removal of a portion of mucous membrane posteriorly and laterally, and the introduction of sutures after the same plan as in the other operations.

The denudation should be most freely carried out posteriorly (Plate 8), and tapered up on each side towards the fourchette; the whole bared surface having a crescentic or horse-shoe shape, adapted to admit of free dilatation in any subsequent labour.

The general plan of treatment laid down applies as well to the incomplete as to the complete form of prolapsus uteri; but the operative proceeding is seldom called for in the former, unless it has been long neglected and the vagina much stretched.

On this and other points connected with the treatment proposed for the radical cure of prolapse of the womb, the excellent article by Dr. Savage in the *Lancet* (vol. I., 1858, p. 164) may be advantageously referred to. But at the time he wrote it, that gentleman had somewhat mistaken my opinion and mode of practice, and, in reviewing the several sorts of incision employed by different surgeons, he inadvertently described mine as narrower than was the case, and to illustrate this adduced a diagram of mine, given, not to show the operation for prolapsus uteri, but that for cystocele.

It is incumbent upon me to notice the error Dr. West has fallen into, respecting the principle and nature of the operation I adopt for the cure of prolapsus uteri. In his *Lectures on the Diseases of Women*, 1856, p. 187, that physician intimates that I adopted Dr. Fricke's operation in a modified form, according to which the prime object was to contract the vulva. This is wrong; for the operations I first carried out



OPERATION FOR PROLAPSUS UTERI.

were done in ignorance of Fricke's plan, and I never adopted the contraction of the vulva as a principle of my practice, but, on the contrary, the contraction of the vagina, the line of practice Dr. West is pleased to speak of approvingly. This method, in my hands, has been very successful—more so, indeed, than the plan adopted by M. Jobert, to the satisfactory results of which Dr. West refers.

A similar operation to the one just suggested would, I apprehend, be beneficial in those very rare instances of prolapse of the entire vaginal canal without procidentia uteri. This is spoken of as a distinct form of displacement by Dr. Churchill, who quotes a case recorded by Noël, where the prolapse reached the knees. But a relaxation of the vaginal walls seems almost necessarily to entail a more or less complete subsidence of the uterus, when, according to the accepted nomenclature, we should rather refer to the condition as one of prolapsed uterus than of prolapsed vagina. However this may be, the general treatment would be the same.

However the fact may be explained, experience has taught me that the operation to cure prolapsus uteri, as a rule, fails in young unmarried women who have not born children. Such a failure has occurred to me in three or four instances, and in place of operating I would recommend general hygienic and moral measures, as it appears to me that undue excitation and irritability of the parts of generation have something to do with the matter. Supposing my notion to be correct, leeches to the labia might be sometimes called for, with cold hip-baths, gentle purgation, and unstimulating diet, together with moral treatment, in order to allay the irritability. Where such means have failed, and the irritation persists, I have excised the clitoris with considerable benefit, and also extirpated the elongated cervix by the actual cautery.

The number of cases to be detailed might have been considerably extended from the records of my own experience, both private and public; but some of my case-books at St. Mary's Hospital were surreptitiously removed and never returned. However, the number at present adduced is ample

enough to illustrate the general history of such cases, their treatment by operation, and the amount of success to be anticipated from the operation advocated.

It may be further observed that several of the recorded cases afford illustration also of cystocele and rectocele, and show that even in such complicated lesions the single operation suffices to effect a cure.

The following is a summary of the cases :—

Description.—

Complete Prolapse :—	
(*a*) Simple	46
(*b*) Complicated—	
1. With cystocele...	19
2. With rectocele	2
3. With rectocele and cystocele ...	9
4. With rectocele, cystocele, and ruptured perinæum	1
Incomplete prolapse :—	
(*a*) Simple	1
(*b*) Complicated with cystocele ...	1
Total cases ...	79

Duration.—Four of the cases were of three months' duration or under, and eight were from six to fourteen months. One case had existed eighteen months, and the remainder, in which the duration could be ascertained, as follows :—6, two years; 3, two years and a half; 5, three years; 5, four years; 1, five years; 3, six years; 1, six years and a half; 2, seven years; 4, eight years; 4, ten years; 1, twelve years; 4, thirteen years; 2, fourteen years; 2, twenty years; 2, twenty-seven years; and 1, thirty-four years.

Almost all the cases of many years' duration were treated successfully.

Results.—Seventy of the cases recorded were *cured*; five

were relieved; in two cases the operation *failed*; and in two it was followed by *death*.

Case I.—*Prolapsus uteri complete: eight years' duration: Relief.*—Sarah W., æt. 33, admitted into St. Mary's Hospital March 31st, 1854. Ten years ago was delivered of her first child, after a labour of six hours. About three weeks afterwards she resumed her occupation as a general servant, and at the end of two months felt the first symptoms of prolapse of the womb, accompanied with much leucorrhœa. Although her condition grew worse, she continued at work for about a year, when the uterus appeared externally, and obliged her to leave her situation and seek medical aid. For the last eight years she has worn pessaries at intervals, and also a truss to keep up the womb; but these means have only imperfectly relieved her, and been a frequent cause of irritation and annoyance. Her sufferings have, moreover, been increased by an inability to retain her urine, which she has had to pass every few hours in very small quantity.

April 5th. Operation. 6th. After the operation yesterday there was much oozing of blood, which was controlled by the local application of ice, and, probably from this interference with the parts, one of the anterior quill sutures was this day found to have given way. After this date she went on well, except that the union of the parts took place only at the posterior half of the wound. 22nd. Discharged. She suffers no inconvenience from walking, but feels a pressure on the perinæum when standing up. However, she is greatly relieved, both from the local suffering and in general health, and I advised her to abstain from employment for a time, and to support the perinæum by a bandage.

Case II.—*Prolapsus uteri complete, with Cystocele: eighteen years' duration: Cure.*—Sarah A., æt. 48, admitted into St. Mary's Hospital October 3rd, 1854. Eighteen years ago, after a very prolonged and painful labour, she suffered from prolapsus uteri, for which she wore a pessary, and went on pretty well until two months since, when she had an attack of fever, and became an in-patient of the Marylebone Infirmary. Subsequently to this illness the displacement has much increased, and at the present time the uterus with the bladder and vagina are protruded externally in the shape of a conical tumour. Around the os uteri are slight ulcerated patches.

Oct. 11th. Operated on in the usual way, and submitted to the after-treatment, as laid down in previous pages. The case did well, and she was discharged cured on the 13th of November. Since that period I have seen this woman, and learnt from her that she is able to pursue her employment, and to get about with ease, without any bearing down. Her bodily health had also greatly improved.

Case III.—*Prolapsus uteri complete: two months' duration: Cure.*—L. F., æt. 20, admitted into St. Mary's Hospital December 12th, 1854. Her health was good up to the time of her confinement, three months ago, which extended over four days. It was her first labour, and the child was large. A month after delivery she felt the uterus protrude, and experienced great difficulty in walking. The uterus appears externally, and the vaginal constrictor and a small portion of perinæum are torn. Dec. 13th. Usual operation performed, and after-treatment adopted, as already described. The bowels were relieved by an injection on the 21st. The discharge of pus, healthy in character, has been very free since the 20th, but greatly decreased by the

23rd, after which her health improved much, and she was discharged, a month from the date of the operation, perfectly cured.

Case IV.—*Prolapsus uteri complete: Cure.*—Ann T., æt. 49, admitted into St. Mary's Hospital April 17th, 1855. Has had three children, the last of which was born suddenly, without assistance. This was eight years since, and the bearing down felt at first has increased until for some long time past the womb has prolapsed completely whenever she has stood, and sometimes indeed after coughing when she has been lying down. She has worn pessaries of two sorts, each of which at first answered very well, but after a time ceased to afford her either comfort or relief. She is thin, weak, of lax fibre, and prone to diarrhœa and vomiting.

May 9th. Measures having been taken to improve her general health, the usual operation and after-treatment were resorted to on this day. As an addition she was ordered 4 oz. of wine and beef-jelly daily. 12th. Deep sutures removed. Adhesion by the first intention has taken place satisfactorily. 19th. Gone on well. Goes out to-day, to all appearance quite restored.

She subsequently presented herself at the hospital, in excellent health, declaring that she had never been better in her life, and was able to follow laborious occupation. The relief afforded by the operation in this case was most gratifying; for even during her stay in the hospital the constant improvement in health and general condition was well marked.

Case V.—*Prolapsus uteri complete: two years' duration: Relief.*—E. W., æt. 21, admitted into St. Mary's Hospital on April 28th, 1855. Unmarried: has never had a child. Prolapse of the womb first showed itself six years ago, and has progressively become worse, causing severe bearing-down pains, and difficulty in defæcation. Various instruments have been tried without effect. Menstruation has sometimes happened every fortnight, and been excessive, and leucorrhœa has been constantly present for the last two years, since which time the prolapse became complete, and was complicated with prolapsus of the bowel and of the posterior wall of the vagina, or rectocele.

May 2nd. Usual operation performed. 6th. Deep sutures removed. 14th. Opium discontinued, and bowels opened for the first time. The union of the divided parts and of the new supplementary perinæum is firm. This operation was not followed by the desired success. After a short time the uterus and bowel again prolapsed, so much so that the former almost constantly protruded when she was in the erect posture. Bichloride of mercury and occasional leeching were resorted to, in order to diminish the size of the uterus, and so to lessen its disposition to prolapse. June 25th. The uterus is rather less in size, but is still much indurated. It presses backwards upon the rectum. July 14th. A *second* operation was performed, for the purpose of extending the supplementary perinæum, and almost closing the entrance of the vagina. 20th. She has gone on favourably, and the uterus no longer escapes externally, although it is low down, and its mouth may be seen on separating the labia. It is still larger and heavier than is natural.

This was the first case I had then seen of prolapsus uteri of any severity in an unmarried female. The protrusion of the womb appears to have been secondary to the formation of the rectocele. As she had tried without avail most other means of supporting the viscus, it was only a plastic operation which held out prospect of permanent advantage. I have since heard that the uterus has again protruded, and that she has consequently not derived permanent benefit from the operation.

Case VI.—*Prolapsus uteri complete: ten months' duration: Cure.*—Mary

Ann C., æt. 28, admitted into St. Mary's Hospital June 2nd, 1855. Was delivered of her first child in April, 1854 ; was afterwards so debilitated that she could not sit up for three weeks, and after she got about she felt the womb low down in the pelvis, and experienced a difficulty in passing water. Four months from the date of her confinement the womb prolapsed one day, as she was walking, completely through the external parts, and induced fainting. Prior to admission in the hospital she had attended from the beginning of June as an out-patient, and being weak and consumptive in appearance, had taken tonics and cod-liver oil.

June 20th. The operation and subsequent treatment carried out in the usual manner. 23rd. Deep sutures removed. The continued favourable progress of the case leaves nothing to record, except it be the marked improvement that ensued in her general health ; an event which experience proves may be anticipated, when the cause of much weakness, irritation, and pain, found in the existence of a prolapsed womb, is removed.

Case VII.—*Prolapsus uteri complete : two years' duration : Cure.*—Mary F., æt. 41, admitted into St. Mary's Hospital on July 12th, 1855. Has suffered from prolapse of the womb for twenty years, but it was not until two years ago that the uterus protruded externally. After each pregnancy the displacement was for a time better, but then again grew worse. During all the time she has been subject to menorrhagia, and for the two last years to much leucorrhœa, since which her health, previously good, has materially suffered. She has great difficulty in walking ; the uterus falls when she is in the upright posture, and when recumbent, it is driven down by coughing : it is, moreover, enlarged.

July 18th. Usual operation performed. 21st. Deep sutures withdrawn. Went on quite well in every respect, and was discharged cured on August 10th.

Case VIII.—*Prolapsus uteri complete : thirty-two years' duration : Cure.*—Julia B., æt. 50, admitted into St. Mary's Hospital in August, 1855. Has had twelve children ; the last fourteen years since. Thirty-two years ago, after her first confinement, the first symptoms of prolapsus uteri occurred, which became gradually aggravated, until at length the womb protruded completely. Has been subject to leucorrhœa ; has worn different kinds of pessaries for the last nine years, but the quoit-shaped pessary alone appeared to suit her. Two months ago she had an attack of metritis, which her medical attendant attributed to irritation caused by the pessary ; since then she has ceased to wear one. On examination, the uterus was found enlarged and protruded beyond the vulva; in the recumbent position it returned within the pelvis. August 8th. The usual operation performed. 10th. There was much tympanitis with sickness and delirium ; pulse slow. At one o'clock, twelve leeches were applied over the abdomen ; a dose of castor oil given, to be followed by one of calomel at bedtime. Opium discontinued. In the evening the tympanitis had decreased. Ordered pills of henbane and grey powder every six hours. 11th. Bowels relieved. Fulness and pain of abdomen relieved. Deep sutures removed. From this date her recovery advanced rapidly, and on 12th September she was discharged perfectly cured.

Case IX.—*Prolapsus uteri complete : Cure.*—E. M., æt. 30, admitted into St. Mary's Hospital November 10th, 1855. Six years ago was delivered of her first female child, after a twelve-hours' labour. For three months subsequently she had great difficulty in getting about, owing to bearing-down pains and sympathetic pains in the loins, hips, and thighs. After improving for a

time, the symptoms became worse, profuse and weakening leucorrhœa came on, and she felt the womb low down in the pelvis. At the end of three years the displacement was so bad that she adopted the use of a pessary, but had very soon to lay it aside, as it caused so much irritation, discharge, and soreness. Six months afterwards the prolapse became complete; the leucorrhœa continuing.

On examination a tumour was seen protruding from the vagina, consisting of the prolapsed bladder and womb, the mouth of the latter being directed backwards. The perinæum is ruptured as far back as the sphincter. November 14th. Usual operation performed, after-treatment as usual. 17th. Deep sutures removed. The catamenia came on, and troubled the patient; but after these ceased she went on very well, and left the hospital at the end of the month, apparently quite cured, and much improved in health. Whilst in the hospital she took bichloride of mercury with bark, with the good effect of reducing the size and hardness of the uterus.

This was one of the worst forms of prolapsed uterus to be met with, since both the bladder and uterus were involved, and the natural support of these viscera was withdrawn by the rupture through the perinæum. The lesson may be drawn from this case of the necessity for restoring even incomplete lacerations of the perinæum, with a view to prevent pelvic displacements.

Case X.—*Prolapsus uteri complete: three years' duration: Apparent cure: Relapse.*—Julia L., æt. 21, single, admitted on February 29th, 1856, into St. Mary's Hospital. She has had no child, abortion, or miscarriage, but admits having had sexual intercourse. Three years ago she was perfectly well, but about that time she lifted a very heavy weight, and strained herself. The accident happened while at her occupation of ribbon-weaving. Immediately afterwards pain and bearing down came on, and a leucorrhœal discharge, from which she habitually suffered, was very much aggravated, and at the end of a week the womb came suddenly through the os externum whilst she was walking. Since then the womb has always protruded upon assuming the upright posture and during defæcation. She can return it when lying down, but it does not recede without manipulation. Leucorrhœa has persisted from the date of the protrusion. The catamenia occur every month, but the discharge is excessive in quantity, and lasts for seven days.

Present condition.—The patient is fleshy, and apparently in good health. Has enlarged tonsils. The uterus protrudes completely; it is larger than natural; the os is abraded. The perinæum is very narrow, but whether congenitally so, or in consequence of continued pressure having produced absorption, does not appear. Has slight leucorrhœa; her voice is husky; has had syphilitic ulceration.

March 3rd. I performed my usual operation for prolapsus uteri.

March 8th. The deep sutures removed.

March 13th. The superficial sutures removed; parts quite healed.

April 19th. She left the hospital, and, as her general health was not very good, attended as an out-patient. At this time the uterus was still heavy, and somewhat low down; there was a little pain and bearing down, and together with general treatment she was enjoined to avoid the erect posture as much as possible.

The subsequent condition of this patient is well described in the words of the able reporter of hospital practice in the *Lancet* for Nov. 22nd, 1856—viz.: "In the case of Julia L. some absorption of the perinæum seems to have gone on, and its lining membrane became excoriated from the prolapse of the womb since the operation. This, Mr. Brown believes, results from the presence of secondary syphilis, symptoms of which are still manifest. The result of the

operation has, therefore, not been entirely satisfactory, and we have heard this gentleman state that, although it is almost invariably successful, yet sometimes cases do present themselves, as the one just referred to, in which it does not prove so favourable as might be anticipated."

CASE XI.—*Prolapsus uteri complete: eight years' duration: with Cystocele: Cure.*—Emma H., æt. 37, was admitted into St. Mary's Hospital on May 1st, 1856. Sixteen years ago, she first began to complain of bearing down; this was after giving birth to her second child. For eight years she suffered from leucorrhœa, menorrhagia, and increased bearing down; and at the end of this period she first observed that the womb began to protrude from the vulva. The uterus has since that time fallen further out of the pelvis, until at last it formed a tumour between the thighs as large as a child's head, according to the patient's account. The discharge has increased with the prolapse; micturition is impeded when the uterus is down; she suffers very much from dragging pains. She is a laundress by occupation, and is unable to perform the work. Her general health is pretty good. She can return the uterus easily. Has never worn any instrument, and has never had any medical or surgical advice for her complaint. She has been in her present condition for the last three years. Menstruation is now scanty, and not quite so regular as formerly.

On examination, the os externum is found to be dilated into a huge pouch, through which the uterus and bladder protrude. The os uteri is very much excoriated, and presents an ulcerated zone around the orifice. The epithelium of the vagina is very much hypertrophied, and is rough and scaly.

May 7th. I performed my usual operation.

May 10th. Deep sutures removed.

May 17th. Superficial sutures removed; parts quite healed. The operation has been quite successful in every way.

June 17th. Discharged perfectly cured.

CASE XII.—*Prolapsus uteri complete, with Cystocele and ruptured perinæum: fours years' duration: Cure.*—Esther C., æt. 50, married, admitted into St. Mary's Hospital May 17th, 1856. Four years ago she was delivered of her tenth child: she described it as a tedious labour, lasting from three o'clock in the morning till seven at night; she was attended by a woman; it was a cross-birth, and the child was still-born. The womb protruded through the vagina, which so disconcerted the midwife that she sent for a medical man, who placed the patient on her knees, and pushed back the womb; he had also to detach the placenta. Whether this was done before the reduction of the protruded womb or not, the patient is not certain, but there was considerable hæmorrhage after the child was born. Since that time she has been unable to follow her occupation as a charwoman, and can work at no employment unless in the sitting posture. The catamenia have been quite regular up to the present time; she has suffered from a dark yellow discharge for the last twelve months. The uterus began to prolapse on getting about after her confinement, and has gradually increased. When confined of her first child she ruptured her perinæum up to the sphincter, but not through the muscle; consequently she has never had a full perinæum.

Present condition.—Middle stature, of well-developed muscular frame. The uterus constantly protrudes, even in the recumbent posture, but can be returned by manipulation. It is rough and scaly, the epithelium being hardened. She cannot micturate when the uterus is down, having to push it up to do so, as well as the bladder, which is also prolapsed. The uterus when down is the size of a swan's egg, and the os is excoriated. The cicatrix of the

former rupture of the perinæum is quite visible, but complete union did not take place.

May 28th. I performed my usual operation.

May 31st. Deep sutures removed.

June 1st. Interrupted sutures removed.

June 15th. The parts soundly healed. Discharged cured.

Case XIII.—*Prolapsus uteri complete: Cure.*—Sarah C., æt. 52, admitted into St. Mary's Hospital April 17th, 1857. Has had nine children and several miscarriages. The uterus began to protrude after the birth of the sixth child, and has now attained the size of a fist. A small polypus is attached to its anterior lip.

April 23rd. Operation. 26th. Deep sutures removed. On June 8th discharged cured.

Case XIV.—*Prolapsus uteri complete: Cystocele: Cure.*—Sarah M., æt. 66, admitted into St. Mary's Hospital on May 8th, 1857. Enjoyed good health until the disappearance of the catamenia, eighteen years ago; since then she has been very weak. Two years back the uterus began to protrude, and during the last three months has caused her great discomfort, both by its complete prolapse and by ulceration having seized upon the os. The anterior wall of the vagina is also much prolapsed by the pressure of the bladder above it.

May 12th. Operation. 15th. Deep sutures removed. June 12th. Discharged cured.

Case XV.—*Prolapsus uteri complete: twelve months' duration: Cure.*—Louisa M., æt. 26, admitted into St. Mary's Hospital July 16th, 1857. Has had two children. About twelve months ago the prolapse of the womb was first noticed; it has gradually increased, and now is seen externally as large as an orange.

July 29. Operation. 31st. Deep sutures removed. Sept. 7th. Discharged cured.

Case XVI.—*Prolapsus uteri complete: three months' duration: Cure.*—Fanny W., æt. 30, admitted into St. Mary's Hospital July 23rd, 1857. About three months ago, after a violent attack of sea-sickness, with straining, the womb protruded externally, of the size of a large egg, and she was unable to return it. As she suffered much from its protrusion, and from an inability to retain her urine, she came to London and had the womb replaced by the aid of instruments. Since this was done she has worn a pessary.

July 28th. Operation. 31st. Deep sutures removed. August 23rd. Discharged cured.

Case XVII.—*Prolapsus uteri complete: Cure.*—Anne P., æt. 27, admitted into St. Mary's Hospital October 7th, 1857. Has had two children. The uterus began to protrude after her first confinement, and to relieve it she has tried injections and pessaries, and without the latter it has always protruded through the external parts.

Oct. 17th. Operation. 20th. Deep sutures removed. Nov. 16th. Discharged cured.

Case XVIII.—*Prolapsus uteri complete: three years' duration: Cure.*—Anne D., æt. 36, admitted into St. Mary's Hospital Oct. 13th, 1857. Has had six children. About three years since, first discovered the displacement

of the uterus, which has since protruded externally whenever she has stood upright, but has been returned readily in the recumbent posture.

Oct. 14th. Operation performed. 16th. Deep sutures removed. On Nov. 7th, the displacement was quite cured, and she was discharged.

Case XIX.—*Prolapsus uteri complete: Cure.*——Mrs. P., æt. 52. Has had two children. About six years ago she began to suffer much from leucorrhœa, and three years since experienced severe dragging pelvic pains, and soon afterwards found the uterus protruding through the external parts. Since its prolapse it has increased in hardness and volume, and now is as large as a fœtal head in the seventh month.

October 21st, 1857. Operation performed. 24th. Deep sutures removed; 29th, the superficial. November 10th. Quite well.

Case XX.—*Prolapsus uteri complete: three years' duration: Cure.*—Susan S., æt. 44, admitted into St. Mary's Hospital January 8th, 1858. Has had three children; the last three years ago. The birth of this child was so rapid that it fell from her as she was standing, and from the toughness of the umbilical cord, which did not break, pulled on the uterus and caused its inversion. The womb was returned, but she lost a great deal of blood, and was unable to leave her bed for a month. When she did get about, she found the uterus prolapsed.

February 3rd. Operation. 6th. Deep sutures removed. 13th. Superficial removed. March 12th. Discharged cured.

Case XXI.—*Prolapsus uteri complete: ten years' duration: with Cystocele: Cure.*—Elizabeth H., æt. 61, admitted into the "London Surgical Home" May 18th, 1858. Has had four children and four miscarriages. Ten years ago first perceived a small tumour protruding through the vulva, after previous bearing-down pains for a long time. The tumour rapidly enlarged, and for the last four years has been as large as the head of a nine months' child. The difficulty of passing water has also been so great as to require her to press the displaced bladder backward with her finger before she could pass any.

May 20th. Operation. 22nd. Deep sutures removed. July 4th. Discharged cured.

Case XXII.—*Prolapsus uteri complete: Cure.*—Anne M., æt. 28, admitted into St. Mary's Hospital July 27th, 1858. Was seven years ago confined of a child, but perceived no inconvenience until a few weeks ago, when the uterus, from sudden strong exertion, prolapsed through the vulva.

August 4th. Operation performed. 6th. Deep sutures, and on the 12th the superficial sutures removed. Sept. 10th. Discharged cured.

Case XXIII.—*Prolapsus uteri complete: seven months' duration: Cure.*—Anne S., æt. 42, admitted into St. Mary's Hospital August 3rd, 1858. Has had eight children. Five years ago experienced a dragging sensation in the pelvis, which increased gradually, and seven months ago was followed by the descent of the uterus through the vulva, of the size of a goose's egg. For some time past it has been continually protruded, not even returning at night.

August 4th. Operation as usual. 6th. Deep sutures removed. On the 18th September, discharged cured.

Case XXIV.—*Prolapsus uteri complete: nine months' duration: Cure.*—

Elizabeth T., æt. 38, admitted into the "London Surgical Home" on Sept. 27th, 1858. Has had eight children. Began to suffer from bearing down of the womb after the birth of the second child, seventeen years ago. The prolapse has advanced, and during the last nine months the uterus has protruded externally whenever she has stood up. The perinæum is partially torn.

October 1st. Operation. 3rd. Deep sutures removed. 30th. Discharged cured.

Case XXV.—*Prolapsus uteri complete: seven years' duration: Cure.*—Eliza T., æt. 41, admitted into the "London Surgical Home" September 27th, 1858. Has had four children, the last seven years ago; and at its birth the prolapse of the womb came on, and progressively grew worse. The perinæum is slightly torn.

October 1st. Operation. 3rd. Deep sutures removed. 30th. Discharged cured.

Case XXVI.—*Prolapsus uteri complete: Cure.*—Jane W., æt. 25, admitted into St. Mary's Hospital October 2nd, 1858. Was confined of her first child six months ago, and a few weeks afterwards perceived the prolapse of the womb. Injections and pessaries have been tried without relief.

Oct. 6th. Operation as usual. 8th. Deep sutures, and on 12th, superficial ones, removed. She progressed favourably, and was discharged cured.

Case XXVII.—*Prolapsus uteri complete: Cure.*—Elizabeth C., æt. 22, admitted into St. Mary's Hospital October 19th, 1858. After her last labour, six months ago, she found that her womb came down into the vagina, and very shortly protruded externally. At first she could readily return it when lying down, but latterly has been unable to do so.

October 21st. Operation as usual. 23rd. Deep sutures removed. Nov. Discharged cured.

Case XXVIII.—*Prolapsus uteri complete, with cystocele: twenty years' duration: Cure.*—Mary F., æt. 63, admitted into the "London Surgical Home" on Nov. 2nd, 1858. Has had eleven children and three miscarriages. For the last twenty years the uterus has protruded externally, and has increased to the size of the head of a nine months' child. She has great difficulty in micturition.

Nov. 4th. Operation. 6th. Deep sutures removed. Discharged cured at the end of five weeks.

Case XXIX.—*Prolapsus uteri complete: three years' duration: Operation, with Cystocele: Cure.*—Mary K., æt. 53, admitted into the "London Surgical Home" in November, 1858. Has had three children and six miscarriages, and for twelve years has suffered from bearing down of the womb, which for the last three years has protruded between the labia when she has stood upright and walked about. She has also experienced great difficulty in micturition; and, indeed, could not empty the bladder without first pushing upwards the displaced organs.

An examination showed that the uterus in its descent was accompanied by the bladder; in other words, the prolapse of the womb was complicated with cystocele.

Nov. 8th. Operation performed. 10th. Deep sutures removed. She recovered quickly, and went out cured at the beginning of December.

Case XXX.—*Prolapsus uteri complete, with Cystocele: four years' duration: Cure.*—Mary S., æt. 45, single; admitted into St. Mary's Hospital November 6th, 1858. Four years ago noticed a tumour protruding from the vulva, which has subsequently augmented in volume, and is at present as large as a teacup. On examination, it was found to be a prolapse both of the uterus and bladder.

Dec. 1st. Operation for prolapsed uterus performed, 3rd. Deep sutures removed.

On January 8th, 1859, having the parts restored in position, she was discharged perfectly cured.

Case XXXI.—*Prolapsus uteri complete: thirteen years' duration: Cure.*—Maria G., æt. 32, admitted into the "London Surgical Home" on December 2nd, 1858. The prolapse of the womb has been coming on for fourteen years, during thirteen of which she has worn a pessary, to prevent protrusion externally. For the last year she has been compelled to give up its use.

Dec. 9th. Operated on. 11th. Deep sutures removed. On the 17th, the superficial withdrawn. January, 1859. Discharged cured.

Case XXXII.—*Prolapsus uteri incomplete: Cure.*—Martha B., æt. 29, admitted into St. Mary's Hospital Dec. 6th, 1858. Three and a half years ago she was confined of twins, and immediately afterwards the uterus began to prolapse. It now shows itself, but not completely, between the labia.

Dec. 15th. Operation. 17th. Deep sutures removed. Slight hæmorrhage attended this proceeding, but was readily checked. Jan. 15th, 1859. Discharged cured.

Case XXXIII.—*Prolapsus uteri complete, with Cystocele: Cure.*—Selina W., æt. 29, admitted into St. Mary's Hospital Dec. 8th, 1858. About three years ago, and during the second month of pregnancy, she first experienced a bearing down of the womb. This disappeared as pregnancy advanced. Subsequently to her delivery, the bearing down recurred and grew worse, but the uterus did not make its appearance externally except after long standing or much exertion. She suffered also occasionally from much difficulty in passing water.

Dec. 15th. Operation. 17th. Deep sutures removed. Jan. 17th, 1859. Discharged cured.

Case XXXIV.—*Prolapsus uteri complete: Cure.*—Mary H., æt. 42, single; admitted into the "London Surgical Home" April 17th, 1859. The prolapse of the womb has gradually increased in severity for the last ten years. Its origin she assigns to over-exertion.

April 22nd. Operation performed. 23rd. Deep sutures removed. On 27th, the superficial. May 21st. Discharged cured.

Case XXXV.—*Prolapsus uteri complete, with Cystocele: Cure.*—Mrs. W., æt. 28, admitted into the "London Surgical Home" on May 4th, 1859. Has had three children, and first found the womb come down after the second confinement. This displacement progressively increased, and the uterus now protrudes like a tumour of the size of a hen's egg between the labia. She has also suffered much in micturition. The perinæum is slightly lacerated.

May 12th. Usual operation. 14th. Deep sutures, and on 19th, the superficial, removed.

The operation proved very successful; and she was discharged cured at the beginning of June.

CASE XXXVI.—*Prolapsus uteri complete, with Rectocele and Cystocele: Cure.*—Eliza C., æt. 34, admitted into the "London Surgical Home" in June, 1859. Has had five children, and suffered from prolapse of the womb ever since her first confinement. The displacement has gradually increased, and her symptoms have been much aggravated by a protrusion of the rectum forward, when at stool, into the vagina (rectocele), as a tumour nearly equal in size to the prolapsed uterus itself; and it is sometimes half an hour before she can replace it, and complete the evacuation of the bowel. Moreover, she has, for a long time, found much difficulty and pain in micturition.

June 9th. Operation performed. On the 11th, the deep sutures were removed. On the 13th, she was seized with an attack of pericarditis. This was gradually subdued; and she eventually left quite cured of all her distressing lesions.

CASE XXXVII.—*Prolapsus uteri complete, with Rectocele and Cystocele: thirteen years' duration: Cure.*—Mrs. M., æt. 47, admitted into the "London Surgical Home" October, 1859. Has had three children. The prolapsus first appeared thirteen years since, and, for a time, she wore a pessary with advantage; but latterly has been obliged to discontinue its use. The rectum and bladder are likewise both of them prolapsed into the vagina.

October 13th. Operation performed as usual, except in the use of metallic wire for both sutures. 16th. Deep sutures, and on 20th, superficial sutures, removed. Early in November she went out cured.

CASE XXXVIII.—*Prolapsus uteri complete: two years' duration: Cure.*—Elizabeth P., æt. 65, admitted into the "London Surgical Home" Nov. 14th, 1859. The rectum has prolapsed for thirty-nine years, but the uterus has come down for only the last two years. It now appears between the vulva of the size of a nine-months' child's head.

Nov. 24th. The prolapsus recti treated by operation, and some piles tied. Dec. 15th. Operation for prolapsus uteri. 17th. Deep sutures removed. Discharged cured, five weeks after the last-named operation, in January, 1860.

Remarks.—This was the worst case I had seen; the poor woman having for thirty-nine years suffered, and during that time performed the hardest kind of labour, and yet, at the age of sixty-five, underwent two severe operations successfully. She still continues perfectly well (1861).

CASE XXXIX.—*Prolapsus uteri complete: Cystocele: Cure.*—Mrs. P., æt. 32, admitted into the "London Surgical Home" on January 2nd, 1860. Has had five children. The prolapse began about six weeks after her second confinement, and has gradually advanced, until now it protrudes between the labia, and is complicated with cystocele and its consequences, difficult micturition, &c. To get the bladder relieved it has been necessary for her to push back the tumour in the vagina.

Jan. 5th. Operation. 7th. Deep sutures removed. Feb. 20th. Discharged cured.

CASE XL.—*Prolapsus uteri complete: two and a half years' duration: Cure.*—Elizabeth D., æt. 27, admitted into the "London Surgical Home" January 7th, 1860. Has had two children. Two years and a half ago, after

great exertion, the uterus began to prolapse, and soon protruded externally whenever she assumed the erect posture.

Jan. 19th. Operation. 22nd. Deep sutures removed. Feb. 22nd. Discharged cured.

CASE XLI.—*Prolapsus uteri complete, with Cystocele: eight years' duration: Cure.*—Mrs. B., æt. 33, admitted into the "London Surgical Home" on January 24th, 1860. By occupation she is a weaver, and has been in the habit of allowing the bladder to become greatly distended. The prolapse of the uterus she noticed eight years ago, and it has been complicated with difficult micturition.

Jan. 26th. Operation. 28th. Deep sutures removed. Feb. 28th. Discharged cured.

Remarks.—This patient was four or five weeks advanced in pregnancy at the time of operation, and, as is always the case under such condition, the parts healed quicker and better than they do in unimpregnated women.

CASE XLII.—*Prolapsus uteri complete: two years' duration: Relief.*—S. D., æt. 52. Married thirty-three years, eleven children, tedious labours. Two years ago, while employed moving heavy weights, felt acute pain and heat in body. This was followed by the prolapse of the womb, which she was in the habit of replacing. December 10th, 1863, operation as usual. January 5th. Left very much improved in health and not feeling much pain from the parts operated on.

CASE XLIII.—*Prolapsus uteri complete: fourteen years' duration: Failure.*—M. G., æt. 32. Single. For fourteen years has suffered from complete prolapse of the womb; during thirteen years she has worn a pessary, but has been compelled to discontinue it. December 9th, 1858. Operation as usual. Deep sutures removed on third day; superficial on sixth day. This patient did not derive much permanent benefit, and the disease returned some months afterwards nearly as bad as before.

CASE XLIV.—*Prolapsus uteri complete: ten weeks' duration: Cure.*—E. A., æt. 33. Delivered of her first child ten weeks ago, after a tedious labour of forty-eight hours. Instruments were used. Both womb and bladder have since prolapsed, and for a fortnight she has been quite unable to void urine without the catheter. Perinæum slightly ruptured; uterus prolapsing, and with it the bladder, beyond the external parts. March 17th, 1859. Operation as usual by Mr. Harper. Deep sutures removed on the third day; superficial on sixth day. Discharged cured. Heard of afterwards. Was again pregnant and confined of another child, remaining quite well afterwards.

CASE XLV.—*Prolapsus uteri complete: ten years' duration: Cure.*—M. H., æt. 43. Single. The prolapse is assigned to over-exertion. It has gradually increased in severity, and gives great pain and inconvenience. Protrusion of uterus with general relaxation of tissues. April 22nd, 1859. Operation as usual. Deep sutures removed on second day; superficial on sixth day. May 21st. Discharged well. To wear a perinæal bandage for some time.

CASE XLVI.—*Prolapsus uteri complete: two years' duration: Cure.*—E. B., æt. 22. Has had two children. After her first confinement suffered

much from bearing down of the womb, which was aggravated after her second confinement; since which time her womb has descended. When long unrelieved, the rectum on straining bulges forward into the vagina. Slight pain on micturition. Prolapse of the uterus with slight rectocele and cystocele; the perinæum perfect. June 21st, 1859. Operation as usual. Deep sutures removed on third day. July 22nd. Discharged cured. Heard of in January, 1863; had had no return of the prolapse.

Case XLVII.—*Prolapsus uteri complete: six years' duration: Relief.*—Mrs. P., æt. 32. The womb began to prolapse about six weeks after her second confinement, and increased in severity after her third, which took place two years later. Cannot make water without pushing back the tumour into the vagina.

The uterus, bladder, and rectum, all protrude and hang down between the legs.

Jan. 5th, 1860. Operation as usual. Deep sutures removed on the third day; superficial on fifteenth day. Feb. 20th. Discharged quite well; kept very well for two years, till her next confinement, when the perinæum was torn, not being supported by the accoucheur; since then has been as bad as ever.

Case XLVIII.—*Prolapsus uteri complete: two and a half years' duration: Relief.*—Mrs. D., æt. 27. Strained herself nine months after her first confinement, being three months pregnant with her second child. After her second confinement the womb protruded considerably. Suffered from sickness and dyspepsia.

Uterus protrudes externally whenever she is in the erect posture.

Jan. 26th, 1860. Operation as usual. Deep sutures removed on third day; superficial on eighth day. Feb. 22nd. Discharged quite well. She remained well for eight months, when she was again confined; and since then she says the prolapse has returned as bad as ever.

Case XLIX.—*Prolapsus uteri complete: fourteen years' duration: Cure.*—C.B., æt. 54. Mother of six children, the last born fourteen years ago; ever since then the uterus has prolapsed. Tried to wear a pessary, but could not, as it was so painful.

Complete prolapsus uteri. August 8th, 1861. Operation as usual. Deep sutures removed on third day; superficial on eighth day. Has been often heard of since she left; she is still quite well.

Case L.—*Prolapsus uteri complete: four years' duration: Cure.*—Mrs. M., æt. 25. Has had two children and six or seven miscarriages. After birth of first child, the labour lasting two days, she was ill for two months, and when she went about, the uterus protruded between her legs. Was obliged to keep her bed on the second pregnancy till the time of quickening.

The uterus, bladder, and rectum all pulled down, and protruding from the vagina. November 21st, 1860. Operation as usual. Deep sutures removed on fourth day; superficial on seventh day. December 8th. Discharged. Can pass her water and motions without pain. A year afterwards was still quite well.

Case LI.—*Prolapsus uteri complete: thirty-four years' duration: Cure.*—A. L., æt. 54. Had one child thirty-four years ago; labour lasted three days; no instruments were used. Ever since then has suffered from

falling down of the womb, and for the last five years it has not returned, even when lying down, without great difficulty; sometimes great difficulty in defæcation. The uterus completely descends between the thighs, even when lying down. The patient is exceedingly corpulent. January 30th, 1862. Operation as usual. Deep sutures removed in forty hours, there being a tendency to slough. Superficial sutures removed on the seventh day. March 1st. Discharged. She is now able to walk about, the womb no longer falling down. Heard of, some months later, as quite well.

Case LII.—*Prolapsus uteri complete: fourteen months' duration: Cure.*—R. M., æt. 28. Confined eighteen months ago of first child. Was frightened suddenly just after labour. Fourteen months ago womb began to come down. Very extensive prolapsus uteri, with large vagina. April 3rd, 1862. Operation as usual. Deep sutures removed on third day. Discharged quite well. In April, 1863, was still quite well.

Case LIII.—*Prolapsus uteri complete: three years' duration: Cure.*—Mrs. W., æt. 41. Married six years; has had two children. The first labour was easy, but ever since has suffered from bearing down, and for the last three years from prolapse of the womb. Has worn pessaries, which only made her worse; suffers from pain in the back. Uterus very low down; vaginal walls much relaxed, and labia greatly hypertrophied. November 13th, 1862. Operation as usual; also cutting off labia majora. Deep sutures removed on third day; superficial on sixth day. Suffered from a slight attack of erysipelas, but discharged quite well.

Case LIV.—*Prolapsus uteri complete: eight years' duration; Cure.*—Mrs. D., æt. 53. Is a widow and has had no children, but three or four miscarriages. About eight years ago she strained herself, lifting her husband, who was very ill, and ruptured a blood-vessel twice, shortly afterwards. Since then the womb has come down, getting worse in spite of pessaries. She suffers great pain in the back, is very emaciated, and in wretched health. The uterus protrudes in every position of the patient. August 7th, 1862. Operation as usual. Deep sutures removed on third day; superficial on tenth day. Had a severe attack of erysipelas, but recovered, and was discharged, quite well, on December 9th, 1862.

Case LV.—*Prolapsus uteri complete: two years' duration; Cure.*—J. J., æt. 52. Married twelve years; three children. Since her forty-ninth year the womb has come down (*i.e.* since last labour). For last two years the prolapse has been such as to prevent her walking, and has kept her lying; bearing-down pains, pains in the back, and sanguineous discharge much aggravated; bowels usually constipated. Uterus forms a large tumour between the thighs; extensive ulceration around the os from friction. May 14th, 1863. Operation as usual. Bowels opened on tenth day; outside bed on June 11th. Made an excellent recovery, and left on June 17th.

Case LVI.—*Prolapsus uteri complete: four years' duration: Death.*—S. N., æt. 37. Married sixteen years; four children. Instruments with first labour. With first, second, and third, three days in labour, and four days with fourth. Eight years ago womb began to come down. Four years ago prolapse first became complete. Complete prolapse, organ much enlarged, eighteen inches in circumference; bronchitis, dysuria, constipation. April 14th, 1864. Operation as usual. Patient had sickness for two days; on

the 5th day began to show severe symptoms, gradually got worse, and died on the fifteenth day.

Case LVII.—*Prolapsus uteri complete: two months' duration: Cure.*—Mrs. P., æt. 50. Married twenty-three years; seven children, one still-born, and two miscarriages. For two months has had bearing-down pain, during which time the uterus has been prolapsed. Walking aggravated it; no pain, but inconvenience and aching at times. Complete prolapse, or rather the os outside the vulva. October 20th, 1864. Operation as usual. On the fifth day, benzoin lotion applied to wound, which looked unhealthy. Bark and acid mixture prescribed; ultimately made a good recovery.

Case LVIII.—*Prolapsus uteri complete: four years' duration: Cure.*—A. P., æt. 33. Married fifteen years; six children. In labour forty-eight hours with third child; instruments were used, and the perinæum was ruptured. Has had three children since, the last April 4th. Entered "Home" May 6th. Complete prolapse and rupture; os uteri greatly elongated, whole uterus outside vagina; sound passed seven and a half inches. May 19th, 1864. Operation as usual. Made a very good recovery, and left the "Home" on 25th June quite cured.

Case LIX.—*Prolapsus uteri complete: eighteen months' duration: Cure.*—R. D., æt. 27, married six months. A miscarriage two years ago. Three years back had a severe fall and hurt herself "in the privates," and soon after the womb began to come down a little. During the last eighteen months has protruded externally. Complete prolapse, vagina quite everted; no dysuria. March 16th, 1864, operation as usual in principle. On second day, erysipelatous inflammation in wound. On second or fourth day, an offensive discharge with inflamed perinæum. On sixth day, improvement began, and then continued to complete recovery. April 15th. Discharged cured.

Case LX.—*Prolapsus uteri complete: two years' duration: Cure.*—E. M., æt. 69. Married twenty-two years; no issue. Ten years ago, when lifting her sick husband, "felt something give way." Shortly afterwards the womb came down, and for two years past it has remained outside. On account of her weak state, no operation was performed. She left the "Home," and returned in nine months in better condition, but with the uterus still completely prolapsed. Complete prolapse; considerable dysuria. March 30th, 1865. First operation as usual. May 10th, 1865. Second operation. Closed vagina up to urethra. The first operation, which was to usual extent, was unsuccessful; in the second the labia were pared close up to urethra and brought together with silver sutures. This was effectual, and the patient made a good recovery.

Case LXI.—*Prolapsus uteri Complete, with vaginal Cystocele: ten years' duration: Cure.*—E. H., æt. 61. Has had four children and four miscarriages. First perceived a tumour protruding from the vulva, attended by bearing-down pains, ten years ago. For the last four years the tumour has been as large as the head of a nine months' child. She has great difficulty in passing water. Complete prolapsus uteri with vaginal cystocele. May 26th, 1858. Operation as usual. Deep sutures removed on the third day. July 4th. Discharged quite well. When heard from, in 1860, still remained quite well.

CASE LXII.—*Prolapsus uteri complete, with Cystocele: twenty years' duration: Cure.*—M. F., æt. 63. Has had eleven children and three miscarriages. Uterus has protruded externally for the last twenty years, and is very large. Great difficulty in micturition. The prolapse was complete, with ulceration and thickening of the os and vaginal cystocele. November 4th, 1858. Operation as usual. Deep sutures removed on third day. Discharged in five weeks quite well. Heard from some time afterwards; continuing well.

CASE LXIII.—*Prolapsus uteri complete, with Cystocele: twelve years' duration: Cure.*—M. K., æt. 53. Has had three children and six miscarriages. For twelve years has suffered from bearing down of the womb, which has protruded for three years when standing up or walking about. Cannot pass her water without first pushing up the displaced organ. The prolapse of the uterus was complete with entire vaginal cystocele. November 8th, 1858. Operation as usual. Deep sutures removed on third day; superficial on ninth day. Discharged in rather more than a month. Heard of afterwards as quite well.

CASE LXIV.—*Prolapsus uteri complete, with Cystocele: thirteen months' duration: Cure.*—A. W., æt. 25. Was confined of her first child in February, 1858. Ever since then has had bearing down, gradually increasing to protrusion of the womb. Great pain and irritation of the bladder. The uterus protruding beyond the vulva as large as an apple. Vaginal cystocele and general relaxation of the parts. March 17th, 1859. Operation as usual. Deep sutures removed on third day; superficial on sixth day. Discharged cured and much improved in health. Has remained quite well, and had two children since the operation.

CASE LXV.—*Prolapsus uteri, with Cystocele: five years' duration: Cure.*—Mrs. W., æt. 28. Has had three children. The womb first descended after her second confinement. This displacement has gradually increased She has also suffered much pain on micturition. The uterus protrudes between the labiæ, and is the size of a hen's egg. The perinæum is slightly lacerated, and there is vaginal cystocele. May 12th, 1859. Operation as usual. Deep sutures removed on third day; superficial on ninth day. Heard of in latter part of 1862, and she has remained quite well.

CASE LXVI.—*Prolapsus uteri complete, with Cystocele: twenty-seven years' duration: Cure.*—Mrs. H., æt. 49. Is mother of fourteen children. Womb came down after the birth of the second child. Much troubled in passing her urine and fæces. Pessaries have been tried, but she is unable to bear them. Complete prolapsus uteri, dragging down the bladder. August 16th, 1860. Operation as usual. Deep sutures removed on third day; superficial on eleventh day. When discharged, she could pass her water and motions without pain or difficulty, and her uterus caused her no inconvenience.

CASE LXVII.—*Prolapsus uteri complete, with Cystocele; six and a half years' duration: Cure.*—A. G., æt. 27. She has had three children; all her labours tedious. Since the birth of her second has suffered from prolapsus of the womb: much worse since the birth of the last, four and a half years ago. When walking about, womb comes down between her thighs. Very extensive cystocele with polapsus uteri. January 23rd, 1862. Operation as usual; also for cystocele. Deep sutures removed on third day; superficial

on eighth day. February 24th. Discharged. In December, 1862, was still quite well.

Case LXVIII.—*Prolapsus uteri complete, with Cystocele and Rectocele: two years' duration: Cure.*—E. J., æt. 34. Single. Enjoyed good health until two years ago, when she experienced bearing down of the womb, with pain in the back and occasional sickness. Great and continued pain during and after defæcation; obliged to push back her womb before micturition. A very large loose vagina with enormous labiæ. Prolapsus uteri, with vaginal cystocele and rectocele. February 13th, 1862. Operation as usual; also cutting off of superfluous labiæ. Deep sutures removed on third day; superficial on eighth day. Bowels opened on ninth day without pain. February, 1863, is quite well; in service as cook.

Case LXIX.—*Prolapsus uteri complete, with Rectocele: twenty-seven years' duration: Cure.*—M. F., æt. 54. Married thirty years; nine children. After second confinement, twenty-seven years ago, perinæum ruptured by midwife's hand and child's head. Complete rupture of perinæum with rectocele. The usual difficulty in defæcation; complicative prolapse. July 22nd, 1863. Operation as usual. Inflammatory action with severe constitutional disturbance ensued, a slough separated, but the wound ultimately healed, and the patient left on August 19th.

Case LXX.—*Prolapsus uteri, with Rectocele: ten months' duration: Cure.*—H. S., æt. 25. Married two years. One still-born child and one miscarriage. One year and eight months ago first felt great pain in back and pelvis, and observed a white discharge; ten months ago the womb came down, and now sometimes appears externally. Has not had inflammation. Did not lie in bed after the miscarriage. Prolapse of the uterus with rectocele, leucorrhœa, pain in back and pelvic region. July 16th, 1863. Operation as usual. Made a good recovery, and left August 15th, quite cured.

Case LXXI.—*Prolapsus uteri, complete with Cystocele: four years' duration: Cure.*—E. W., æt. 55. Has had eight children, one delivered by instruments, and the youngest ten years old. Four years ago womb came down after lifting a heavy patient. For the last three months has been unable to move about, as both bladder and womb protrude. The uterus protruding several inches, dragging down the bladder also. May 29th. Operation as usual. Deep sutures removed in thirty hours. Discharged quite well.

Case LXXII.—*Prolapsus uteri complete, with Rectocele and Cystocele: ten years' duration: Cure.*—Mrs. C., æt. 27. Married three years without children. First had bearing down after exercise, ten years ago. After menstruation began was better, until six years ago, when she entered service and carried heavy weights. Since marriage has been much worse, the womb protruding two or three inches after the least exertion; has worn a pessary, which has made her much worse.

Re-admitted April 10th, 1861.—The rectum and bladder protruded from the vulva, and between them was the os uteri. The clitoris enlarged and hard; also a vascular tumour of the meatus urinarius.

On re-admission, the small hole which had seemed filled up when she was discharged, has become large enough to allow the os uteri to protrude through it.

December 20th, 1860.—*First operation* performed as usual, and in addition

cutting off a piece of the clitoris, excising the vascular tumour and applying nitric acid to it.

Second operation, April 11th, 1861.—The edges pared and brought together by superficial sutures simply twisted. Deep sutures removed on third day; superficial on eleventh day, when there was observed a simple slough in the back of one suture. This separated and the hole made had apparently filled, so she was discharged.

Second operation.—Sutures removed on seventh day. June 4th. Discharged quite well. 1863. Is still quite well.

Case LXXIII.—*Prolapsus uteri complete, with Rectocele and Cystocele: six years' duration: Cure.*—E. C., æt. 34. Has had five children. Prolapse of the womb occurred after her first confinement, she imprudently getting up and standing within an hour after her delivery. This prolapse has gradually increased, and when at stool the rectum has protruded forward, forming a tumour nearly as large as the uterus itself. She has also suffered much from pain, &c., during micturition. The uterus protrudes through the vagina. The os is much hypertrophied and slightly ulcerated. There is both rectocele and cystocele; also a small reducible femoral hernia.

June 9th, 1859. Operation as usual. Deep sutures removed on third day.

June 13th. Was attacked with pericarditis; this was subdued, and the patient was eventually discharged quite cured of all her distressing lesions. Ordered a truss for the hernia.

Case LXXIV.—*Prolapsus uteri complete, with Rectocele and Cystocele: thirteen years' duration: Cure.*—Mrs. N., æt. 47. Has had three children, the last eight years ago. Wore a pessary for six years, but obliged to discontinue it; since then the prolapse has been worse. Complete prolapsus uteri, with extensive vaginal rectocele and cystocele.

Oct. 13th, 1859. Operation as usual, except that wire sutures were used for the deep as well as for the superficial sutures. Deep sutures removed on fourth day; superficial on eighth day. Three months afterwards wrote, saying that she was able to walk six miles without the least inconvenience.

Case LXXV.—*Prolapsus uteri complete, with Rectocele and Cystocele: eight years' duration: Cure.*—Mrs. B., æt. 33. By occupation a weaver; has been accustomed to allow the bladder to become greatly distended. The prolapse of the uterus first commenced after the second confinement, which was very quick.

Re-admitted Feb. 7th, 1861.—She was confined on Sept. 22nd, 1860, and her attending accoucheur slit up the perinæum, in order to deliver the child. When she got up, uterus, bladder, and rectum all came down, though previous to her confinement she had been quite cured. Prolapse of the uterus complete, with vaginal cystocele.

First operation, Jan. 26th, 1860. Feb. 28th, 1860, discharged quite well. Second operation, Feb. 14th, 1861. Deep sutures removed on third day; superficial on eleventh day. This patient was four or five weeks pregnant, and the parts healed with extraordinary rapidity. March 16th, 1861. Discharged quite well. Heard of in February, 1863: is quite well, and has had no more children.

Case LXXVI.—*Prolapsus uteri complete, with Rectocele and Cystocele: thirteen years' duration: Death.*—F. T., æt. 56. Has had eleven children, and one miscarriage. Has had bearing down of the womb ever since her last labour, thirteen years ago. It has descended for six years, gradually increasing in size and severity. Has had pessaries, &c., without benefit.

Uterus completely prolapsed, of enormous size, considerable leucorrhœa present. The bladder and rectum also protrude, the whole forming a tumour as large as two fists.

June 6th, 1861. Operation as usual. Four deep sutures used. Deep sutures removed on third day; superficial on eighth day. On the 23rd, had an abscess opened which had formed near the trochanter, from lying on her side; about eight ounces of pus evacuated. She gradually sank, and died on July 1st, 1861.

Case LXXVII.—*Prolapsus uteri, with Cystocele and Rectocele: fourteen months' duration: Cure.*—M. A. B., æt. 31. Was delivered of her first child fourteen months ago, having been in labour twenty hours, the child being born very quickly at the last. Since then, when standing, bowel, bladder, and womb all fall down. Motions pass with ease, but before micturition she is always obliged to push back her bladder. Thinks she is now in the family way. The uterus prolapses, and the cervix is very long and flabby. There is also slight rectocele and extensive cystocele. February 26th, 1863. Operation as usual. Deep sutures removed on third day; superficial on sixth day. March 8th, delivered of a fœtus three months old. Parts healing with extraordinary rapidity. April 1st, 1863. Discharged quite well.

Case LXXVIII.—*Prolapsus uteri incomplete: five years' duration: Cure.* M. P., æt. 34. Married twelve years: one child and one miscarriage. About seven years ago, while engaged in laundry work and using great exertion, felt something give way. Soon after had a pressure, and eventually the womb appeared externally. Prolapse of uterus, occasional leucorrhœa, regular menstruation excessive. No difficulty in micturition. July 16th, 1863. Operation as usual. A small abscess formed in left buttock. Patient left on August 19th, 1863, quite cured.

Case LXXIX.—*Prolapsus uteri incomplete, with Cystocele: thirteen years' duration: Cure.*—M. W., æt. 42. Prolapse of the womb occurred after her first and only labour, which lasted only two hours. Prolapsus uteri with cystocele. February 28th, 1861. Operation as usual. Deep sutures removed on third day; superficial on eighth day. April 1st. Left quite well. She has remained so, and walks many miles daily, being employed as a scripture reader.

CHAPTER IV.

VESICO-VAGINAL FISTULA.

This lesion was long considered an opprobrium of surgery, as, with few exceptions, attempts at cure entirely failed. But such is no longer the case; for, thanks to the persevering efforts of several surgeons within the last few years, almost every example may now be successfully treated.

By the term "vesico-vaginal fistula" is understood an unnatural communication between the bladder and the vagina, allowing all or a portion of the urine to escape through it, instead of passing away through the urethra. This opening is different from that produced by a rupture of the bladder; for it is not a simple accidental laceration, but the result of a wound, of ulceration, or of sloughing of the coats of the vagina and bladder.

Causes.—These may be thus summed up:—1. Wound of the vagina during criminal attempts to procure abortion. 2. Retention of a pessary within the vagina, inducing inflammation and subsequent ulceration, or sloughing. 3. Long impaction of the head of the child in the pelvis during labour, inducing, by pressure, inflammation ending in ulceration and perforation. 4. Careless or improper use of instruments, and the operation of turning to effect delivery, especially if the bladder be not empty. 5. Corroding cancer of the uterus or vagina perforating the bladder. 6. Stone in the bladder at the time of delivery, the bladder being pressed between the head of the child and the stone. This is a very rare cause.

A review of the causes productive of the lesion in the seventy cases of vesico-vaginal fistula, tabulated hereafter, on which I have operated, shows that the third and fourth in the

above category have been, either together or singly, the effective agents in every instance save one.

In no less than fifty-nine cases the labour was protracted one day or more. In some of these its duration extended over several days. The time which the labour was allowed to drag on in many cases is terrible to contemplate. The sufferings of the unfortunate woman were permitted to continue, in twenty-five instances, three days or upwards.

The following is a summary of the duration of labour in those cases which owed their origin mainly to this cause :—

One day	8
Above one day and less than two days...	15
Two days	9
Above two days and less than three ...	2
Three days	12
Above three days and less than four ...	2
Four days	2
Four and a half days	1
Five days	4
Six days	2
Seven days	2
	59

The breech presented in two of the cases, in another case the arm, and in a fourth the shoulder. The case in which the arm presented was delivered by turning, that in which the shoulder presented by instruments, and evisceration was found to be necessary in one of the cases of breech presentation on account of long impaction of the child in the pelvic outlet. In one case the child was dead.

In four cases, recorded in the table, labour was short. In two of these, delivery was effected by instruments; in the other two the child was born naturally.

Forty-three of the seventy cases had been delivered by the aid of instruments. In all these cases the labour had endured for a long time,—sometimes, in the hands of ignorant nurses,

for two or three days. In nine cases forceps were used; in seven craniotomy was performed; in one turning; and in twenty-six cases delivery was effected by instruments, the nature of the instruments used not being stated.

From the histories of several of the patients, it may gathered that the bladder had not been properly attended to during labour. In one instance it was stated that attempts to introduce the catheter during a labour of four days failed.

In a large proportion of the cases the injury occurred during the first labour; but it is apt to take place during any labour. Thus in the cases subsequently recorded the mischief was done at the time of—

The first labour in	29 cases
The second labour in	9 ,,
The third labour in	5 ,,
The fourth labour in	5 ,,
The fifth labour in	8 ,,
The sixth labour in	3 ,,
The eighth labour in	5 ,,
The ninth labour in	2 ,,
The thirteenth labour in	1 ,,
The fifteenth labour in	1 ,,

One case (Case LIX.) occurred in a single woman after lithotomy, and came under my notice nine years after the operation.

The first case recorded is an exception to the rest, for it appears to have owed its origin to a remarkable and no less rare cause—not noted, as far as I am aware, in any treatise—viz., the presence of a calculus in the bladder. The stone was removed by me some time after the accident, and found to be of very considerable size. It must have been placed so that the child's head, in passing over it, severely compressed the septum between the bladder and vagina, causing inflammation and subsequent sloughing of the injured tissues.

So far as my experience goes, the prevention of vesico-vaginal fistula (so far as the lesion may arise during labour) is very much within the control of the accoucheur. With proper care,

attention to keeping the bladder empty, and, still more, by not allowing the head to remain a long time just within the os externum, it is an accident that should rarely happen. In this recommendation to accelerate the delivery of the head of the child, I am opposed to many eminent obstetric writers. But when I reflect on the very many cases of vesico-vaginal fistula which have fallen under my notice, and on the fact of the almost invariable origin of the lesion, from protracted labour and pressure within the vaginal outlet, I feel my opinion to be well founded. The history of some of the cases recorded will afford the best confirmation of this opinion.

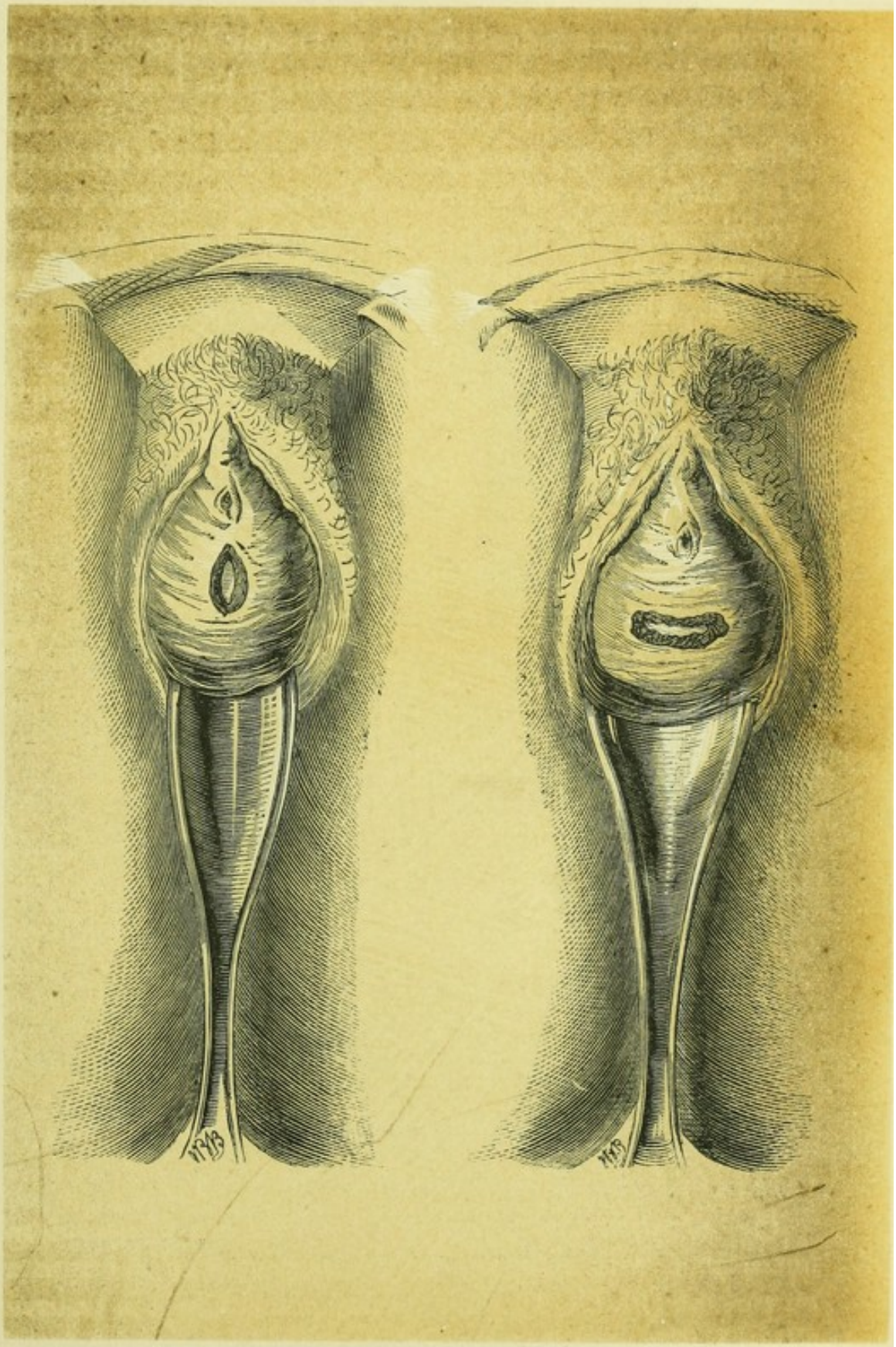
The *ages of the patients* at the time of coming under my care varied considerably. They ranged from nineteen years to sixty-six, as shown in the following summary:—

19 years of age	...	...	...	2
20 „ and under 30	...	...	21
30 „ „ „ 40	...	...	29
40 „ „ „ 50	...	...	13
50 „ „ „ 60	...	...	3
62 „	...	...	...	...	1
66 „	...	...	...	...	1

The *ages of the patients* at the time when the injury occurred (in sixty-eight cases) were as follows:—

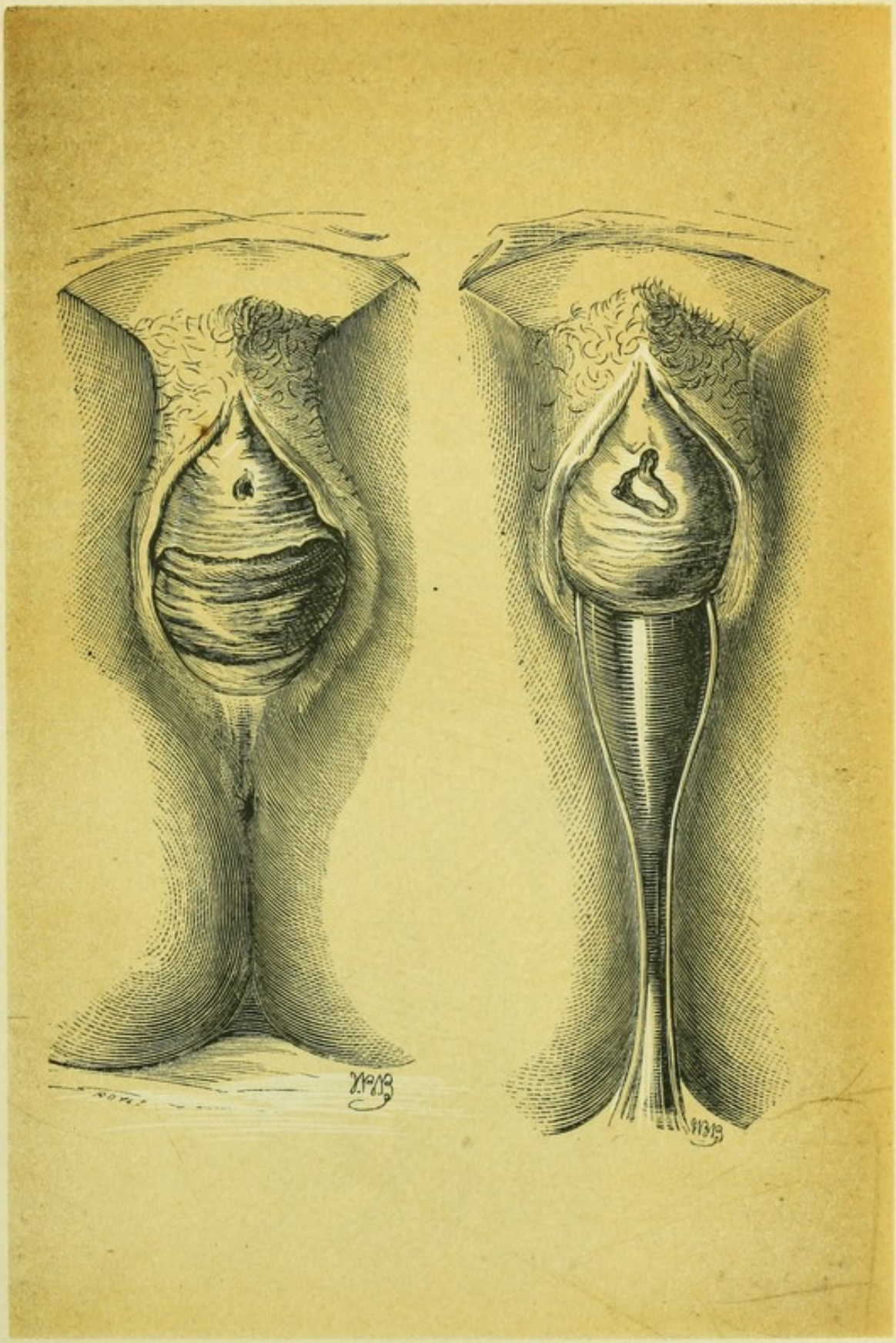
17 years of age	...	...	...	1
18 „ „	...	...	...	1
19 „ „	...	...	...	1
20 „ and under 30	...	...	34
30 „ „ „ 40	...	...	26
40 „ „ „ 50	...	...	5

The situation and extent of the fistula are of considerable importance with reference to treatment. The aperture may be vertical (Pl. IX. 1), though more commonly it is transverse (Pl. IX. 2); and it may vary in size from a small fistulous opening the size of a pin-head, to a complete fissure, extending



No. 1. No. 2.

VESICO-VAGINAL FISTULA.—1. Vertical. 2. Transverse.



No. 1. No. 2.

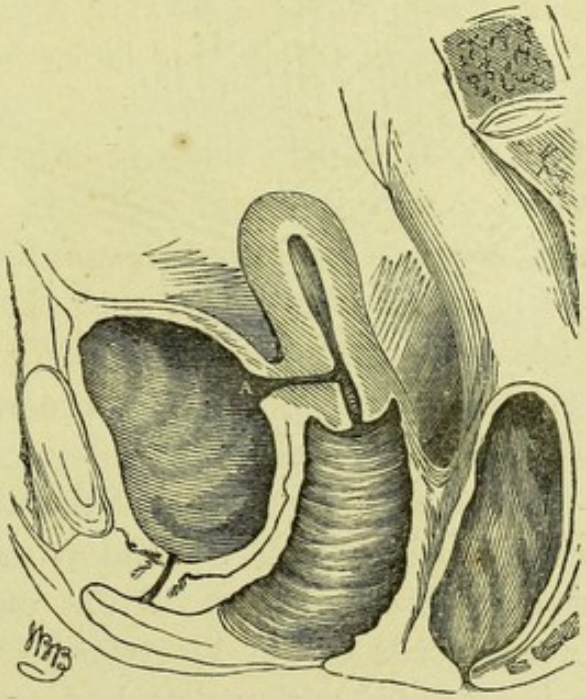
VESICO-VAGINAL FISTULA.

1. Enormous fistula, with eversion of the Bladder. 2. Urethro-vesical.

the whole length of the vesico-vaginal septum, through which the superior wall of the bladder will be seen to prolapse (Pl. X. 1). Moreover the fissure may extend so far forward as to lay open the whole of the urethra (Pl. X. 2), or be continued backwards into the os and cervix uteri, or into either of these singly (Pl. XI.). In shape the fissure varies greatly. It is sometimes irregular, and then more difficult to deal with. In cases of long standing, and especially where unsuccessful attempts have been made to close the fissure, bands of adhesion are frequently thrown across so as to divide it into two or even three fistulous openings; and often such adhesions also produce an awkward puckering, and more or less occlusion of the vagina, requiring preliminary treatment before an operation to close the fistula can be undertaken.

Differences in the situation and extent of the injury have received different names. When the lesion is between the bladder and vagina, it is a vesico-vaginal fistula proper; when it involves the urethra together with the vagina, it is a *vesico-urethro-vaginal fistula* (Pl. X. 2); when the injury extends beyond the vagina into the os and cervix uteri, it con-

Fig. 3.



stitutes a *vesico-utero-vaginal fistula* (Pl. XI.); and when the opening is between the bladder and uterus, and the vesico-

vaginal septum is entire, it is called a *vesico-uterine fistula* (fig. 3).

Either variety of fistula may be complicated with other surgical lesions about the pelvis; such as displacement of the uterus, recto-vaginal fissure, and rupture of the perinæum. Occasionally a vesico-vaginal-fistula exists, with complete loss of the urethra.

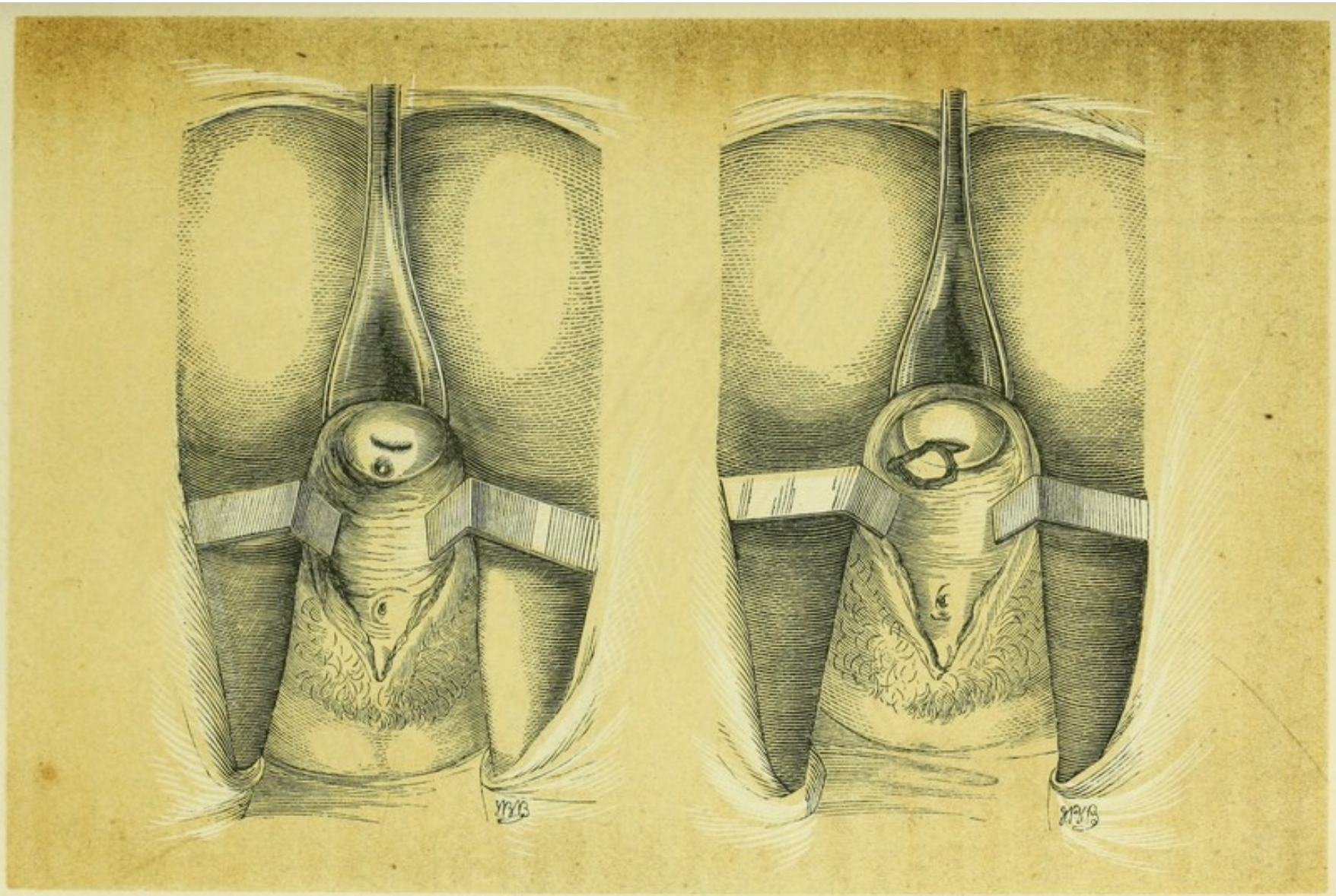
Vertical and *transverse* fistulæ are of the most common occurrence. *Urethro-vesical fistulæ* are of moment to the surgeon, as the operation of making a new urethra is generally required in these cases. Cases LXXX. and LXXXIII. are instances of this condition. Sometimes, as in Case LXXXI., the urethra becomes impervious from long disease, and requires to be perforated. *Utero-vesical fistulæ* are fortunately rare. Usually it is necessary to close up the os uteri entirely. *Vesico-utero-vaginal fistulæ* are much more common, and are very difficult to treat. I have had several such cases in my practice (Cases LXVI. to LXXIX.).

The *size of the fistula* may vary from a minute orifice hardly admitting the point of a probe, to a hole so enormous that the superior wall of the bladder will prolapse through it and occupy the whole vagina. Cases XIII., XXXIII., XXXVII., XLVI., LVI., &c., are instances in which this latter fearful condition was present.

Number of fistulæ.—Generally there is only one fistula, but it is not uncommon to find a second one. In these cases the second and smaller fistula is not unfrequently found close to the os uteri, and it is not discovered until the first observed and larger one has been treated, as in Case XXI.

In the Table there are five cases where there were two fistulæ, and one in which there were three.

Symptoms.—The involuntary escape of the urine is the prominent and leading indication of the nature of the accident, and of itself renders the condition of the patient painfully distressing. In the words of Dr. Fleetwood Churchill, "The escape of urine is attended with so marked and irrepressible an odour, that the patient is placed '*hors de société.*' Obliged to confine herself to her own room, she finds herself an object



No. 1. No. 2.

VESICO-UTERO-VAGINAL FISTULA.

No. 1. Not involving the os uteri. No. 2. The fistula extending into the os uteri.

of disgust to her attendants and even to her dearest friends. She lives the life of a recluse without the comforts of it, or even the consolation of its being voluntary. It is scarcely possible to conceive an object more loudly calling for our pity, and strenuous exertions to mitigate, if not remove, the evils of her melancholy condition." The escape of the urine also produces excoriation of the vagina and external parts.

Wherever this sad condition is suspected, a most careful examination should be made by passing a catheter or probe into the bladder, and introducing the forefinger of the other hand into the vagina, when, if there be an opening, the finger will come in contact with the catheter or probe at some point or other. The best position for examination is, for the patient to rest on her hands and knees; then, the vagina being held open by retractors, the surgeon can see as well as feel the size of the fistulous opening. An examination is especially necessary, as partial paralysis of the bladder may induce incontinence of urine. The examination is easily made when the vagina itself is not cicatrized. The use of a speculum, by dilating the vagina, renders it possible to detect the fistulous opening when the plan just proposed fails to do so: indeed, I always use the speculum so as to satisfy myself of the exact nature, size, and position of the opening.

Besides the situation of the lesion, it is important, in regard to the treatment to be pursued, to ascertain its cause and duration. If it has been produced by a sharp cutting instrument, the early application of sutures may occasionally prove successful; and, in other cases, if sutures be applied as soon as possible after the discovery of the opening—that is, before the edges have become thickened and turned inwards towards the bladder—a favourable result may be anticipated.

When the fissure is far back, and there is considerable loss of substance, the success of an operation is difficult to compass. The fissure is more easy of cure the more forward its position.

History of Operations proposed.—I shall now allude briefly to the different modes of operation that have been tried.

Dessault's method consisted in plugging the vagina and

maintaining a catheter constantly in the urethra, so as to divert the discharge from its unnatural channel, and give this a chance of closing.

Chopart, Peu, S. Cooper, and Blundell, relate cases of cure by this means. It is, however, in some cases impracticable to continue the catheter in the urethra owing to the irritability of the bladder.

Cauterization.—Various modes of cauterizing have been recommended: the nitrate of silver, the nitrate of mercury, the actual cautery, and galvanism (as advised by Mr. Marshall, of University College Hospital), have all been tried, but with very partial success. A few successful cases are, however, recorded by Dupuytren, Delpech, Dr. M'Dowell, Dr. Kennedy, Mr. Liston, Dr. Colles, Dr. Ferrall, and others. In using any form of caustic, the patient should be placed on her hands and knees, and a speculum introduced into the vagina, through which the caustic should be passed, and then lightly applied to the edges of the wound. The vagina should be plugged immediately afterwards with a piece of dry lint, the patient placed in bed, and a long gum catheter passed into the bladder, having attached to it an india-rubber bag to receive the urine. As a portion of the after-treatment (were I disposed to adopt this plan of operating by caustics, which, considering the superiority of the plastic operation presently to be described, is not probable), I should insist on giving a dose of solid opium immediately, and on repeating it from time to time, so as to prevent pain and produce constipation; a measure in my estimation of the greatest importance. I am convinced any action of the bowels by which the pelvic viscera are disturbed, will always tend seriously to prevent contraction and union.

Dr. Blundell relates a case where a fistula at the neck of the bladder was cured by laying it open into the urethra, and then healing up the wound, just as in the usual way of treating a rectal fistula. Mr. Porter, of the Meath Hospital, performed an operation of this sort, which turned out well.

Velpeau suggested, and Jobert (de Lamballe) put in practice, a plastic operation similar in principle to that followed in

restoring the nose. Of four cases so treated, two were cured, one proved unsuccessful, and one died.

Suture.—This method has long been practised; the merit of its introduction is due to Roonhuysen. It has been used with success by Dieffenbach, Blandin, Chanam, Jobert, Malagodi, of Bologna, the late Mr. Earle, Mr. Hobart, of Cork (who states he has had at least ten successful cases), and by Mr. Hayward, of Boston, United States (*American Journal of Medical Sciences*, Aug. 1839), and others.

M. Jobert (de Lamballe) gives a very elaborate account of his modes of operating. In some cases he thoroughly pares the edges and surrounding surface of the fistula, and then paring the side of the uterus, he approximates the denuded surface of the bladder to that of the uterus, and keeps the two in apposition by interrupted sutures. In other cases he dissects back the whole of the anterior lip of the uterus, and unites the posterior lip with the denuded opening in the bladder. He relates cases cured by this means where the menstrual discharge subsequently came through the urethra. In certain cases he fastens the edges of the opening almost round the neck of the uterus. Great stress is laid upon free incisions, with a view to remove all tension, and upon constant catheterism after the operation. He relates six cases, of which he cured three, and greatly alleviated and very nearly cured two others; the remaining one died. (*Traité des Fistules Vésico-Utérines, Vésico-Utéro-Vaginales, Entéro-Vaginales, et Recto-Vaginales*, 1852.)

The surgeons whose names have been mentioned used silk or twine sutures, and the idea of employing metallic wire appears to be due to Mr. Gossett, of the City of London, who published in the *Lancet* for 1834 the report of a successful operation in which he adopted gold wire for the sutures, and recommended the use of this or other metallic wire as best suited to similar operations. However, Mr. Gossett's proposition did not attract the attention it deserved, and it was not until Dr. Marian Sims, of New York, published his account of an improved operation for vesico-vaginal fistula, and insisted on the superiority of metallic sutures, that their value became

recognised. I at once adopted Dr. Sims' views, and, in the first edition of this work, quoted them at large from Ranking's *Retrospect* (vol. XV. part I. 1852, p. 232), and so contributed materially to draw the attention of the profession to them; the more so, as I was able to narrate some cases in which I had successfully put them into practice. Soon afterwards Dr. Sims published a *résumé* of his mode of treatment, which he extensively circulated in this country.

The monograph of my esteemed friend Dr. Bozeman, of Montgomery, Alabama, United States, which he kindly sent me on its appearance in 1856, confirmed the utility of metallic sutures and clamps, and indicated other modifications of preceding operations of so valuable a kind as to leave little for future surgeons to devise or desire.

Dr. Sims used what he termed a "clamp" suture, consisting of annealed silver wire, as fine as horsehair, fastened to cross-bars either of silver or lead, as the silver sutures do not ulcerate out. His rule was to remove the suture on the tenth day. Before introducing the wire, he transfixed the parts to be brought into apposition, at as many points as necessary, by a long spear-pointed needle armed with silk thread, the ends of which being left hanging free served as guides for the metal sutures to be substituted for them. The next step was to fix the wire sutures, by means of a clamp, on each side the united edges, and by split shot fastened on each ligature.

This plan was adopted by me in a few cases, with very varied success, as published in the first edition of this work. Some slight improvements in Dr. Sims' procedure occurred to my mind in the course of my trials with it; but when Dr. Bozeman's plan became known to me, I at once perceived its superiority, and on the first opportunity carried it into execution, and that, too, with great success. (See *Lancet*, 1856, p. 540.) Subsequent experience has suggested to me certain amendments in the instruments used, and in other particulars of the method of operation, as will shortly be described.

Shortly after the appearance in the *Lancet* of November, 1856, of the report of a case successfully treated by me, I induced Dr. Wallace, of Greenock, to adopt Bozeman's plan

in a case which he subsequently recorded in the *Glasgow Medical Journal* for April, 1857. From this time until July, 1858, no other surgeon or physician in Scotland had succeeded in curing a case of vesico-vaginal fistula. In that month I attended the meeting of the "British Medical Association," held in Edinburgh, and read a paper on this lesion and its successful treatment; illustrated by eleven cases. This paper I at once had printed in the form of a pamphlet, and sent it to every member of the association.

My friend Dr. Bozeman was also present at the meeting, and he continued for some time afterwards in Edinburgh, where he operated first on a patient under the care of Dr. Keiller, and afterwards on one of Dr. Simpson's patients, illustrating and explaining in detail the whole procedure which he had so happily devised. He afterwards went to Glasgow, and there repeated his operation before several members of the Faculty in that city.

Soon after this period Dr. Simpson himself began to operate according to Bozeman's method, with great success, introducing however several modifications; and his example was soon followed by some other medical practitioners in Scotland. Judging from their own accounts, some of these followers in the path of Bozeman and myself appear to forget that they adopted the treatment for vesico-vaginal fistula after it had been perfected in the hands of others. Setting aside these considerations, they contrast their own recent results with those attained when the operative measures were yet unelaborated—a proceeding which must, on all hands, be considered unfair.

To revert, however, to the history of the operations and instruments proposed by others before detailing my own proceeding, I shall briefly describe the plan of Dr. Bozeman. The patient being, as Bozeman prefers, placed on a table, resting on her hands and knees, and the edges of the fissure pared, a sufficient number of wire sutures, eighteen inches long, are then passed by a porte-aiguille. The two ends of each wire are next brought together by an instrument prepared for the purpose; leaving the parts in apposition. A metal button is then passed over the end of each double suture, and a per-

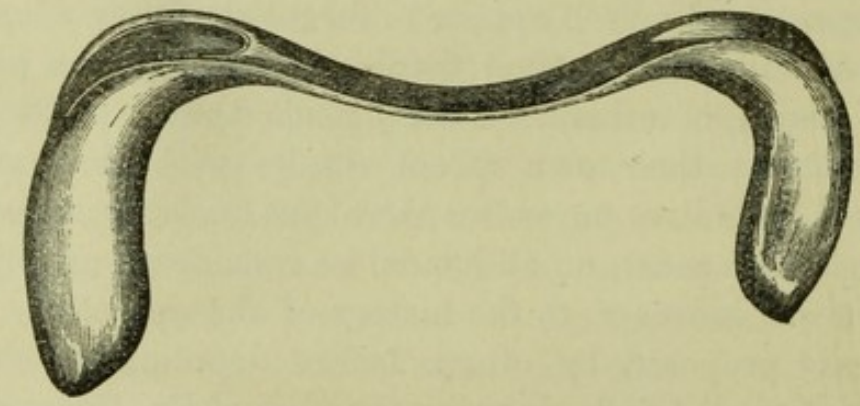
forated shot passed over each wire, pressed down upon the button, and then firmly squeezed together with a pair of long, strong forceps. Lastly, the wires are cut off close to the shot. The buttons are of lead, and may be cut to meet the special circumstances of any case.

Since the publication of the second edition of this work, little has been added to our knowledge of the treatment of vesico-vaginal fistula. As Dr. Graily Hewitt has remarked in his admirable treatise on *The Diagnosis and Treatment of the Diseases of Women* (p. 510), "the operation as now practised by several distinguished physicians and surgeons, is essentially the same, particular points being more insisted on by some than by others."

I will now, before describing the mode of operation, enumerate the principal instruments I am in the habit of employing, and of which I append illustrations. I say in the habit of employing; for I do not put them forward as the best possible, but as those which have well served my purpose.

Speculum.—I use Bozeman's bent speculum (fig. 4), which acts especially as a dilator of the vagina and a retractor of the

Fig. 4.



perinæum. For the eversion of the labia, I trust to assistants, who are further occupied in holding the legs of the patient. In this operation much depends upon the assistants and upon the pre-arrangements.

Forceps.—The forceps are of various kinds, according to the purpose they have to serve.

1. One description is used to seize the mucous membrane

near the fistula, preparatory to paring it. These forceps are straight, of different sizes, furnished with fine teeth, and known as "Vulsellum forceps." A larger and longer form is employed to take hold of the os uteri, and to draw it downwards, so as

Fig. 5.

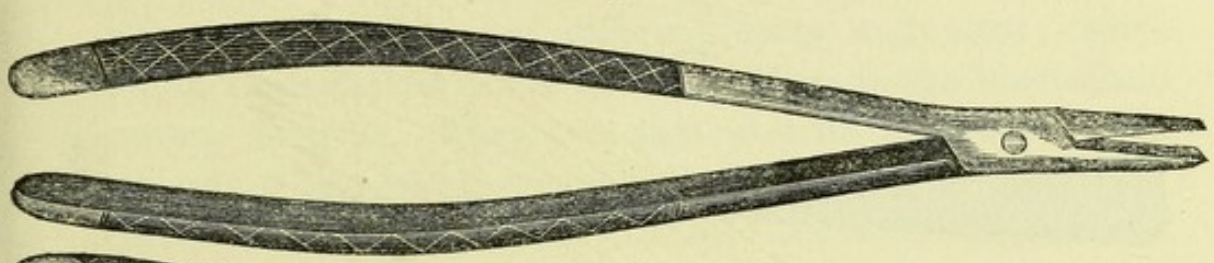
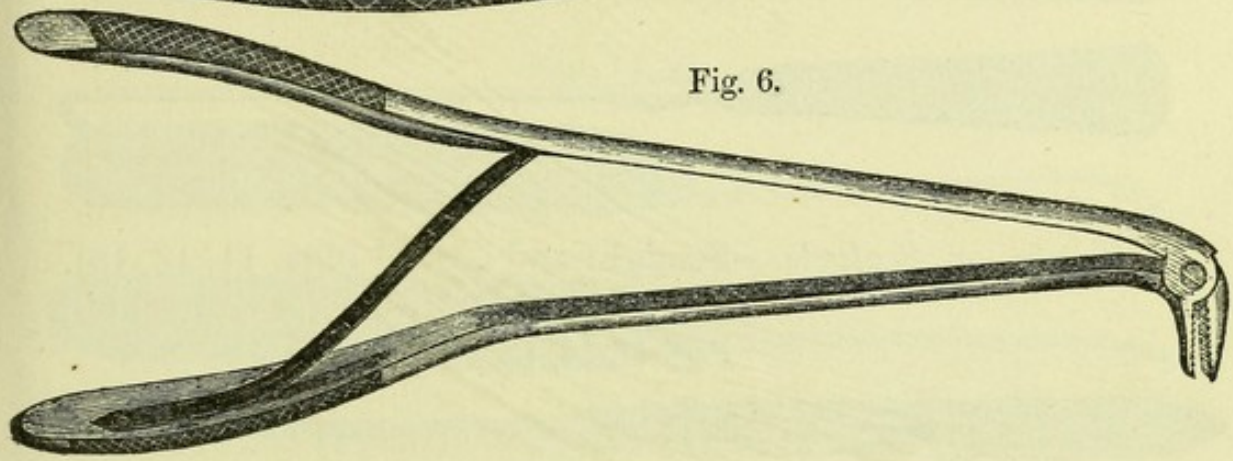
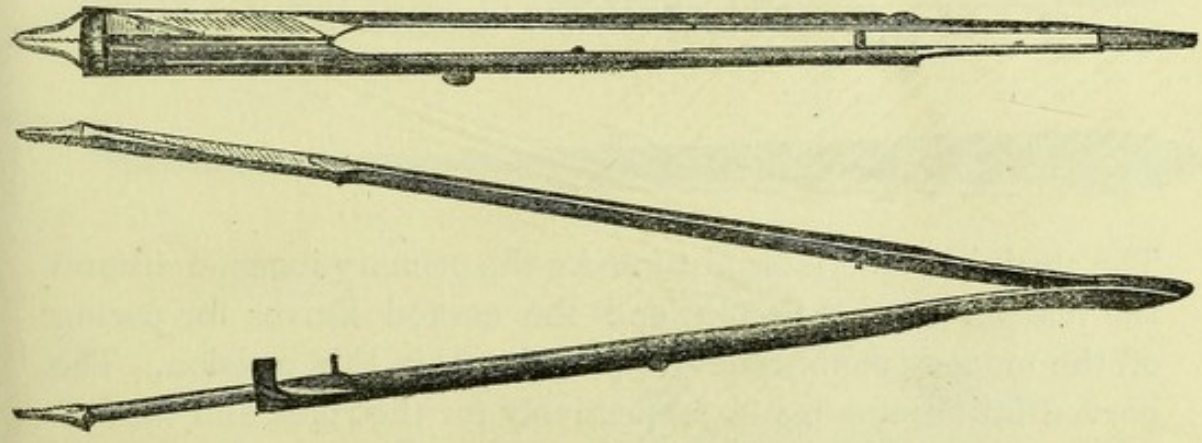


Fig. 6.



Figs 7, 8.



to bring the fissure, when in or near it, within reach for the insertion of the sutures.

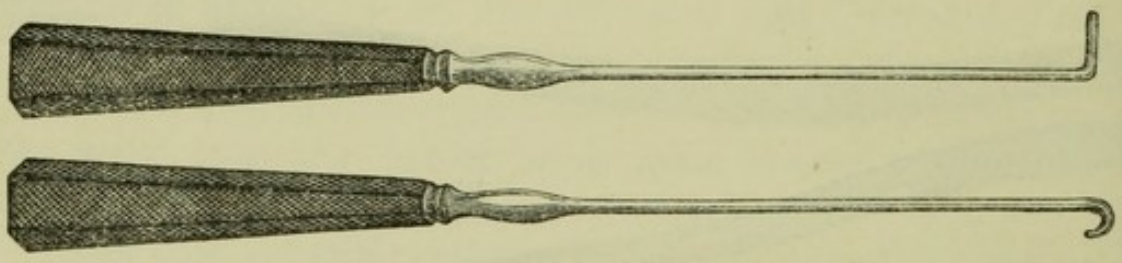
2. Forceps made strong to act as pincers for nipping the clamps, or for twisting the wire. These may be straight (fig. 5) when the patient is operated on in the lithotomy position; but

they must be curved (fig. 6), as in "Harper's forceps," when the patient rests on her hands and knees.

3. Weiss's "self-holding forceps" (figs. 7, 8).

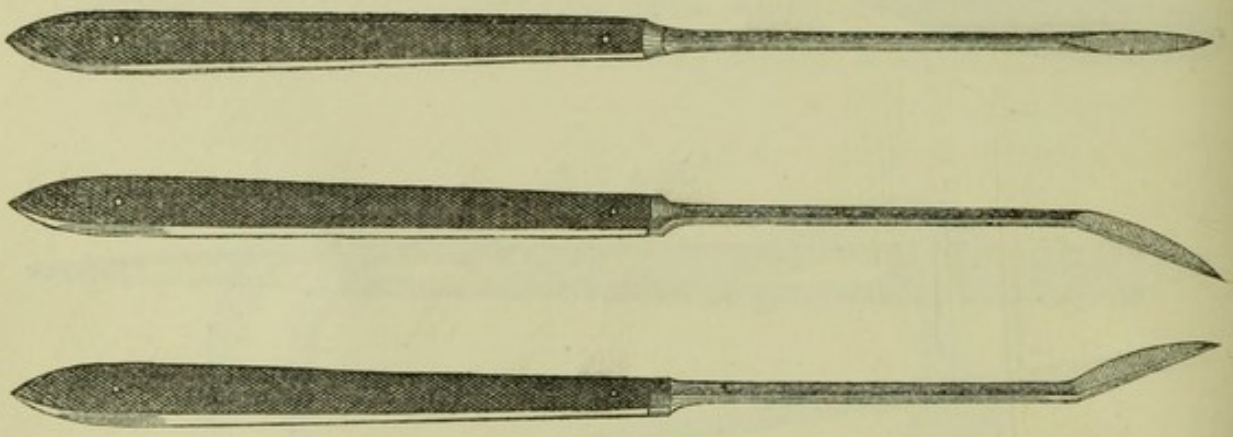
4. Bent probe
5. Blunt hook } (figs. 9, 10), for catching the point of the needle as it emerges from the second lip of the fistula.

Figs. 9, 10.



Knives or Scalpels.—Straight and curved (figs. 11, 12, 13).

Figs. 11, 12, 13.



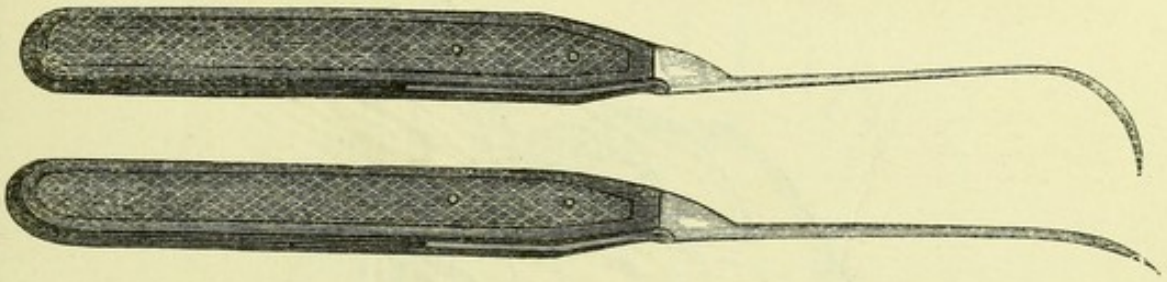
The straight knife is used to make the primary incision around the margin of the fissure, and the curved knives for paring off the mucous membrane comprised within this incision. The curved knives are made respectively for the right and the left hand; for it is important for the operator to be ambidextrous. The form of knives described was of my own invention, and in use long before my friend Dr. Bozeman came to this country. During one of the many discussions I had with him, I showed him my knives, as affording great facility in denuding the edges of the fistula; when he, in his own quiet manner, opened his

instrument-case and took out three knives precisely similar to mine, made in Montgomery, United States, from his own designs and under his own direction. It will thus be seen that we both felt the necessity for, and had made, the same kind of instruments, without any communication with each other.

Scissors.—These are of different sorts and sizes; some straight, some curved in the handles, others in the blades, and of several lengths. They are used to trim the edges when these cannot be pared thoroughly by knives.

Needles (figs. 14, 15).—These are also of different lengths and

Figs. 14, 15.



curves. They are made of rigid steel, perforated in almost their entire length, the point grooved on its under or concave aspect, and they are mounted on handles. There are fourteen in all. Besides these are many others of different sorts. Latterly, instead of seizing the mucous membrane with forceps

Fig. 16.

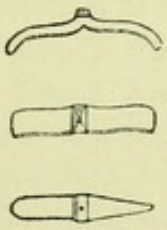
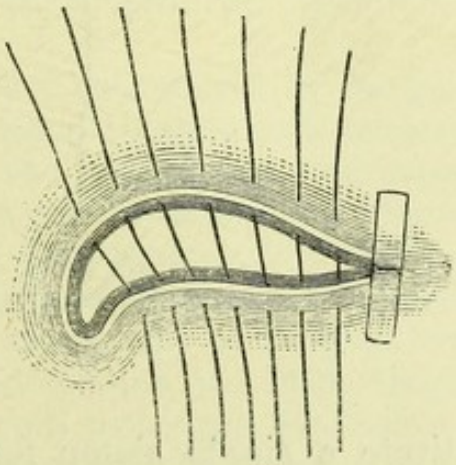


Fig. 17.

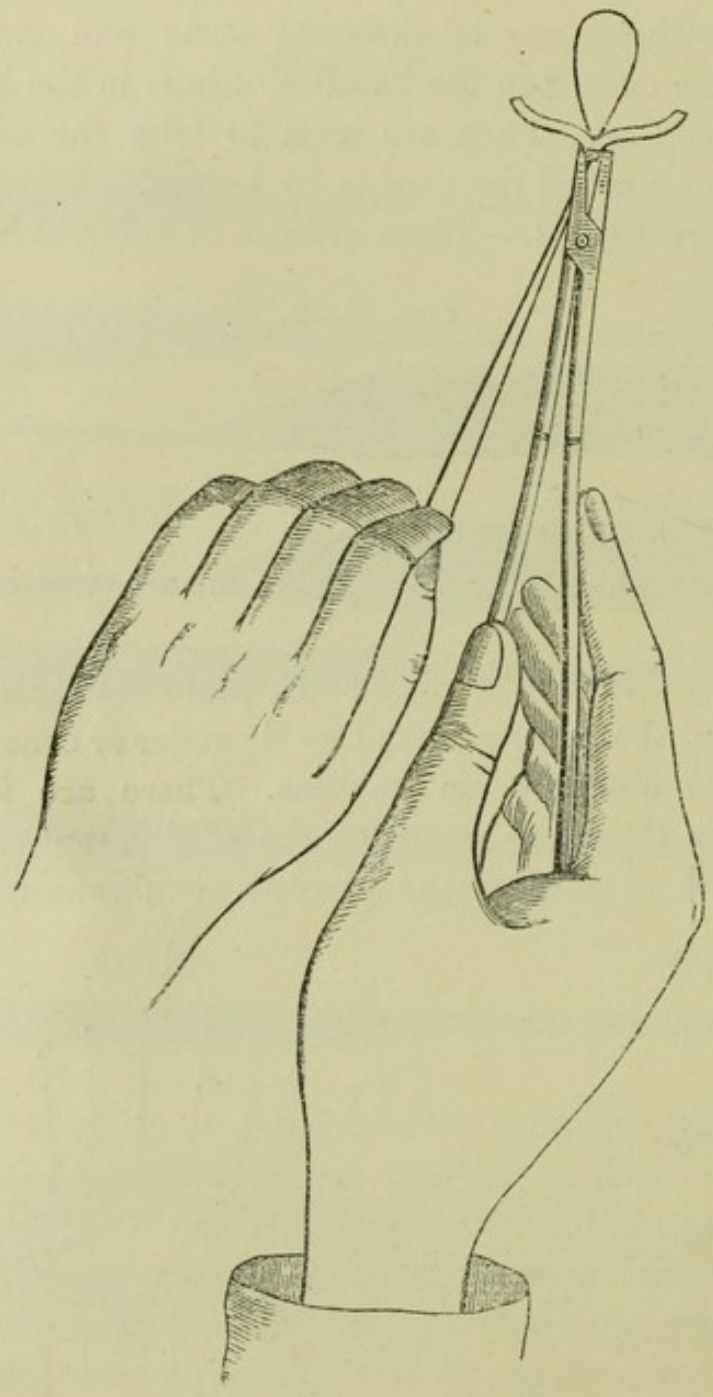


preparatory to denuding the edges of the fissure, I have transfixed the fistulous opening by one of the mounted needles;

and thus having a secure hold of it, I proceed to cut away the mucous surface.

Clamps (fig. 16).—In my earlier operations I used Bozeman's button only, but it afterwards appeared to me preferable

Fig. 18.

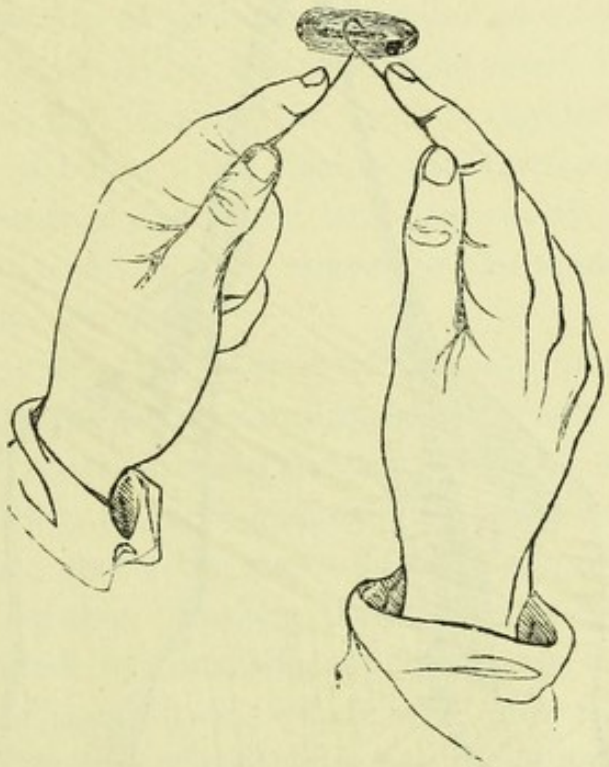


to substitute a single clamp for each suture. These clamps are furnished with a nipple pierced to receive the wire for the sutures. They are carefully cut out by hand, in lead, and on their application are curved; but when nipped by the forceps

(fig. 18) to fix the sutures, they are straightened; the soft lead yielding to the pressure, as seen in fig. 17.

Although these clamps have answered very well, I have lately operated without them, by merely twisting the wire sutures over each other; a proceeding which has the merit of simplifying the operation.*

Fig. 19.



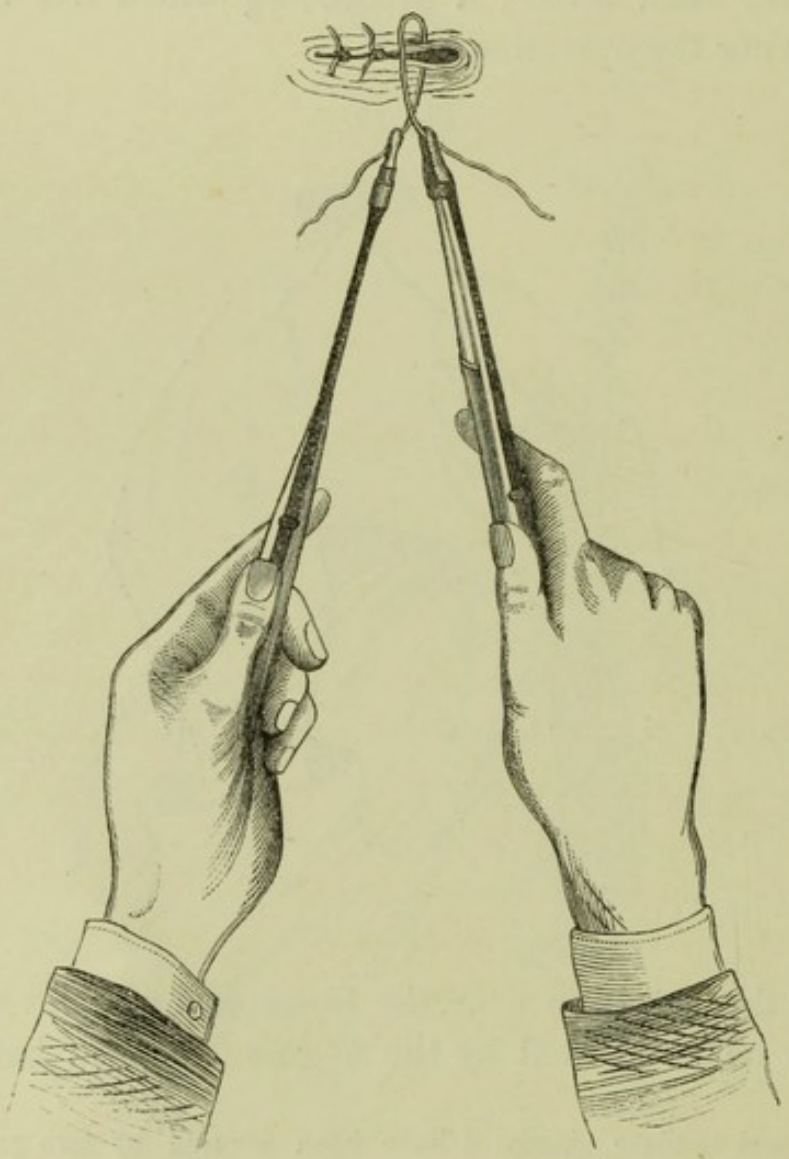
When the fistula is near the lower end of the vagina, the wire may be so twisted by the fingers (fig. 19); but when it

* In respect to these clamps I have been accused by two gentlemen of appropriating their inventions without giving them credit for them. In the first instance, it was Mr. Startin who laboured under this misconception (*Medical Times*). I accordingly called upon him to state that I had never seen his clamp or read an account of it; that, moreover, Mr. Blaize, who made instruments both for him and me, had never mentioned the invention to me, but, on the other hand, had lately requested me to show him how my bar-clamps were made (my friend and assistant, Mr. Philip Harper, having always made them for me). With this explanation Mr. Startin expressed himself perfectly satisfied, and wrote to the *Medical Times* to that effect.

The other gentleman who entertained a similar erroneous impression was Mr. W. B. Hilliard, to whom surgeons are indebted for several ingenious and useful instruments. He presumed that I had used his *separate* plate

is high up, I use two of Weiss's "self-holding forceps," and pass one pair over the other, so as to effect the same purpose (fig. 20).

Fig. 20.



Sutures.—I now always use silver wire for the sutures, as I find it never produces ulceration, as often happens with iron

and claimed it as my own invention; but I wrote to assure him I had never seen the plate nor a description of it, for he had given none in his excellent paper on the operation he proposed. He replied that he only claimed the "nipple," not the single plate; but it is the latter only which is of moment, and on its form depend most of the advantages I claim for the separate clamps. However, I could adduce abundant evidence to show that I devised and used the nipple-clamp without a suggestion from any one except

wire. But other metallic wire, as of gold or copper silvered, may be substituted.

Dr. Hayward, of Boston, United States, employs silk sutures, and allows them to ulcerate out; and he reports several instances of success with this plan. I gave it a trial in one case, and it there answered very well.

Preliminary Operative Treatment.—This becomes necessary where there has been much cicatrization about the vagina; a condition sufficient frequently to render an examination by the speculum impracticable, and one that must be cured before the operation for closing the vesico-vaginal fistula can be undertaken. In fact, the vagina has first to be restored, to have its strictures destroyed and its cavity opened up and expanded, in order to give space for the manipulation of the subsequent operation.

The cicatrices not only contract the vagina at one spot, but often also occur as bands running across it and rendering it impervious. To destroy these strictures I divide them freely by a straight bistoury, preferring, however, to cut towards the sides of the vagina, and so to avoid injuring the recto-vaginal septum. Considerable bleeding follows these incisions, but it is quickly arrested by immediately plugging the vagina with strips of lint dipped in oil, which after forty-eight hours are to be replaced by a tent of sufficient size to distend the vagina and keep the incisions widely open; the object being to get them to heal from the bottom by granulation. The tent employed for this purpose is made of a piece of oiled silk, stitched up like the thumb of a glove, and well filled with small pieces of sponge. It should be removed every twenty-four hours, and

my friend Dr. Bozeman, who sometimes employed a somewhat similar clamp over the button, and then a shot to secure it—a contrivance I at once endeavoured to simplify by joining a nipple to a clamp. It seems, therefore, quite clear that Mr. Hilliard and myself attained a similar object quite independently of each other, just as Bozeman and myself did with respect to the form of the knives employed.

I have entered into these particulars thus fully, because I should regret incautiously to deprive any one of the merit justly due to him, for his endeavours in any direction to facilitate the treatment of so painful a lesion as vesico-vaginal fistula.

the vagina syringed well out each time. The tents subsequently introduced should be progressively larger, so as to insure as complete a dilatation of the vagina as is attainable. When the whole surface of the vagina is again covered by mucous membrane, then the operation to close the fistula may be proceeded with. Now and then it is necessary to divide a second or a third time some bands of adhesion before the canal is thoroughly pervious and dilatable.

There is yet another impediment to operating met with at times, caused by the presence of earthy matter deposited by the urine over the vaginal surface. This must be removed by repeated hip-baths and injections. An unhealthy state of the vagina must also, as a matter of course, always be remedied before operative measures are resorted to; and I postpone these in patients who are suckling until the milk leaves the breasts.

The bowels should be thoroughly emptied the day before the operation is performed. This rule applies to all operations about the pelvis, where it is necessary afterwards to keep the bowels confined for a considerable period.

Position for Operating.—Three positions for the patient during the operation have been recommended:—1. the semi-prone, suggested by Dr. Sims; 2. on the hands and knees, advised by Dr. Bozeman; and 3. as for lithotomy, proposed by myself. The first of these is thus described by its proposer:—"The knees must be separated some six or eight inches, the thighs at about right angles with the table, and the clothing all thoroughly loosened, so that there shall be no compression of the abdominal parietes. An assistant on each side lays a hand in the fold between the glutei muscles and the thigh, the ends of the fingers extending quite to the labia majora; then by simultaneously pulling the nates upwards and outwards, the os exterum opens, the pelvic and abdominal viscera all gravitate towards the epigastric region, and stretch this canal out to its utmost limits, affording an easy view of the os tincæ, fistula, &c. To facilitate the exhibition of the parts, the assistant on the right side of the patient introduces into the vagina the lever speculum, and then by lifting the

perinæum, stretching the sphincter, and raising up the recto-vaginal septum, it is as easy to view the whole vaginal canal as it is to examine the fauces by turning a mouth widely open up to a strong light."

Bozeman always places the patient resting on her hands and knees, without chloroform, as already described in the account of his operation. Unlike Bozeman, I usually administer chloroform before operating, and place the patient in the lithotomy position. This position I hold to be generally the best for both patient and operator; it is readily secured without muscular effort to the patient, the weight of the body being all thrown, as she lies in a supine posture, on the back. Chloroform can be inhaled without the impediments which must always be experienced by the patient in either of the other two positions. The parts are well exposed to the surgeon, who seats himself in front during the whole time occupied, and thus is saved the fatigue of standing for, it may be, an hour or more. This is a matter of considerable practical importance moreover, as calculated to materially expedite the whole proceedings.

Nevertheless, there are now and then cases in which Bozeman's position on the hands and knees is the best; such, for instance, as those in which it affords the best view of the lesion, or those where the mucous membrane of the bladder is very lax and protrudes through the fistulous aperture.

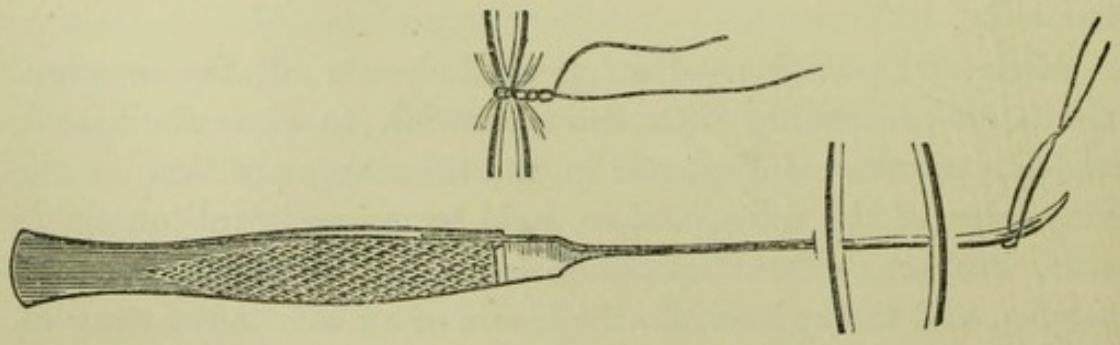
Mrs. Day, my late excellent head nurse, and afterwards matron, at the "London Surgical Home," has invented an admirable table, so that the patient may recline easily on her belly.

Mode of Operating.—Having made ready all the arrangements for proceeding with the operation to close the fistula, and the patient being placed in the lithotomy position, on the very edge of the table, and so held by an assistant on either side, Bozeman's bent speculum is to be introduced into the vagina, and then given into the hands of an assistant sitting on the left side of the operator, who draws the orifice downwards and backwards, whilst the assistants employed in holding the legs keep the labia drawn well apart. Having now the cavity

of the vagina well exposed, the operator takes hold of the vaginal septum with a pair of vulsellum forceps, and giving these into the hands of one of his assistants, proceeds to mark out the precise extent of the mucous membrane around the fissure which he intends to remove, by making a slight incision through it with a straight knife, taking care to cut on the lower side first, for otherwise the blood flows from the higher part of the fistulous opening over the lower and obscures it. The next step is to remove this ring of mucous membrane from around the opening. This is best effected by the curved knives, one of which is for use with the right hand, to pare one side of the fissure, the second for the left hand, to pare the other; for the use of one or other hand in turn, according to the direction of the surfaces to be denuded, facilitates the procedure. If managed well, the portion of mucous membrane, when cut obliquely inwards from around the fistula, can be removed in a single piece. The knives recommended are much preferable to scissors. Latterly, as before remarked, I have tried the plan of transfixing the two sides of the fistula by one of the curved needles, instead of holding them with forceps, previously to paring off the mucous membrane, and have found the plan answer very well.

The paring of the edges being accomplished, the next step is the introduction of the sutures. Formerly I used a straight, flexible, long needle, and passed the wire at once through it (fig. 21); but I now prefer a hollow one, on the principle

Fig. 21.

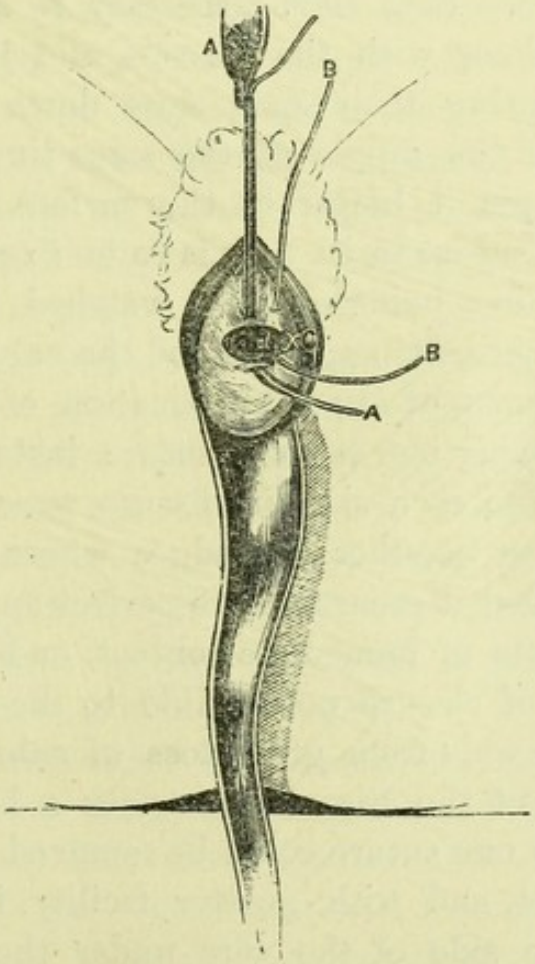


of Mr. Startin, as first used by Dr. Simpson, in these cases, except that instead of being made of flexible metal, it is of

steel, and rigid. To obviate the necessity of changing the angle, as is done with the flexible needle, I have fourteen needles of different curves, from which I may select the one best adapted to my purpose. The needle is passed within a quarter of an inch external to the denuded surface through the coats of the vagina and the muscular tunic of the bladder, avoiding its mucous lining; it is thence carried across, and made to penetrate the same tissues at an equal distance from the fistula, on its other side. In other words, the two sides of the fissure are transfixed by the needle, and as this carries the wire, a suture is at the same time introduced.

Before thrusting in the needle I pass the wire through it, as

Fig. 22.



far as, but not beyond, its extremity (fig. 22); so that as soon as it has passed through the opposite sides of the fistula, the end of the wire can be pushed onwards beyond the point (A)

and forthwith seized by the forceps; this done, the needle is withdrawn (B), and the next business is to fasten the suture so introduced (C).

The several sutures required are inserted in the same manner: their number must be determined by the size and general characters of the fissure to be closed.

The next proceeding, formerly, was to seize the two ends of each suture as introduced, and pass them through the eyelet-hole of the simple bar-clamp (fig. 16), which, it will be seen, is slightly curved, and furnished with a nipple-like projection on its back. Holding the two ends of the wire with the left hand, and seizing the nipple of the clamp with a pair of long forceps (fig. 17), this is pushed backwards until it presses against the fissure, and is seen to bring the edges into perfect contact beneath. It is then necessary to squeeze firmly the nipple of the clamp with the forceps, and thereby secure the wires before cutting their ends close down upon the nipple. The pressure of the nipple at the same time straightens the clamp, and adapts it better to the surface (fig. 17). In the same way each suture in its turn is to be fixed by a clamp, the process of closing being carefully watched, to see that each clamp secures accurate apposition of the subjacent edges.

The advantages of the multiplication of the clamps, as I proposed, by fixing one to each suture instead of having one common to all on each side the fissure, were, that it rendered it easier to bring together the edges where these are sinuous or irregular; that it secured more perfect apposition by multiplying the points of immediate contact, and by rendering the whole process of closure perceptible to the eye; that where the fissure was wide from great loss of substance, it involved less stretching of the vagina than does a long button; and, lastly, that any one suture could be removed with less disturbance of the rest, and with greater facility, it being necessary only to cut one side of the wire under the clamp, and then draw the latter away by gentle traction with a pair of forceps.

In certain cases Bozeman's button has a superiority over the clamps; as, for instance, where the vagina is very large and lax, or where there is unhealthy condition of the edges.

The sutures are left undisturbed for ten days, after which period they should be removed, the bowels having been cleared out by injections and medicine on the day before.

My recent experience has taught me that clamps or other such fastenings are not positively necessary, at least in some cases, and I believe Dr. Sims holds the same opinion, and has largely acted upon it. Instead of using them, the plan is to twist the ends of the wire across each other, so as to tie or link them (figs. 19, 20, 22), after the lips of the wound are accurately brought together. This plan will, I expect, supersede the use of all clamps and buttons. So far as I have tried it, it has succeeded very well, and it has the advantage of shortening the operation, and of diminishing the number of instruments required.

Dr. Sims' views on this subject I learned from my eldest son, who was, when in New York, kindly allowed by that distinguished surgeon to witness his mode of operating. He, moreover, tells me that Dr. Sims fastened the sutures by seizing the two ends of the wire with a pair of forceps, and then twisting them together by turning the forceps round several times in his hand.

The history of my earlier operations for vesico-vaginal fistula shows that I at first resorted to lateral incision on each side the sutured edges, with the view of preventing traction upon them. Experience, however, has induced me to discontinue this practice both as unnecessary, and also as likely to be prejudicial to the union sought for; in the first place, by the drain of blood, and afterwards by the withdrawal of nutritive material from the parts where it is most needed.

Another practice which I have also given up as unnecessary is, the introduction of pledgets of lint, dipped in oil, within the vagina, immediately after the operation was completed. For when the lips of the wound are well brought into apposition by the sutures, there is no hæmorrhage, or none of any consequence. If there be, iced-water dressing will suffice to stop it.

To carry out the operation just described does not occupy me, in the less severe varieties of vesico-vaginal fistula, more

than twenty minutes; but when the fissure is multiple or large, half an hour or forty-five minutes may be occupied. A great gain in expedition is thus obtained as compared with other operators of whom I have accounts: as, for instance, Bozeman and Simpson, whose operations have extended from one to four hours. This economy of time I attribute chiefly to the facilities offered by the position of the patient, and to the use of the hollow needles recommended.

The size and position of the fistulous opening, under certain circumstances, call for slight modifications or extensions of the operation, just now described in a general way as applicable to all ordinary varieties of the lesion. Thus, when the laceration has extended to the uterus, and the os uteri forms one side of the fissure, it is necessary to denude the surface of the latter and to pass the sutures through it, so as to unite it with the wall of the bladder. There is no particular difficulty in doing this except what results from the greater force required to push the needles through the denser tissue of the os uteri, and from the deep situation of the injury; but this latter difficulty is overcome by drawing the womb downwards in the cavity of the vagina by means of a long pair of vulsellum forceps.

Again, where the fistula opens not through the os but through the cervix uteri (fig. 3), the operation may be varied in two ways. If the aperture be not far above the os uteri, the best plan is to slit the latter up and so lay it open into the fistula, and then bring the cut edges of the uterine walls into apposition with the bladder by sutures in the ordinary way. On the other hand, if the opening be too high up in the neck of the womb to warrant this procedure, the only other course open is to close the os uteri itself, and thus divert the menstrual discharge into the bladder. This proceeding has been condemned by some as unjustifiable during the child-bearing epoch. It is, however, the only plan that can be followed to close the opening between the uterus and bladder, and to prevent the escape of the urine into the cervix uteri and vagina. Although the occlusion of the os uteri necessarily cuts off the chance of future progeny, yet if this means is not put into execution, it is still questionable whether

a fistulous communication of the uterus with the bladder is compatible with impregnation, and if this is answered in the affirmative, how far it is compatible with the due course of pregnancy.

Though my adoption of this plan has been condemned by some, yet it has received the approval of Dr. Fleetwood Churchill, of Bozeman, and others, and has been successfully followed by Dr. Churchill. Experience has shown that no ill consequences follow the discharge of the menses through the bladder, and it is a question for the patient to decide whether she will put up with the distressing and painful inconveniences of the uncured fistula, or forego the chance of offspring and be restored to the comforts and the enjoyment of life. Surely the latter alternative is the best.

Since the publication of the second edition of this work, a case has been published by Mr. J. R. Lane (*Lancet*, 1864, vol. I. p. 207), which shows that, after the operation for, and apparently complete occlusion of, the os uteri, pregnancy may take place.

The patient, aged 45 years, was first admitted into St. Mary's Hospital in May, 1862, suffering from vesico-uterine fistula. Mr. Lane closed the os uteri; and the patient left the hospital within three weeks, having menstruated through the bladder without inconvenience or pain. The menstruation continued regularly in the same way for three months, when Mr. Lane lost sight of the woman for a time. The subsequent history of the patient is best told in his own words:—

"Towards the close of the year," he writes, "she applied to me, telling me that since August or September she had ceased to menstruate, that she had experienced various uncomfortable sensations in the uterine region, and had been increasing in size. On investigation, I found that there was certainly a tumour in the hypogastric region, which appeared to be an enlarged uterus; but, on examination *per vaginam*, the os uteri appeared to be as firmly closed as when she left the hospital in June.

"These facts seemed to admit of but one conclusion,—viz., that the fistulous opening had spontaneously closed, or had

become in some way blocked up; and that the menstrual fluid, being unable to escape, had accumulated within the uterus, and was the cause of the enlargement. Pregnancy, with the os uteri firmly closed, was a contingency which never presented itself to my imagination; nor, I believe, to that of any of those who saw the patient.

"The appropriate treatment, therefore, seemed to be to re-open the os uteri to allow the accumulated matters to escape; after which, supposing the fistula to be really closed, she would be restored to her original and normal condition.

"She was re-admitted into the hospital early in January, 1860. On the 10th of January, I attempted to divide the uniting substance with a small knife guided by my finger; but I found it impossible to do this, owing to the mobility of the uterus and the firmness of the uniting medium. I therefore resorted to a trocar and canula, a speculum having been introduced to bring the os uteri in view; but, before the trocar would penetrate, I found it necessary to hold the os uteri steady with a vulsellum, and to use an unexpected degree of force. Only two or three drops of blood escaped through the canula; but I satisfied myself that I had really opened into the uterus by passing a small bougie, which readily penetrated to the depth of about three inches. The next day I was informed that a considerable quantity of watery fluid had escaped during the afternoon after the puncture had been made, and that she had complained of pain. The discharge of water was not repeated. On the following day I learned, to my extreme surprise, that she had been taken ill during the night, and that a fœtus of about four months' date had made its appearance. The watery discharge which followed the puncture was, therefore, doubtless liquor amnii, and was thus clearly accounted for. The patient recovered rapidly from her miscarriage; but the cicatrix formed by my operation was, of course, completely broken down by the passage of the fœtus, and the os uteri was permanently reopened. The urine escaped through it precisely as it did before my first operation. She left the hospital for a time on the 10th of February, but shortly afterwards

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applied to me with an urgent request to be re-admitted, in order that the original operation might be repeated. This I did on the 14th of March in the same way as before, and with the same result. Nothing untoward occurred; the wound healed firmly, and the incontinence of urine ceased. She menstruated through the bladder about a week after the operation as on the former occasion, and left the hospital in about three weeks. I saw her at intervals for a considerable time. The last occasion was in September, since which I have lost sight of her; but I know she would have immediately come to me had anything unusual occurred. When I saw her in September, which was six months after the last operation, she had menstruated regularly through the bladder without any difficulty. No trace of menstrual secretion had been discharged excepting through the bladder, nor had any escape of urine occurred through the os uteri; neither was there anything to indicate a repetition of the mysterious pregnancy which had followed the first operation.

"The question which next suggests itself is, how conception could in this instance have taken place. Either the seminal secretion must have passed through the urethra and bladder into the uterus—an explanation which I am very unwilling to adopt,—or there could not have been an absolutely complete closure of the os uteri. If, however, there were really an aperture of this kind left, it must have been exceedingly minute; for it was quite undiscernible by repeated examination, and no appreciable amount of urine escaped through it. Indeed, the union appeared to be singularly firm, as evidenced by the difficulty I found in penetrating through it. Had the union not been so firm, I should have suggested the possibility of a portion of it having been broken down during sexual intercourse, and of an inlet for the seminal fluid having been thus provided. A small opening so caused might have closed again spontaneously after the mischief, if I may so call it, had been done. On the whole, however, I am inclined to think that a capillary channel may have existed along the track of the wire sutures, one of which had disappeared and escaped detection when the others were removed, and was not

taken away till a considerable time afterwards. Should this latter supposition be correct, the fact is a very curious one, as showing how minute a communication may suffice for impregnation; and it is especially interesting in these days, when enlargement of the natural dimensions of the canal of the cervix uteri by dilatation or incision is recommended by high authorities, and frequently practised, for the cure of sterility. On this point M. Nélaton has made some humorous remarks, contrasting the size of the spermatic filaments with that of the passage they are intended to traverse, and suggesting that an enlargement of that passage, instead of facilitating their transit, might seriously embarrass them by causing them to lose their way."

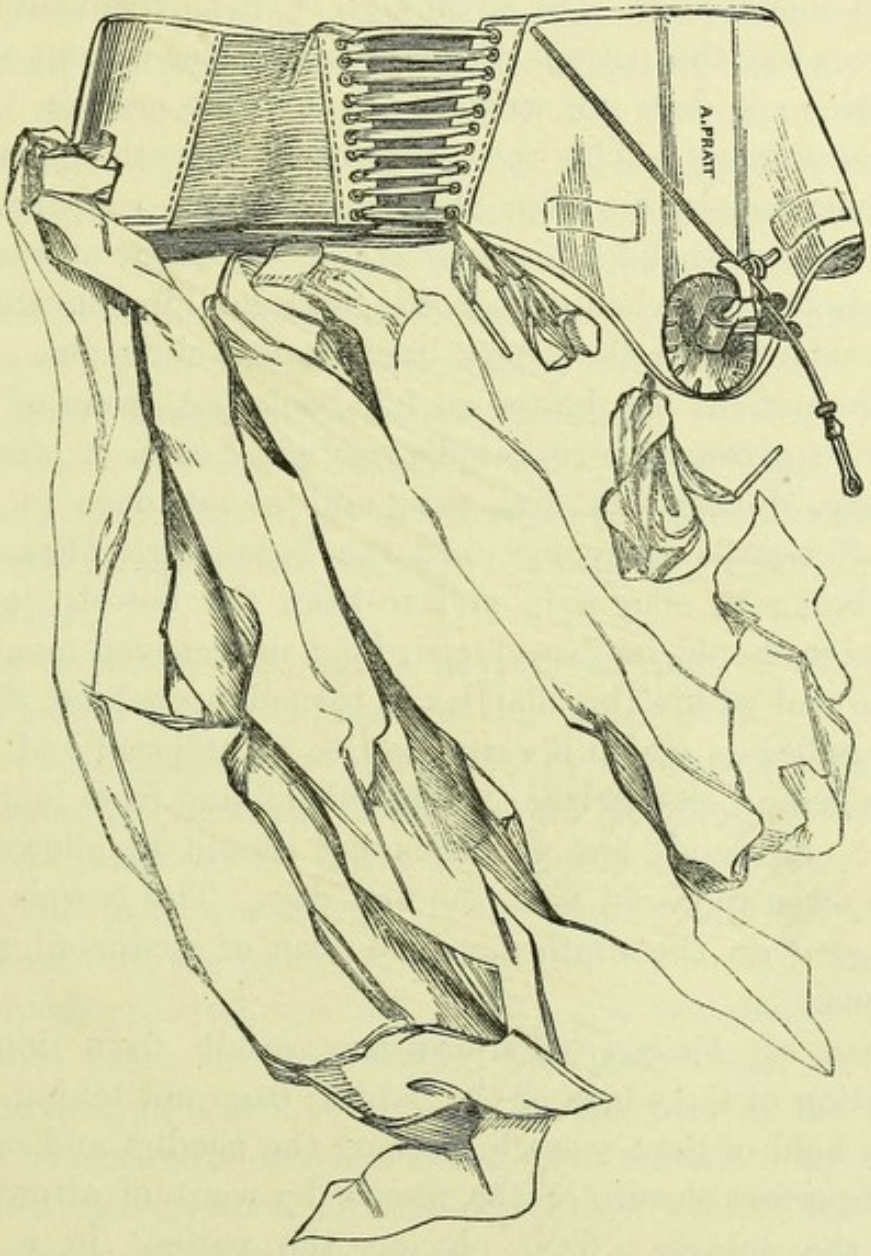
I have met with a case where there was so much sloughing of the septum about the os and cervix uteri that these parts projected into the bladder, and as a preliminary measure it was necessary to replace and secure them, and then to denude the surface of the cervix, and bring it into apposition with the bladder. Such cases are necessarily very troublesome, difficult, and tedious.

When there are two or even three fistulous openings, it is a difficult matter to attempt to close them all by a single operation; generally it is necessary to deal with them one after the other. However, in one of my patients I succeeded in curing two out of three fistulæ at one time; and in one case I undertook the closure of two in the course of a single operation, and succeeded most satisfactorily.

In cases complicated by fistula of the urethra, it is necessary first to deal with the vaginal opening, and, when this is healed up, to undertake the closure of the urethral fistula. This last matter is always exceedingly difficult, on account of the scanty tissue about the injured part, and the consequent impediment to apposition and union. In such circumstances, I make an incision on each side of the urethra, about half an inch from it, so as to allow its edges to be brought together without tension. But the introduction of the sutures is not attempted until some weeks after the incisions are made. During this interval the latter are dressed with lint dipped in olive-oil.

In cases of urethro-vaginal fistula the whole of the urethra has sometimes sloughed away, and the parts have healed, the patient having become unable to hold her urine, the sphincter being destroyed. I have adopted the plan, in these cases, of making an entirely new urethra. I make a puncture under

Fig. 23.



the arch of the pubes, with a straight knife or a trocar, into the bladder, and then introduce a catheter with an ingenious apparatus appended to it (fig. 23), devised by my friend Mr. Harper. I have performed this operation three times in the

"London Surgical Home," and the patients are able to hold urine and to pass it at pleasure. I have also had several cases in private practice; one case especially, the patient being a friend of Mr. Frederick Clowes, of Windermere. The apparatus referred to is simply a belt put round the body, with a piece of bone in the centre. On this is screwed a plate, to which is attached a holder for the catheter moving on a ball-and-socket joint. The advantage of this instrument is that, whichever way the patient moves, the catheter is kept steadily in position; it does not wriggle about in the urethra.

After-treatment.—This resembles in all essential particulars that advocated by me after the operation for ruptured perinæum, or after that for prolapse of the vagina or uterus. The patient is placed in bed on her side, with her hips elevated on a water-cushion, and the knees bent on the abdomen. Sometimes the patient lies better on her back. A grain of opium is at once given, and repeated every six hours, or oftener, if necessary, during the first day, and about once in twelve hours afterwards every day until the bowels are relieved; the object being to allay pain and to keep the bowels confined. A catheter should be introduced, bent in a curved manner, so that the end within the bladder is turned up behind the arch of the pubes on which it rests, and to its external end should be attached an elastic bag, capable of holding from four to six ounces. A bland, but generous diet should be allowed, and wine is often required from the first day. The bowels should be relieved on the ninth day by a dose of castor-oil and by injections.

Causes of Failure.—Failure may result from imperfect denudation of the edges of the fistula; from not taking a deep enough hold of the tissues in passing the needles and sutures; from imperfect closure of the fissure by want of attention in fixing the sutures; from placing the patient in a wrong position; from inattention in keeping the bladder empty, or from neglecting to insure constipation of the bowels until union of the sutured edges is sufficiently firm. Other causes of failure occasionally met with are, the impaired health of patients and the consequent non-formation of plastic

lymph to effect union; also a very indurated state of the edges of the fissure, brought about by the misapplication of caustics, by imperfect attempts at operating, or by the use of the actual cautery.

From agencies of the last-named class, the induration is sometimes so great as to feel cartilaginous, and the edges prove incapable of throwing out adhesive lymph sufficient to unite them. Again, in some cases where previous operations have been unsuccessfully undertaken, there is not only induration of the edges of the fistula, but the formation of two or three fistulæ, by the development of fibrous bands which have been thrown across the original fissure in the imperfect attempt to close it. Such bands are, however, not necessarily fatal to the success of the operation, though they greatly diminish the chances of a good result. Occasionally also sickness, if violent, and a severe cough, prove causes of failure.

Pyæmia is a surgical accident which may befall a patient after any operation. It is due frequently to depraved health, and needs no particular notice in connection with the operation in question.

It is important to rectify any impairment of the general health before operative measures are undertaken.

Results.—Besides the seventy cases tabulated, I have operated upon eleven cases in St. Mary's Hospital, and on eight in private practice. Of these eighty-nine cases, *forty-four*, or almost one half, were cured by the *first* operation, sixteen by *two* operations, six by *three*, and twelve by more. Two cases were much relieved, but not cured; and two died. The unsuccessful cases resulted either from unruliness, a want of perseverance, or a lack of stamina on the part of the patient. In one unsuccessful case the disease had existed forty years.

In two cases treated successfully (Cases XXIX., LXV.), the fistula was complicated with ruptured perinæum. Recto-vaginal fistula co-existed with the vesico-vaginal in five cases (Cases LXXXV. to LXXXIX.) and one in private practice. Each case was cured. Case LXXXVIII. was most difficult. The patient had long traded upon the charity of the benevolent, and there was good reason to believe that she purposely, from time to

time, undid the good gained by operation. In the end, however, the sphincter ani was made to do duty both for the bowel and the bladder.

Cases.

A.—*Vesico-Vaginal Fistula.*

Case I.—*Vesico-vaginal fistula of three years' standing, the effect of the pressure of a stone in the bladder during labour: Operation: Cure: Remarks.*—Hannah B., æt. 43, mother of ten children, admitted into Boynton ward, St. Mary's Hospital, under my care, March 24th, 1853. She states that she was injured three years ago during a tedious labour. The waters broke on a Thursday morning, and she was not delivered till Saturday morning; the child was born suddenly, no medical attendant being present at the time. The funis broke and the placenta remained, and had to be removed by the introduction of the hand of a medical attendant. There was a great quantity of fæces accumulated in the rectum, and great pain in passing the motions after taking castor-oil. She got out of bed on the ninth day and tried to pass her water, but could not: something seemed to fall down and prevent her; no water passed for two or three days, then, "a little piece fell down about the size of a finger nail, and water has escaped ever since."

In July, 1852, she had another child, the delivery being natural. She cannot recollect how long she was in labour; frequent constipation subsequently.

March 24th, 1853. Examination. There was a small fistulous opening near the os uteri; a large calculus could be felt within the bladder, which on being grasped by a pair of forceps through the urethra, began to peel; by repeated applications of the forceps, assisted by the scoop, the whole was removed: the stone was two inches long, an inch and a half broad, and three inches and a half in circumference; weight two ounces and a half. The patient was under the influence of chloroform during the operation. There was a very slight laceration of the anterior part of the urethra, which was otherwise uninjured, so dilatable was it found to be. The bladder was injected four or five times with cold water, and no bleeding followed. She was much depressed by the chloroform, with feeble pulse and somewhat laboured respiration; had distinct arcus senilis. Ordered fourteen minims of liquor opii sedativus, fifteen minims of compound spirit of sulphuric ether, and an ounce of camphor mixture immediately; and this was ordered to be repeated after six hours.

8.30 P.M. Doing well; circulation recovered; countenance good: no sickness. To take two drachms of liquor ammoniæ acetatis, fifteen minims of spirit of nitric ether, fifteen minims of tincture of henbane, ten grains of compound tragacanth powder, and an ounce of camphor mixture, every four hours.

April 5th. The fistulous opening is a mere point and very high up; small particles of calculi still passed through it. Actual cautery with small point thoroughly passed into the orifice. A catheter, with bag attached, introduced and retained to prevent the urine escaping at all through the fistula.

9th. An incision was made half an inch from the fistulous opening on each side, through the mucous membrane, so as to take off all tension from the opening, after which the actual cautery was applied.

16th. The opening is quite closed, and the incisions through the mucous

membrane healing up by granulation; no water escapes but by natural passage.

19th. No urine escapes through the vagina: on examination with the speculum, there is a granulating surface about the size of a shilling in the situation of the opening; os uteri irregular and abraded; urine clearer.

28th. On careful examination, no fistulous opening could be found, and there was no evidence of any urine escaping from the vagina.

30th. Discharged cured.

Practical Remarks.—This case is interesting, as showing the mischief sometimes done during labour by the presence of a stone in the bladder; a circumstance not mentioned, to my knowledge, by any previous author. It also shows the importance of liberating the fistulous opening from any dragging of the surrounding parts, by incising the membrane before applying the cautery.

CASE II.—*Vesico-vaginal fistula of seven months' standing: Three operations: Cure of the fistula: Subsequent death from effusion into the pericardium and left pleura.*—Mrs. T., æt. 25, consulted me March 18th, 1853. She gave the following history of herself:—

On August 1st, 1852, she was delivered of her fifth child; her labour was very tedious: the legs, body, and arms were born at half-past ten A.M., but the head was not born till half-past seven P.M. On the ninth day she was taken with violent pain; leeches were applied and a warm bath afterwards; on coming out of which, she found she could not hold her water, and has not been able to do so since, except when sitting or lying down, and then not for more than two hours.

On placing her on her hands and knees, I found an opening into the bladder about an inch and a quarter from the orifice of the urethra: this opening readily admitted the finger. On examination by speculum, I saw the mucous membrane of the bladder protruding through the opening, and a considerable quantity of phosphatic secretion oozing through. On passing the speculum further up, I brought the os uteri into view, and found it to have two deep fissures, and to be in a state of ulceration. I applied caustic to it.

20th. Examined again carefully, and applied caustic to the os and cervix uteri, and introduced a bent catheter, with india-rubber bag attached to catch the urine.

25th. Catamenia appeared after two months' cessation.

On April 4th, 2 P.M., present, Messrs. Wilkin, Borham, World, Trotter, and my son, I proceeded to operate:—I pared the edges of the fistula and applied three silver wires and clamps. I found, on passing my finger into the urethra and examining the opening from within, that there were two points admitting the end of the probe not in apposition between the sutures, so that, in fact, I had not enough sutures. I therefore introduced two more under the clamps, and tied them over: this appeared to secure them perfectly. There was a good deal of hæmorrhage. She had ice before the operation, and afterwards she was ordered to take one grain of opium every two hours, and the catheter to be passed every two hours by the nurse. 9 P.M. Considerable hæmorrhage: applied ice within the vagina and the vulva.

5th. 9 A.M. No fresh hæmorrhage; urine full of dark blood; has had some refreshing sleep. 9 P.M. Syringed the bladder and vagina with ice-water, and left a bent catheter, with bag attached, in the urethra.

6th. 9 A.M. Has not had a very good night. Some considerable quantity of clots from the bladder. Pulse quiet and soft; allowed her to sit up on the bed-pan, and pass the water herself. A large quantity of clots came away; and from this time she was easier. I ordered a mixture of infusion

of roses, dilute sulphuric acid, and tincture of henbane. 10 P.M. No more hæmorrhage. Beef-tea and barley-water allowed.

7th. 9 A.M. Passed a good night. 2 P.M. Passed some large clots from the uterus, which produced fainting and prostration. 10 P.M. Very comfortable.

8th. 9 A.M. Very good night. No bleeding.

10th. An injection of warm water and salt brought away a good deal of scybalous matter ; ordered some acid and bark mixture, and an opium pill at bedtime.

11th. Has passed a good night, and is very comfortable.

12th. Examined and found the upper stitches had all given way, and that a large quantity of phosphates had oozed out around them like mortar.

She gradually recovered her strength, and could hold the urine for three or four hours, except when walking. She returned into the country in May to recruit, and on January 31st, 1854, came up to town again, her health being very much improved.

She was placed under the influence of chloroform Feb. 6th, and I proceeded to dissect away the meatus urinarius from the symphysis pubis, and from its attachments laterally, so as to let it go quite back, and not to offer any traction on the rent of the bladder. There was a great deal of hæmorrhage, principally venous. The hæmorrhage being so great, I did not, as I intended, proceed to dissect away the bladder from the uterus, and from its attachments laterally, so as to let it be quite free from all traction before proceeding to the treatment of the fistula. The hæmorrhage was stopped by ice, and the little that took place afterwards was immediately stopped by fresh ice. The consequence of the operation was, that the urethra contracted well backward, towards the fistula, insomuch that the patient could control her urine until she asked for the bed-pan.

Feb. 12th. The catamenia appeared. She can hold her water even when she sneezes. I now determined to attempt the complete closure of the fistula, and on the 20th I proceeded with the following operation.

The patient being placed on her abdomen and the pelvis raised, the anterior lip of the os uteri was dissected from the bladder ; indeed, it was divided into two portions horizontally, and then the incision was carried round to the right side of the vagina, so as to detach the bladder completely from behind up to the pubes ; the same was done on the other side : then a needle, armed with a double suture of twine, was passed through the upper part of the opening (which was the size of a half-crown), and then the edges were pared with the knife and scissors, and finally united by six sutures, fastened to two pieces of bougie. The operation took two hours and a quarter, during which time the patient was kept under chloroform. Not much blood was lost, considering the depth of the incisions which were made through the plexus of veins on each side of the urethra and bladder. Wine and ice were administered as soon as she recovered from the chloroform, and hot bottles applied to her feet ; one grain of opium an hour afterwards, and a bent metallic catheter introduced, with a bag attached. 21st. Almost incessant sickness.

22nd. Very sick all night, sleeping an hour or two at a time ; ordered some Bass's bottled ale, which stopped the sickness ; had some fresh mutton chop minced up ; ordered to continue the opium every six hours.

23rd. Much better, and no sickness.

24th. Discharge from the vagina very offensive ; syringed vagina with chloride of lime-water. The bent catheter was completely filled with phosphatic secretion. It was cleaned out with acid, and reintroduced. No escape of urine from vagina. 25th. Injection of chloride of lime used—discharge of healthy pus, no escape of urine per vaginam. 26th. No sloughing

from pressure; healthy discharge and no escape of urine; parts looking well; determined not to remove the sutures. 27th. Doing well; no escape of urine.

28th. A little shivering in the morning, headache, and sickness; a great deal of bile vomited. An injection ordered; great accumulation of fæces came away; no escape of urine.

March 1st. The sutures have nearly all ulcerated away; removed the rest. The union appears to be perfect.

6th. Is able to retain her water for three or four hours, and then passes it entirely through the urethra.

At half-past eleven, I was called to her suddenly, and found she had had a severe rigor. On examining the left side of the chest and heart, there was evidence of considerable effusion in the pericardium and pleura. Day by day she gradually sank, became delirious, and died on March 13th. Her brother, a surgeon, was present for some days before she died. Post-mortem examination not allowed.

So far as the fistula was concerned, this must be reckoned a successful case; death being due to an intercurrent disease.

Case III.—*Vesico-vaginal fistula, duration three months: Single operation: Cure.*—Deborah P., æt. 22, admitted under my care in St. Mary's Hospital, Sept. 22nd, 1856. She stated that she was delivered of a still-born male child on July 15th, with instruments, after being forty-eight hours in labour. Eight days after delivery she discovered that the urine all dribbled away, and "seemed to pass by the wrong passage." Upon examination, I discovered a fistulous opening close up to the os uteri, of such a size that an ordinary director would easily pass from the vagina into the bladder; all the urine passed through this opening and none through the urethra; in fact, she was never able to retain any in the bladder even for a short time. After attending to her general health I performed, on Oct. 15th, Bozeman's operation, using a silver button with three holes.

On Oct. 24th removed the button and sutures, and found most perfect union had taken place throughout the whole extent.

Nov. 8th. Perfectly cured. After a most careful examination I found all the parts firmly united, and no tendency to the slightest escape of urine, even after a long and tedious investigation.

Case IV.—*Vesico-vaginal fistula, six weeks' duration: Single operation: Cure.*—Mrs. K., æt. 22. I was called to see this lady by Mr. Kisch, who gave the following history:—About six weeks ago she was confined of her first child. The labour was very long and tedious, and the head remained in the pelvis for many hours without making any progress whatever; so at last the forceps were applied, and after a good deal of difficulty she was delivered. She progressed without any unfavourable symptom till the sixth day, when she perceived that her urine was constantly escaping without her being in any way conscious of it, and that it did so in all postures equally. This continued without alteration, although her general health rapidly improved, and she was able to sit up in perfect comfort, in every other respect, at the usual period.

Upon examination, it was discovered that there was an opening which would admit a middle-sized bougie, situated just at the junction of the bladder with the urethra. The edges had not become at all callous, but were soft and yielding. Every drop of the urine escaped through the fistula.

Feb. 2nd, 1858. I proceeded to operate, assisted by Dr. Priestley and Messrs. Kisch, Nunn, and Philip H. Harper. The patient was placed in the usual lithotomy position, and a full-sized wooden bougie being introduced into

the bladder through the urethra, so as to raise the fistulous opening well into sight, and to give a little support while the edges were being pared, I proceeded to split up the coats of the bladder, first dissecting a narrow strip of mucous membrane from the circumference of the fistulous opening, and turned the so dissected edges, without removing them back into the fistula, thus obtaining a raw surface. Having done this, I inserted three double silk sutures at regular intervals through the split surfaces, and then tied them over two pieces of fine elastic bougie, about an inch in length, so as to bring the two raw surfaces into close, equal, and exact apposition ; and by careful manipulation no portion of mucous membrane was allowed to get between.

On Feb. 8th the sutures had cut themselves out. When I syringed the vagina, as I was in the habit of doing daily, they came away in a basin. There had been not the slightest escape of urine up to this day : she was, therefore, allowed to leave off the catheter. After four days—viz. on the 12th —she was allowed to pass the urine herself every three hours. In two days she found she could go five, six, or eight hours at night, and then pass it naturally, none escaping involuntarily ; but on beginning to dress or to suckle the child, some escaped from the urethra, which seemed to have partially lost its controlling power. On carefully watching the parts where the fistula was, and requesting her to cough, I could see a drop or two percolate through the united surfaces, just like the escape of perspiration from the pores of the skin. I applied caustic to this part, as the mucous membrane of the vagina had not yet covered over the parts operated on.

Thursday, 18th. The nurse saw a small escape from the vagina : but from that time till the 22nd, there had been no escape, except occasionally in the day a drop from the urethra, although the patient walked about the room.

March 2nd. There has been no escape, and on a most careful examination, I found no sign of an opening, and indeed the vaginal mucous membrane had completely covered over the parts, so as to leave no trace of the fistula. She walks about, up and down stairs, and the urethra has perfectly recovered its normal action.

Remarks.—This is a case of great interest, and offers some practical points for observation.

1. It will be noticed that the first operation succeeded. 2. The silk sutures were not removed, but were allowed to cut themselves out, after the plan recommended by Mr. Hayward, of Boston, United States. 3. The operation was performed only a few weeks after the lesion was discovered, and before the edges were callous or much inverted—a point I believe of the greatest importance ; and I laid great stress on it when first consulted, and would not allow even the nursing of the infant to delay the operation. The wretched condition of any patient suffering from this lesion is at all times most distressing and loathsome ; and in this case, where the young wife was of a cheerful temperament, clever, and fond of society, it was peculiarly trying, and calculated to break even her high and buoyant spirits.

Case V.—*Vesico-vaginal fistula, four months' duration : Nine operations : Cure.*—E. T., æt. 36, from Cirencester, was admitted into St. Mary's Hospital in February, 1855, and gave the following history :—In November, 1854, was taken in labour (first pregnancy), and after forty-eight hours instruments were used, and she was delivered of a still-born child. She went on pretty well until about the ninth day, when a good deal of pain in micturition came on, and she continued in great pain throughout the next three days, when suddenly, on the twelfth day, she felt something give way, her urine escaped, and she felt quite easy. From that period all her urine escaped uncontrolled. On examination per vaginam, I found a large opening ex-

tending transversely completely across the centre of the bladder, and wide enough to admit easily two fingers. The destruction of the tissue was so great, and the fistula so gaping, as to render any present attempt at closing it quite impossible. I therefore determined to adopt a plan recommended by Jobert de Lamballe—viz., to dissect the neck of the bladder from the pubis and its descending rami, thus allowing the anterior half of the bladder to fall backwards, and by so doing relax the fistula. Great success followed this operation, and in April, 1855, I pared the edges and brought them together by Sims' mode of treatment. But little success followed the operation, and she was allowed to return into the country for the improvement of her general health ; and in April, 1856, she was delivered of a living child.

On December 9th, 1856, she was again admitted into the hospital, and I performed Bozeman's operation, with the result of closing eight-tenths of the opening. In five weeks I again operated, with but little success, as great sickness always followed the use of chloroform ; so in three days I again operated without chloroform, and the result was closing the third of the fistula. After this she returned into the country.

December 7th, 1857. She was again admitted, and I performed Bozeman's operation ; with the result of a further reduction in size of the fistulous opening. She then went again into the country.

On February 15th, 1858, she was re-admitted, and stated that since the last operation she has been able to retain the urine during the night, and some even during the day, whilst she was sitting quite still.

17th. I carefully denuded the edges of the fistula all round, and then brought the raw surfaces together by silk sutures and quills.

20th. She felt the sutures give way and the urine escape.

24th. She was taken into the operating theatre for the ninth time, and without chloroform I revivified the edges, and passing three silver-wire sutures, closed them down with Bozeman's button.

March 6th. Button removed, and the whole opening found beautifully closed and quite firm.

10th. On most careful examination, the fistula was found quite closed, and she can pass or retain her urine as well as she ever could before the lesion, and is consequently in good spirits and very grateful.

Remarks.—This case is very interesting, and requires little comment. It will be observed that she was three years under treatment for a large fissure, and that I performed nine operations upon her from first to last. The result is a good encouragement to persevere in the most difficult lesions. However, had the operation as at present improved been matured at the time of my earlier operations upon her, there would have been no necessity for such repeated attempts.

Case VI.— *Vesico-vaginal fistula, two months' duration : Two operations : Cure.*—Margaret Dancer, æt. 26, admitted into St. Mary's Hospital, under the care of Mr. Brown, May 15th, 1858.

In March last was taken in labour with her first child, and after a continuance of three days and nights, was delivered of a still-born male child, without the use of instruments. Her urine was drawn off for two days after delivery, as she was not able to void it herself, and after that period it dribbled away from her as she lay in bed.

Upon examination it was found that there was a transverse opening about an inch long, situated at the neck of the bladder.

After the usual preparation, she was, on May 19th, operated upon by Mr. Baker Brown, who performed Bozeman's operation, closing the opening with three silver sutures and leaden button.

29th. To-day Mr. Brown removed the button and silver wires.

June 8th. She was carefully examined to-day by Mr. Brown in the presence of Mr. Talbot and others, and he found that the whole of the opening had healed, with the exception of a small portion which would admit the point of an ordinary director.

13th. States that her urine is constantly dribbling away, and she is not able to retain any in the bladder.

16th. After the usual preparatory treatment, she was again operated upon. Mr. Brown used three sutures and a leaden button, and by them brought the parts well in apposition.

She went on well, and, on June 26th, Mr. Brown removed the button and sutures. He found the parts firmly healed, and no trace of any fistula remaining. Dr. Bozeman and other gentlemen were present, and were satisfied that the cure was complete.

July 7th. Discharged cured. Whilst in the erect position some drops of urine escaped from the meatus urinarius, which was itself torn at the mouth, probably by the catheter. I had proposed to close the tear with a silver suture if it had been requisite.

Remarks.—The opening in this case was a large one, and I fancied at the time it might have been better to have inserted four sutures; but as the three appeared to close it, I was content. However, the chloroform made her very sick, and probably the straining from this cause forced a drop of urine between the edges of the fistula. The success was great in closing so nearly, at the first operation, so large an opening. I have not heard from her since she was discharged; it is fair to conclude, therefore, that the slight enlargement at the mouth of the meatus has contracted, and that she is now perfectly recovered even from that slight annoyance.

Case VII.—*Vesico-vaginal fistula, fifteen months' duration: Single operation: Cure.*—C. G., æt. 33, admitted into St. Mary's Hospital on June 28th, 1858. She has had four children, always with tedious labours, and twice required instruments. Her last labour began on Monday night, and she was delivered on Thursday morning by craniotomy. Eight days after delivery she perceived that her water dribbled away, and she has not been able to retain any since that day. It is now fifteen months since. She has been under various gentlemen, and has undergone several operations of one kind or other, including the actual cautery.

On examination, I found an opening which would admit the top of the little finger, at the upper part of the vagina, close to the right side of the os uteri, through which the urine very freely escaped. The edges were tense and callous.

Having undergone the usual preparatory treatment, on June 30th I proceeded to operate. Dr. Hayward, of Boston, administered ether; Dr. Bozeman, of Alabama, U.S., was also present. I pared the edges of the fistula in a longitudinal instead of a transverse direction, on account of its position; and from its close proximity to the os I was compelled to pare this also. I inserted four silver-wire sutures, one of them through the anterior lip of the os. I then put on the leaden button as usual.

July 8th. Passes her urine voluntarily and with little difficulty.

10th. I removed the button and two of the sutures. The fistula is perfectly healed, and is very sound. She retains her urine and passes it voluntarily. There is not a trace of the wound left; in short, she is perfectly cured. I have since heard from Mr. Edwards, who recommended her to be under my care, that she was pregnant at the time of the operation. She continues perfectly well. Feb. 1861. She has been twice delivered at the seventh month, and is quite well.

Case VIII.*—*Vesico-vaginal fistula, seven months' duration: Two operations: Cure.*—J. P., æt. 20, admitted into St. Mary's Hospital, under Mr. Baker Brown, on October 14th, 1857.

Was delivered in March last by instruments, after a long and tedious labour, in the course of which violent convulsions came on. She suffered great pain as well as soreness in the vagina after the labour, and her urine escaped without her knowledge. She has not been able to get out of bed since.

On examination, there was found a fistulous opening into the bladder, which would admit three fingers, and the loss of structure was very great. In addition to this, the edges of the fistula were puckered up, and very tense, and it was drawn quite behind the arch of the pubis. All the urine escaped involuntarily, and in all positions alike. Mr. Brown considered that it would be useless and impossible to do anything for the closure of the fissure until the parts could be placed in a more relaxed state, so as to allow the edges of the fistula to be brought into contact. Therefore, with this object in view, on October 24th he detached the urethra and neck of the bladder from their attachments to the rami of the pubis. By this procedure the walls of the bladder, in which the opening was situated, were much relaxed. There was very little bleeding. The incisions were stuffed with oiled lint, and she was put into bed with a catheter introduced into the bladder. She recovered gradually from this operation, and Mr. Brown determined to attempt the healing of the fistula. On December 17th he therefore performed Bozeman's operation upon her, but the difficulty of getting to the parts was still very great. The urine appeared through the fistula again on the following day. Mr. Brown determined not to do anything more for her until she had been into the country for a few months, so as to improve her general health. She was therefore discharged on January 11th, 1858.

She was re-admitted on July 22nd, 1858, and stated that the inconvenience and distress were as bad as ever, and that no water could be retained in any posture.

On examination now, in the presence of Dr. Bozeman, it was found that the fistula was about an inch and a quarter in length, extending in an oblique manner from right to left, passing close to the os uteri, which was closed. She had not menstruated since the accident occurred. One of the silver-wire sutures used in the former operation was found lying bright and firm in the edges of the fistula, without occasioning any inconvenience. The orifice of the urethra was drawn back three-quarters of an inch from its ordinary situation, as the effect of its detachment from the pubis in the first operation. General health good.

On July 27th she was placed under chloroform, and Mr. Brown proceeded to perform Bozeman's operation, but in the lithotomy position. Some difficulty was experienced, in consequence of the edge of the fistula breaking down under the passage of the needle, and after many attempts the sutures were passed satisfactorily from before backwards. A small artery was wounded during the paring of the edges, but it was easily restrained by torsion. A leaden button was used which was slightly hollowed out, so as not to compress the os uteri. It required seven holes, as the opening was so large as to need seven sutures. The operation occupied two hours and a half.

August 4th. Mr. Brown removed the button to-day, in the presence of Dr. Inglis of Perth, and his brother Mr. Inglis, Mr. Talbot, and other gentle-

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* From Notes by Mr. Talbot, Resident Obstetric Medical Officer.

men. The cure was quite perfect, and the line of union was not recognizable. She can hold her urine as long as she is allowed.

11th. I removed the remaining sutures in the presence of Dr. Hennig of Leipsic, and others, and found the parts very sound and most satisfactorily healed.

Case IX.—*Vesico-vaginal fistula, ten years' duration: Single operation: Cure.*—I. I., æt. 46, married; mother of ten children; was admitted into St. Mary's Hospital October 10th, 1858. About ten years ago she was delivered of her tenth child. She was thirty-six hours in labour, and was ultimately delivered by instruments. Five days afterwards she strained very much whilst attempting to pass urine; and in a short time, while lying in bed, she fancied she was flooding, from a great quantity of urine escaping per vaginam. From that time she had never been able to retain her urine when upright, nor, at first, when even lying down. All her labours had been very prolonged; instruments were used on four occasions.

Oct. 13th. On examination, the opening was found to run horizontally, immediately anterior to the os uteri. The usual operation was performed, but in this case I experienced a little difficulty, as the silver sutures, six in number, implicated the os.

Oct. 22nd. Sutures removed, fistula quite healed.

Case X.—*Vesico-vaginal fistula, seven months' duration: Single operation: Cure.*—Rachel K., æt. 22, admitted into St. Mary's Hospital Oct. 15th, 1858. She was delivered of her first child on March 25th; the labour was allowed to continue three days without interference, after which she was delivered of a still-born male child. Her urine ran away from her immediately after the labour, and had continued to do so down to her admission. She was treated at the Leicester Infirmary a month after her confinement, and her impression is that, whilst under examination, some operation was performed on her, but whether cauterization, or of what nature it was, she could not say. It did not produce any benefit. The fistulous orifice was about the size of a sixpenny piece, and was situated in the upper wall of the vagina, about half an inch in front of the os uteri. After the usual preliminary treatment, I operated, on October 27th, after Bozeman's plan. The opening was brought together transversely, and six metallic sutures were used.

November 6th. Sutures and button removed, and the wound was found perfectly healed in its whole extent.

Case XI.—*Vesico-vaginal fistula: Duration nearly two years: Single operation: Cure.*—Charlotte H., æt. 27, admitted into St. Mary's Hospital October 15th, 1858. She was a native of the same village as Case XV., and had been under the same medical treatment.

She was brought to bed of her third child in November, 1856, and was three days and nights in labour. She was then delivered by craniotomy. Seven days afterwards she first perceived her urine running away. No treatment was adopted. She again became pregnant, and was delivered in May of a living child. The labour lasted three days this time also. The symptoms have not been worse since the last confinement.

The fistula was of small size, near the os uteri. On October 27th I operated, and on paring the edges found that, although the fistula had encroached upon the mucous membrane of the os, it had not penetrated into the cavity of the cervix.

The wound was brought together longitudinally with four silver sutures.

Nov. 6th. Button and sutures removed, fistula quite healed.

Remarks.—In reference to this and Case XIV. I would say that I do not attach so much importance as Dr. Bozeman is inclined to do to the direction in which the wound is sewn together. That gentleman always contrives that the line of suture should run transversely across the vagina ; but, from my experience, longitudinal wounds unite just as favourably.

Case XII.—*Vesico-vaginal fistula of seven years' duration: Twenty-five operations : Ultimate Cure.*—Eliza Z., æt. 29, married ; in July, 1851, was delivered by instruments of her first child, after a labour of three days' duration. Twelve hours after labour her urine escaped involuntarily, giving her great pain. On April 29th, 1852, she was admitted into St. Mary's Hospital. On examination, the vagina was found to be almost obliterated by cicatrizations. On the left side the finger passed into the *cul-de-sac*, at the end of which was felt the os uteri. Across the other part of the vagina was a large fistulous opening into the bladder. On May 5th I operated upon her, and closed a large portion of the fistula. She then left the hospital ; and, becoming pregnant, aborted in the third month. Five weeks afterwards she was readmitted, and the second, third, fourth, fifth, and sixth operations were performed upon her, in addition to the actual cautery being used. During these repeated operations the bands of cicatrization were cut through, and the os uteri turned into the bladder, as it appeared easier to close the fistula by so doing. She then left the hospital, and the seventh, eighth, and ninth operations were performed at her own house. She afterwards went to Dover to recruit her strength ; and, when she returned, the tenth operation was performed at her own house. In 1854 she returned to the hospital, and the eleventh operation was performed. On November 1st and Dec. 24th, 1856, she had the twelfth and thirteenth operations performed at her own house. On February 3rd, 1857, she was readmitted into St. Mary's Hospital, and the fourteenth operation was performed. After this she went into another hospital, and in August was operated upon with harelip-pins, and in November with common sutures. She was readmitted into St. Mary's on April 5th, 1858, and I performed the seventeenth operation. On April 28th the eighteenth operation was performed. On May 19th Bozeman's operation was performed, making the nineteenth. This did not succeed, and she was discharged on June 20th to recruit her general health.

She entered the "London Surgical Home" on July 3rd, 1858. There still remained two openings ; one would admit a No. 12 bougie, situated near the urethra ; the other was a small one, barely admitting a probe. There was a strong band of adhesions, extending from the walls of the vagina to the point of the larger opening.

July 6th. Bozeman's operation was performed, and the adhesions divided. The urine escaped on the fourth day.

July 24th. I freely divided the bands of adhesion, and plugged the vagina with a large sponge tent covered with oiled silk. This was changed every other day.

August 3rd. On proceeding to operate on this day, it was discovered that the smaller opening communicated in a circuitous manner with the under edge of the larger one ; I therefore opened the track, and made the two openings into one. The vagina was ordered to be regularly plugged with full-sized sponge tents.

August 17th. Bozeman's operation was performed, using a leaden button and six sutures. The urine escaped on the seventh day. On removing the plate, it was found that one of the deep incisions had laid open the cervix uteri about an inch from the os, which was still in the bladder. Through this opening a uterine sound could be easily passed into the uterus.

October 3rd. Bozeman's operation was performed with five sutures, with the effect of reducing the opening to the size of a pin's head.

November 2nd. Bozeman's operation was performed ; but the urine escaped on the same night ; and on

November 4th. The operation was re-performed. The button remained on nine days, but still there was a slight escape of urine through a very small opening. However, the parts had a healthy granulating appearance ; and she was recommended to remain quiet in bed ; and very little urine escaped that night. None escaped on the following day and night. From this time she lost none, and freely passed it at pleasure.

November 28th. A most careful examination found every part firmly united, and no sign of the old fistulous opening.

January 20th, 1859. She now menstruates through the vagina, which she had not done for years : and her vagina was of the ordinary size. Her health and spirits were good, and she was making a most cheerful and inspiriting nurse.

Remarks.—This case is full of interest, and exhibits an amount of courage and perseverance on the part of the patient which is beyond all praise. Such a series of operations is not likely to occur again, as the new method will enable us to grapple at first more successfully with the difficulties.

CASE XIII.—*Vesico-vaginal fistula, four years' and a half duration : Three operations : Cure.*—Jane B., aged 26, a very short, small-made woman, was admitted into the "London Surgical Home" on October 20th, 1858. Mr. Humphreys, of Shrewsbury, kindly sent this patient to me.

She said that she had been delivered four years and a half previously with instruments after a labour of thirty-six hours' duration. For the first few days she passed her urine properly ; and nine days afterwards she had retention, which necessitated the use of the catheter. After a good deal of pain for three days, her urine came away with a gush ; and since that time she had never been able to retain any portion in any posture. It always flowed away from her without the slightest control. She had undergone about twenty operations unsuccessfully.

On examination, an opening was found of the size of a half-crown, situated close up to the os uteri. There was a great deal of spasmodic action about the bladder, so that the mucous membrane of its cavity constantly protruded through the fistula, and filled the vagina, looking like a vascular tumour. The edges of the opening were thin and soft. The vagina was a good deal contracted ; and one band of cicatrization was thick and strong, and drew the lateral wall of the vagina towards the angle of the opening, and formed an obstacle to the apposition of the edges.

I determined to endeavour to reduce the size of the fistula before dividing the bands of adhesion ; and therefore, on Nov. 2nd, proceeded to perform Bozeman's operation. The patient having had chloroform, and being placed in the lithotomy position, I pared the edges of the fistula, and succeeded in removing the whole circumference in one piece. The mucous membrane of the bladder, which protruded very much during this part of the operation, was held up with spatulas. Seven iron-wire sutures were then inserted, and a leaden button was put on, and the operation was completed in the usual way.

November 3rd. She went on well until November 11th, when a little urine escaped.

November 15th. I removed the button, and found the greatest portion of the opening firmly healed. The opening which remained was the size of one wire, which cut itself nearly out, and thus formed the fistula.

December 9th. The parts having become firm, I freely divided all the constricting bands ; and the vagina was plugged with oiled lint.

December 12th. The lint was renewed, and large sponge tents were ordered to be introduced every day.

December 24th. The divided parts having healed, Bozeman's operation was this day performed. It required three sutures and a leaden button with three holes, and silver sutures.

She was very sick after the operation, and became so exceedingly irritable, that she would not remain quiet, and was constantly withdrawing the catheter herself ; so that on the seventh day after the operation, there was again a slight escape.

January 24th, 1859. I again performed Bozeman's operation. The patient this time was placed on her hands and knees, and did not have chloroform. It required again three sutures and a leaden plate with three holes. She was not sick this time, and remained much more steadily under control. Everything went on well, and there was no escape whatever.

February 5th. The button was removed, and the whole fistula was found firmly healed and the parts quite sound. She could retain her urine quite well, and passed it with perfect command ; and in a week left the institution quite well.

Remarks.—The failure of the first operation here, I am convinced, arose entirely from the iron wire cutting itself out up to the line of union ; and as I observed the same thing to occur in other cases where there was any tension from constriction after laceration of the vagina, I now always employ silver wire.

CASE XIV.—*Vesico-vaginal fistula : Two operations : Cure.*—The previous history of the case was furnished by Dr. J. Hall Davis, who placed the patient under my care. "M. D., æt. 30, a woman of stout habit, good conformation, and previous good health, was taken in labour of her eighth child March 1st, 1856, at 9 P.M. Her midwife was sent for at 10 P.M. ; and arriving soon afterwards, found the liquor amnii already escaped, the breech at the brim of the pelvis, the os uteri dilated to the size of half a crown ; active labour was present. At 4 A.M. (March 2nd), the orifice of the uterus was fully dilated, and the breech had reached the pelvic outlet. The pains continued strong throughout the night ; and, in consequence of the pressure exerted on the neck of the bladder, the midwife had found it necessary to empty that organ with the catheter.

"At 11 A.M. (March 2nd), no progress having taken place notwithstanding ample parturient action ; the parts, moreover, having become heated and swollen, the patient being much fatigued with fruitless efforts, I was sent for and arrived shortly afterwards (half-past 11 A.M.). I found the breech at outlet, swollen, and impacted, the parts heated. I introduced the catheter and removed a little urine, and having satisfied myself that another mode of delivery was impracticable, I proceeded to deliver by evisceration, which I effected through the outlet of the child's pelvis. Thus the abdomen was diminished, and very moderate traction completed the birth. The child (a female) was large, swollen, but not putrid. I gave it as my opinion that the child should have been delivered earlier, with the necessary precautions. The delivery of the child occupied rather more than an hour, and the placenta, being thrown off spontaneously into the vagina, was removed soon afterwards. In the course of the following days the patient was the subject of acute peritonitis, which was treated by application of leeches to the abdomen, hot linseed poultices, and turpentine stupes. Vaginitis also ensued, and sloughing of the portion of the vesico-vaginal septum, leaving an opening of the size of

a five-shilling piece. For the latter inflammation and its consequences, warm water and a weak solution of chlorinated soda was employed as an injection, and the catheter was resorted to till the fistulous opening occurred. At the end of three weeks the patient was up and about. After this I merely suggested frequent ablution with tepid water, injections into the vagina to prevent calcareous deposits on the mucous coat. The patient being of very cleanly habits, this was properly attended to.

"I hoped that, in the course of time, such an amount of contraction of the fistula would take place as would warrant some attempt being made by surgical operation to close the aperture. I was not disappointed in this, and becoming subsequently acquainted with the success of Dr. Bozeman's operation, founded, but greatly improved, upon that of Marion Sims, of New York, and having already witnessed one case of complete cure of a large urinary fistula (A. T., case IX.), on which I had been consulted before operation, I was induced to place this case under Mr. Baker Brown.

"The above M. D. was a patient of one of the Lying-in Charities under my care; and her case of fistula, tabulated in the statistics of my work (table XI., p. 275), is the only instance of a urinary fistula which has occurred to me in any of the charities under my direction, comprising 7,302 deliveries."

The patient was operated on November 1st, 1858, at the London Surgical Home, in the presence of Dr. Davis and several other practitioners. The edges of the opening, now reduced at least three-fourths of its original dimensions, extending transversely, situate at the junction of the urethra and neck of the bladder, were first pared, the patient being under anæsthesia. The edges were then brought together by silver wires, silk threads, previously passed through, being used as their conductors, and then removed. The two halves of each wire were then passed through a hole in an oblong plate of lead, suitable to the opening to be covered. This plate was then with a special instrument pressed firmly upon the opening, the wires made tense. A shot, perforated by one aperture, was then passed over the two halves of each wire, pressed firmly up to the plate, and nipped with a well-adapted pair of pincers, so as to obliterate the aperture of the shot upon the wire. Thus the plate was fixed securely in its place, and the surplus wire being cut off, the operation was complete. The patient was operated on in the position for lithotomy, and the vagina was well dilated by a special speculum and by tenaculum forceps, held steadily by assisting friends. After the operation the patient was placed on her side, with an elastic catheter in the bladder, attached to a caoutchouc tube and bottle; the bowels were constipated by opium, having previously to the operation being well opened by aperients. Full diet was ordered.

On the eighth day the plate was removed, and a linear cicatrix was visible in place of the former aperture: no leakage whatever observable.

Two days afterwards, it was evident that a minute aperture yet remained, and a second operation was performed, from which Dr. Davis was unavoidably absent. The cure was now quite complete.

CASE XV.—*Vesico-vaginal fistula: five months' duration: Two operations: Cure.*—T. C., æt. 19, married, was taken in labour on October 29th, and was delivered with forceps on October 31st, after a hard labour. There was a good deal of irritation of the bladder afterwards; and in a few days all her urine came away without any control on her own part, and continues to do so now in all postures alike.

She was admitted into the "London Surgical Home" on December 2nd, 1858. An examination showed an opening of the size of a florin, situated about half an inch from the os uteri. The edges were very unhealthy, having an ash-

grey look, and evidently inclined to slough. The whole vagina was very sore and excoriated. She had a good deal of constitutional depression, with headache, with tenderness and swelling in the left inguinal region deep in the pelvic cavity, shivering, constipation, and much wasting. She was given decoction of cinchona with dilute nitric acid, generous diet, and opiates at night.

She gradually improved much in general tone, and the vagina became more healed. The edges of the fistula cleaned. The cicatrization of the vagina contracted, and several bands formed, which dragged upon the opening. On January 3rd, 1859, she was put under chloroform, and I divided these bands, and plugged the vagina with oiled lint, which was changed every day. This gave much more room.

January 23rd. I performed Bozeman's operation, the patient being placed on her hands and knees, without chloroform. A leaden button and six sutures were used.

24th. Some urine had escaped.

26th. The pulse at 140 ; the tongue dry. She was ordered to have some blue pill and extract of colocynth.

27th. The bowels were well opened, and she was much improved. There was an escape of urine.

From this time she improved in her general health, and on February 4th I removed the button. The fistula was found to be healed in the middle in such a way as to leave two openings, one the size of a fourpenny piece, and the other of a large bougie. As the vagina was rather irritable, and the general tone low, she was put upon tonics for a short time previous to another operation.

February 21st. She was placed under chloroform on her back, and I proceeded to operate. I intended to close each opening separately, but as I progressed with the operation, I found it would be much easier to close them under one button. I therefore did so with four sutures with a long straight needle carrying the silver wire itself, which I had used in some of my earlier operations, and which in certain cases is easier to use than the short needle in the *porte aiguille.*

She went on very well, and had no escape of urine or any untoward symptom, and on March 2nd I removed the button, and found the opening entirely closed.

March 7th. She could retain her urine at pleasure. In every respect she was perfectly well.

9th. She left the institution quite well.

CASE XVI. — *Vesico-vaginal fistula: Four operations: Cure.* — R. O., aged 32, admitted into the "The London Surgical Home," being recommended to me by Dr. R. C. Roberts, of Ruabon, North Wales. The fistula appeared six months ago, after a labour of two days' duration. The opening was not large.

March 3rd, 1859. I operated, and for the first time used my bar-clamp instead of Bozeman's button. Chloroform administered. 10th. The clamps were removed. All the fistula was healed, except a small point in one corner. 17th. I operated again, using Bozeman's button. 25th. Slight escape. 28th. Button removed ; parts look unhealthy ; general health not good.

On April 22nd I again operated.

May 10th. Part of fistula healed ; an opening about the size of a goose-quill on the right side. The parts look healthy. 12th. The patient being put under chloroform, I proceeded to operate in the presence of Sir James Clark and others, using Bozeman's button and three sutures. 20th. No

escape ; healthy and plentiful discharge. 21st Bowels opened. 23rd. Button removed ; perfect union, and not the least appearance of escape.

Soon afterwards she was discharged, perfectly cured.

Remarks.—This was one of the cases where union after the first operation did not take place, owing to the unhealthy condition of the patient. It will be seen that I waited a month between the second and third operations. I returned to Bozeman's button, because the parts around the fistula required a good deal of support. I had not then acquired sufficient confidence in my bar-clamps to persist in using them after failure. I have just received (Jan. 4th, 1861) a letter from Dr. Roberts to tell me that this patient was safely delivered at the close of December of a child, without any injury to the vagina, although labour was protracted and forceps used to deliver.

Case XVII.—*Vesico-vaginal fistula : Three operations : Cure.* — A. S., æt. 58, admitted into the "London Surgical Home." The accident occurred thirteen years ago, after a labour of forty-eight hours' duration, which was finally terminated by instruments. The opening is as large as a half-crown, and passes completely across the vagina at the juncture of the body with the neck of the bladder.

March 3rd. I operated, using Bozeman's button and six sutures. 7th. Slight escape ; catheter discontinued. 10th. Button removed ; all healed except a small space. 17th. I operated again, and used bar-clamps. 25th. Left off the catheter on account of the irritation it caused. Nearly all the urine passes by the urethra, but there appears to be a slight escape. 28th. Clamps removed ; still a small opening.

April 7th. I operated a third time, using my bar-clamps. 10th. Catheter removed ; no escape. 20th. Clamps removed ; no escape ; all perfectly healed. 23rd. Discharged cured.

Remarks.—This was a case of great severity, and the patient was worn down by her long-continued suffering. Still it will be seen that in seven weeks she was completely cured, and has continued well to this time, having recovered her general health and spirits. This case also shows the intolerance of the catheter which some patients suffer from ; and I considered it better to remove it, and have the urine drawn off frequently by the nurse.

Case XVIII.—*Vesico-vaginal fistula : Operation : Cure.*—H. H., æt. 24. Has had two children. The accident occurred during the first confinement, about three years ago, when instruments were used, after a long labour, and chloroform administered. Five days after the labour, she found that the urine escaped involuntarily.

Two years ago, an eminent surgeon at Reading performed an operation, which materially reduced the size of the fistula. Since then her general health has been good. She was admitted into the "London Surgical Home" on the 22nd of March, 1859.

March 24th. I operated, using Bozeman's button. The opening was very small, and only two sutures were required.

25th. Slight escape from urethra. 27th. Good purulent discharge. April 5th. Button removed. 11th. Discharged, quite cured,

Remarks.—The fistula here was one of the smallest kind we meet with, and situated at the side of the vagina, almost covered by puckered folds of mucous membrane. The first operation was successful. I here used Bozeman's button because of the puckered state of the vagina.

Case XIX.—*Vesico-vaginal fistula : Operation : Death.*—Mrs. E., æt. 56, admitted into the "London Surgical Home" on April 19th, 1859. About

twenty years ago she was delivered of her eighth child, after a labour lasting from Monday until Friday. It was terminated without instruments. Five days afterwards the urine trickled away involuntarily. This was at first attributed to weakness, and nothing was done. She cannot retain any urine in the bladder in any position whatever. Her general health has become much affected, and she has suffered much from bilious attacks.

Examination showed a large opening, the lips of which were bound to the walls of the vagina by strong bands of organized lymph.

April 21st. I divided the bands, and plugged the vagina with a sponge tent.

25th. A little hæmorrhage.

May 2nd. A smart attack of hæmorrhage. The vagina was injected with a solution of chloride of zinc, and then replugged with lint saturated with a strong solution of tannin.

5th. No hæmorrhage; vagina replugged. To take bark and nitric acid; to have the vagina injected daily with a weak solution of chloride of zinc.

9th. Suffers great pain after the injection.

11th. Progressing favourably; the wound dressed again.

15th. The wounds have healed; dressing discontinued.

26th. I proceeded to operate, using my bar-clamps and three sutures. There was violent hæmorrhage from a small artery. The patient was at first put on her hands and knees; but, owing to the hæmorrhage, was afterwards placed in the lithotomy position.

27th. Slept pretty well; slight escape.

28th. The purulent discharge is beginning to appear. The catheter to be taken out twice a day. Eight ounces of wine, with generous diet.

June 1st. Progressing favourably, but suffers from great weakness.

3rd. Feverish and uneasy; the bowels not acted since the operation. To have half an ounce of castor oil and an enema.

4th. Bowels acted freely; more comfortable.

6th. Clamps removed. The fistula appears healed, except a portion which could not be brought together, owing to the hæmorrhage during the operation. Bladder very irritable.

From this time she got rapidly weaker, and, although never complaining, she died on June 13th, apparently worn out. The system never rallied under any quantity of stimulants and generous diet.

Post-mortem examination.—The lungs and heart were found pretty healthy; the aorta slightly cartilaginous; the right kidney was about the size of a pigeon's egg, whilst the left was three times its normal bulk, and must for some time have been the only one secreting urine; the liver soft and friable. The whole body was very bloodless. The parts which had been operated upon were unhealthy, and inclined to slough.

A more minute examination made of the parts by Mr. Nunn showed "the bladder to be atrophied, the walls not thicker than parchment. The vesico-vaginal orifice reached from within half an inch of the neck of the bladder to the orifice of the ureters—that is, the whole of the base of the bladder was wanting. One kidney was converted into a cyst, no doubt from the obstruction of the ureter, which must have been of long standing, as such change could not have occurred except very slowly. The other kidney was hypertrophied. The upper part of the vagina was a good deal inflamed."

CASE XX. — *Vesico-vaginal fistula: three years' duration: Operation: Cure.*—S. B., from Hadlow, near Tunbridge, sent to me by Mr. Hooker, under whose care she subsequently came, admitted into the "London Surgical Home" on the 7th of November. She was twenty-nine years of age;

mother of four children. The first three labours were very good. She was taken in labour with her fourth child at four A.M., and at half-past nine instruments were applied. They were persistently used until four P.M., when the child (a large male) was born. She had not passed her urine from the time her labour set in until its termination, neither had it been drawn off. The same evening she perceived it escaping involuntarily. It was imputed to weakness, and she was told that, as her strength returned, so also would the control over the bladder. This was three years ago ; and since then she has not been able to retain her urine in any position. She has been operated upon in the country, and also frequently cauterized, but all without any benefit.

An examination showed a fistulous opening into the bladder, which would easily admit the forefinger, and was situated close to the os uteri. The edges were soft, and the mucous coat of the bladder was not much prolapsed.

Nov. 10th. She was placed under the influence of chloroform, and in the lithotomy position, and the new operation was performed. It required seven sutures, three of which were passed through the anterior lip of the os uteri. Each suture was closed down by the bar-clamp. The operation only lasted forty minutes, although each step was performed very slowly, in order that it might be explained to several gentlemen who were present. She went on very well, with no escape of urine. On Nov. 20th the clamps were removed, and the whole fistula was well and firmly healed.

24th. She has perfect control over her bladder, and can easily hold half a pint of urine for three or four hours.

CASE XXI.—*Three fistulæ : Several operations : Cure.*—(This and the three following cases are abstracted from the reports of the "London Surgical Home," taken by the visiting surgeons.) "S. P., æt. 45, married ; has had eight children and three miscarriages. Her first five labours were pretty good. Her last labour began at half-past twelve A.M. on Thursday, and lasted till a quarter past three P.M. on Friday, April 9th, 1852. She was finally delivered by instruments. Her urine came away *per vaginam* immediately after the labour. Six months afterwards she was admitted into St. Mary's Hospital, under Mr. Baker Brown. On examination, he found two openings, separated by about half an inch from each other, the upper one near the os uteri. He performed several operations upon her without much benefit. Subsequently she entered the Soho-square Hospital, where the actual cautery was frequently applied. On Nov. 1st, 1858, she was admitted into the 'London Surgical Home.' On examination, Mr. Brown found both the openings much smaller, but the edges very hard, almost cartilaginous. The patient stated that the last doctor under whom she had been, asserted that there were three openings ; but at the time, only the two before mentioned could be seen. Mr. Brown operated on these by Bozeman's plan, excepting that the buttons were placed horizontally instead of transversely, as recommended by him. On the tenth day the buttons were removed, and both openings found to be completely closed ; but in a few days she complained that a very small quantity of urine occasionally escaped ; therefore, on Dec. 1st, Mr. Brown injected the bladder with tepid water, and then found the water escape (*guttatim*) through another small opening, which was situated at the very apex of the vagina. Around this was a strong band of adhesion, cutting off, as it were, the opening from the rest of the vagina. This was freely divided, and afterwards dressed with oiled lint and sponge tents. On the 3rd of January, 1859, Mr. Brown endeavoured to close the opening, which had become much larger, using Bozeman's

buttons. Four days afterwards the patient was taken with violent sickness and diarrhœa ; nothing relieved her ; and the result was, that the sutures were entirely torn out. On the 27th, the patient having perfectly recovered and the parts looking healthy, Mr. Brown again operated upon her, and for several days with apparent success ; but on removing the button there was still a very minute fistula, through which a small quantity of urine escaped, when standing, but not in the recumbent posture. Her health being very much shattered by long confinement, she left the institution for the purpose of going into the country.

After this I lost sight of her till June, 1860, when, hearing that she was quite well, I called on her, and found that such was the case. She stated that she had been gradually getting better and losing less and less urine, and for the last three months had been perfectly well.

Remarks.—It is evident that the cause of the *last* opening not healing was the unhealthy condition of the vagina, the parts around the opening being almost cartilaginous, and therefore possessing but very slight powers of healing. It will be observed that this case, prior to admission into the "London Surgical Home," was one of those treated before the advantages of silver sutures had been proved.

Case XXII.—*Two fistulæ, the larger one cured by one operation, the second by two.*—N. K., æt. 30, married ; resides at Winchester ; admitted into the "London Surgical Home" on the 20th of December, 1859.

History.—Had a child ten months ago ; says that she was some hours in labour, the child being very large, but no instruments were used. About nine days after her confinement, she found that she was unable to retain her urine. She then applied to the County Hospital ; afterwards she was seen by Mr. Buckell, who recommended her to be removed to the Home.

On examination, two openings were found, one admitting the end of the finger, and the second the end of a No. 10 bougie, with an intervening space not much more than a quarter of an inch. These openings were situated midway between the os uteri and the neck of the bladder.

Dec. 22nd. The patient being placed on her back in the lithotomy position, under the influence of chloroform, both openings having been pared, were closed by bar-clamps, the larger one requiring three, and the smaller two, iron-wire sutures being used.

27th. An escape of urine. On examination, the clamps on the smaller opening had fallen off, because the wires had ulcerated through ; but a part of the opening was found to be healed.

Jan. 1st. The bar-clamps on the larger opening were removed, and complete union found.

19th. The smaller opening was again operated upon.

29th. Bar-clamps removed ; complete union found.

Feb. 17th. Discharged quite cured.

Remarks.—It is always difficult to cure two openings by one operation ; but it is certain that in this instance the cause of failure was the cutting out of the iron wires ; and if silver wires had been used, such would not have been the case. It will, however, be observed, that the cure was effected in five weeks.

Case XXIII.—*One fistula : Two operations : Cure.*—L. R., æt. 40, married ; three children ; admitted into the "London Surgical Home" April 7th, 1860.

History.—Eleven years ago she was confined of her first child. The labour did not last very long ; but as she had previously been suffering from dys-

pepsia and debility, she became exhausted. The medical attendant thought it necessary to apply forceps, and a fine boy was born, who, however, only lived a few minutes. After the confinement she was very ill ; and, about a week later, she found that her urine dribbled away through the vagina, excoriating the parts dreadfully. Since then she has had two good labours, but has always been in a most wretched condition on account of the constant escape of urine.

On examination, there was found an opening large enough to admit the top of one's thumb midway between the urethra and os uteri, and on the left side of the vagina.

April 12th. Mr. Baker Brown performed his usual operation, bringing the parts together transversely with five of his bar-clamps.

21st. Clamps removed. On their removal, there was found a *very* small opening, but the rest was healed. Mr. Brown was in hopes that this would heal of itself, as there was a healthy purulent discharge ; but as it did not do so, on

May 17th, he again operated in his usual manner, the patient *not* being under the effects of chloroform.

28th. Bar-clamps removed ; no escape of urine.

June 10th. She left perfectly cured.

Remarks.—When it is considered that this patient had been suffering for eleven years, and, consequently, that the parts around were much indurated, and that she was perfectly cured in about six weeks, the result must be considered highly satisfactory.

CASE XXIV.—*Vesico-vaginal fistula : Operation : Death from pyæmia.*—Mrs. W., aged 34, admitted April 18th, 1860, into the "London Surgical Home ;" mother of five children.

History.—About three months before her admission she was confined of her last child. The labour was a rather protracted one, and she was attended by a midwife. After the labour she was unable to retain any urine, but gradually improved, and at the time of her admission there was a mere trickling. She was sent to be under the care of Mr. Baker Brown by Mr. Hemming, of Kimbolton.

On examination, there was found a very small fistula at the junction of the urethra with the neck of the bladder, which could hardly be discovered. The opening had originally been much larger, but was now filled up by very unhealthy loose granulations.

April 26th. The patient being under chloroform, and in the lithotomy position, Mr. Brown performed his usual operation, three bar-clamps being used, with iron-wire sutures. She recovered well from the chloroform ; but towards the evening unusual sickness came on, which nothing seemed to allay. This continued till the 30th, when she became delirious, and on May 3rd she died, having been insensible for the last twenty-four hours, death arising evidently from pyæmia.

Remarks.—As soon as she was dead, I began to inquire into the cause of so unlooked-for a sequence to the operation. I then ascertained that there was milk in the breasts. This greatly surprised me, as she had assured me that she had weaned her baby some weeks before admission, and she had also led my friend, Mr. Hemming to the same belief before he sent her to me. Had there been the slightest doubt in my mind on this head, I should never have attempted the operation, because I had long been convinced by past experience, especially of one case of death from pyæmia, after an operation for ruptured perinæum, where milk was still in the breasts, that an operation about these parts should be delayed until every trace of milk has disappeared.

CASE XXV.—*Vesico-vaginal fistula: two months' duration: Two operations: Cure.*—Mrs. B., a lady from Berkshire, æt. 37; three children.

History.—With her first child she was in labour for a week, and was ultimately delivered by instruments. Her second labour was not nearly so severe. Her third labour occurred in March last. The pains began on the 7th, and were regular, as well as severe, until the 9th, when the child's movements ceased. The pains continued very severe, and on the evening of the 11th instruments were applied. After some hours' exertions, she was delivered of a female child (still-born), which weighed over 12 lbs. She was not conscious of passing her urine after the labour was over; and when, a few days afterwards, she arose with the intention of doing so, she found that it all passed involuntarily. A slough came away about the tenth day. She has recovered her general health, but has no control over the bladder in any position.

May 15th, 1860. I examined her, and found an opening into the bladder about the size of a shilling. It was situated a little distance from the os uteri, and extended up into the lateral wall of the vagina. There was a constricted band extending across the vagina, and involving the anterior edge of the opening. I placed her on a preparatory course of tonics, and on the 29th of May proceeded to operate, in the presence of Messrs. Plumbe (of Maidenhead), G. Brown, Clark, and Philip Harper. She was placed on her hands and knees, and did not take chloroform. In order to obtain a more complete command of the opening, I first passed one of Startin's needles through the edges, and then pared them freely; five sutures with bar-clamps were applied. The usual after-treatment was adopted.

Everything went on well for the first five days, but on the sixth there was a slight escape of urine. I removed the bar-clamps on the tenth day, and found that the greatest portion of the opening had healed, but a small piece where the constricted vaginal band was attached had not done so. As she was extremely anxious to return home, I determined to make another attempt to close the remaining fistula, without previously dividing the band, as I generally do. A fortnight afterwards, I again operated in the same manner, and in the presence of the same gentlemen. The opening this time only required three of my bar-clamps. She went on very well this time; and on the eleventh day I removed the clamps, and found the opening perfectly healed. A few days later she returned home.

Remarks.—This case would have healed by the first operation if I had previously divided the constricting band, which, by constantly dragging on the inner edge of the fistula at every movement of the patient, disturbed the co-adapted edges. Although two operations were performed, the patient was cured, and returned home in five weeks.

CASE XXVI.—*Large fistula: Two operations: Cure.*—(From the reports of the "London Surgical Home.") H. S., æt. 21, admitted under the care of Mr. Baker Brown, May 26th, 1860.

History.—Three years ago she was delivered of her first and only child. She was three days and nights in labour, and was then delivered with instruments. She was very ill afterwards, and about a fortnight later found that her urine escaped *per vaginam:* this it has done ever since, and she has been in a miserable condition.

On examination, the vagina was found much cicatrized, and the os uteri protruded at the vulva. The fistula was of the size of a florin, involving half the urethra and a large portion of the bladder.

May 31st. Mr. Brown divided the constricted bands in the vagina, and plugged the parts with oiled lint. Sponge tents were afterwards applied till

June 28th. The parts being now perfectly healed, she was placed on her hands and knees without chloroform. Having passed two long needles through the edges of the opening so as to raise them into view, Mr. Brown thoroughly pared and brought them together by seven silver sutures, using no clamps, but simply twisting the wire.

July 5th. Sutures removed; all healed except a very small hole about the size of a small pea.

19th. Mr. Brown operated again, the patient not being under chloroform. He used two bar-clamps.

28th. Clamps removed; all quite healed. Loses a little urine from the natural passage, from want of power to retain it.

August 12th. Discharged, quite cured.

Remarks.—It will be observed that the simple twisted sutures in the first instance were here used: my reason for so doing was that, half the urethra having been lost, any button or bar-clamp would have pressed on the remaining half and interfered with the free passage of urine.

CASE XXVII.—*Vesico-vaginal fistula: three months' duration: One operation: Cure.*—S. D., æt. 38, married, admitted into the "London Surgical Home" May 29th, 1860.

History.—Has had nine children, generally with long labours; but the last time she says that she was in labour a week. This took place in February, and the labour was terminated by instruments. Nine days after the operation she discovered that the urine dribbled away *per vaginam.*

On examination, there was found a fistula about the size of a sixpence, just at the junction of the urethra with the bladder.

May 31st. I operated, using three bar-clamps, and bringing the parts together horizontally instead of transversely.

June 9th. Bar-clamps removed; fistula perfectly healed.

CASE XXVIII.—*One fistula: Two operations: Cure.*—M. B., æt. 32, has had one child, still-born; admitted into the "London Surgical Home" on the 18th July, 1860.

History.—Has been married fifteen months; was confined of her first child April 6th. The labour lasted twenty-four hours; no instruments were used. She was very ill after the labour, and about a week later her urine came away *per vaginam;* since then she has passed none naturally *per urethram.*

On examination, there was found a fistula about an inch long, situated at the junction of the urethra with the bladder. There was also a tight circular mucous band, which constricted the vagina; just above this could be felt the os uteri, which was very low down.

July 19th. Mr. Brown divided the band, and plugged the vagina with oiled lint, the patient not being under chloroform. Sponge tents were afterwards used until August 2nd, when Mr. Brown operated, the patient not being under chloroform. He used three bar-clamps.

Aug. 11th. Clamps removed. The fistula seemed quite closed; but towards evening the nurse found that there was a slight escape, the united parts having separated.

16th. Mr. Brown operated again, the patient being under chloroform; Bozeman's button, with six shots, was used.

27th. The button was removed, and the whole wound was found to be quite united.

Sept. 8th. Up to this period she had been gaining strength, and had been out several times. On examination, Mr. Brown found that the fistula was quite healed. The patient therefore left the same day for her home.

Remarks.—This is another of those cases where there was a want of power in the parts around the fistula, and where I gave credit for some part of the opening being healed, because it was filled up with loose granulations. It is always, therefore, better to cut away all the parts apparently united by such granulations before operating; yet it will be seen that she was cured in the short space of five weeks.

CASE XXIX. — *Vesico-vaginal fistula, with complete ruptured perinæum: Three operations for the fistula: Cure.*—(This and the two following cases are taken from reports of the "London Surgical Home.")—E. B., æt. 41, married, living at Leicester; has had thirteen children; admitted July 20th, 1860.

History.—On the 1st of April parturition commenced; was in labour fifty-two hours, when craniotomy was performed. She was very ill afterwards, losing the use of her limbs. The urine escaped *per vaginam* immediately after the labour, and she has never passed any since by the natural passage. Diarrhœa also came on after labour, and ever since then the motions have passed away entirely without control. Early in June she went to the Leicester Infirmary, under the care of Mr. Paget, who, in consultation with his colleagues—Messrs. Macaulay and Benfield—recommended her to place herself under the care of Mr. Baker Brown.

On examination, the posterior part of the vagina was found contracted by bands of cicatrization, immediately behind which could be seen a small portion of the os uteri. Directly anterior to these adhesions was a long fistulous opening, running up the left side of the vagina into the bladder, in extent altogether about two inches. The whole of the perinæum was gone, and the anterior half of the sphincter muscle also.

Aug. 2nd. Mr. Brown operated for the fistulous opening, the patient being under the influence of chloroform, and placed in the lithotomy position. Seven bar-clamps were used, and put horizontally along the wound. There having been no escape of urine, on the 10th the clamps were removed, and the union seemed perfect; but on the following day Mr. Brown found that about half of the opening had again separated. She was therefore placed under tonic treatment, with a view of improving her general health.

16th. Mr. Brown operated a second time, the patient being placed on her hands and knees, and not under the effects of chloroform. He used a button and five shots, and brought the edges together transversely.

25th. The button was removed, and all was found healed, except a small portion where one wire had torn through.

Sept. 13th. Having regained her health, Mr. Brown operated again, the patient being on her hands and knees. Bozeman's button was used.

22nd. The button having been removed, it was found that the most perfect union had taken place.

Remarks.—The reason, in the first instance, of a partial failure in the union arose from two causes: first, from the cicatrized band, which pulled upon the edges; and, secondly, from the low condition of the general health of the patient. It would have been better to have divided those adhesions, and to have waited two or three weeks before operating. In a similar case such would be my practice. I may just mention that the usual operation for ruptured perinæum has since been performed with perfect success, and the patient is now entirely relieved from her miserable condition.

CASE XXX.—*Vesico-vaginal fistula, very large size: Four operations: Cure.*—S. H., æt. 28, married, living at Chichester; admitted into the "London Surgical Home" April 5th, 1860.

History.—She has had one child, eight weeks ago ; in labour thirty hours, when craniotomy was performed ; suffered from retention of urine for the first four days, when the catheter was employed. From that time no urine could be retained. This history was obtained from Mr. Bucell, who was called to see her after this condition was ascertained.

On examination, Mr. Brown found strong bands of adhesion almost closing up the vagina, and with an opening about the size of a five-shilling piece, which not only embraced the whole floor of the bladder from the termination of the urethra to the os uteri, but extended also to the left side of the vagina, destroying much of the tissues thereof. Mr. Brown freely divided all the bands of cicatrization, and afterwards dressed them with oiled lint, and then for many days used the usual sponge tents.

March 22nd. Mr. Brown did not consider it advisable to attempt to close the whole opening ; he therefore operated on a portion of it with three bar-clamps.

29th. Removed the clamps, and the part operated on was found quite healed.

April 5th. Several strong bands of cicatrization, still dragging upon the edges of the fistula, especially on the left side, were again divided and dressed as before.

May 31st. The fistula being now the size of half-a-crown, Mr. Brown brought the edges together with seven bar-clamps.

June 7th. Bar-clamps removed ; only a small portion had soundly healed, evidently because the patient was weak and out of health. She was therefore put under tonics and recommended out-door exercise.

July 26th. Mr. Brown operated, using six bar-clamps.

Aug. 4th. Clamps were removed A large portion was found healed ; but, in consequence of the very bad state of health of the patient, it seemed impossible to close the whole. She was therefore sent to Brighton for a month.

Sept. 13th. She returned much better in health, but some strong bands still constricting the vagina on the left side, Mr. Brown freely divided them.

Oct. 18th. Mr. Brown again operated, using Bozeman's button and seven shots.

27th. Button removed. Complete union had taken place.

Remarks.—This was one of those cases offering great difficulties, not only on account of the very large fistulous opening, but also because of the general bad health of the patient from the time of her admission, materially aggravated by a great fretfulness of disposition. It was one of those cases which no young surgeon, however clever, could have succeeded in curing by one operation.

CASE XXXI.—*Vesico-vaginal fistula : two openings : four years' duration : One operation : Cure of both fistulæ.*—J. E., æt. 37 ; admitted into the "London Surgical Home" Dec. 6th, 1860 ; married ; two children. Four years ago was delivered of her first child, still-born ; the labour lasted two days, and was terminated by instruments. About three days afterwards, she discovered that her urine came away entirely *per vaginam ;* but as she got stronger she could retain some. Since then the urine has constantly dribbled away, but when sitting or lying, some is retained. Seven months ago was delivered of a girl alive, the labour being easy, and terminating naturally. Has been operated on in a London hospital, in which she was ten weeks, silk sutures being used and cauterization, but without any benefit. On examination, I found a triangular fistula large enough to admit the end of a thumb just behind the urethra, the apex of the triangle being directed

forwards; and about half an inch behind this was another and much smaller one.

Dec. 13th. I operated, closing the small fistula first by means of two silver-wire sutures simply twisted; and then the larger one by five sutures in the same way.

23rd. Sutures removed; both fistulæ healed.

Remarks.—This case was one of some interest, from the fact of two fistulæ being closed by one operation. I hear from this patient that she has not perfect control over the urethra *when walking about.* Time, however, will doubtless restore this want of power.

Case XXXII.—*Vesico-vaginal fistula: Operation: Relieved.*—M. J., æt. 27; admitted into the "Home" April 27th, 1865. This patient was in the "Home" two years ago, then suffering from recto-vesico-vaginal fistula. She underwent three or four operations, one of which closed the aperture in the bowel. She was then sent out on account of her having got into a bad state of health. All her water now escapes from her, but the fæces pass *per viam naturalem.* She has not been in a sufficiently good state of health to return before, having had several bad attacks of gravel. There is a rent in the base of the bladder, admitting the forefingers easily. May 4th. The edges of the fistula were pared and brought together by means of twelve silver sutures. Ordered to pass her own water. May 26th. As she still loses a little water when walking, she was carefully examined by means of a speculum this morning, and there was found a small pin-hole in one corner of the wound, which was thought to be quite healed. She expresses a strong wish to go home, as she can keep herself quite dry by wearing a diaper, and can voluntarily pass a fair quantity of water. Discharged, very much relieved.

Case XXXIII.—*Vesico-vaginal fistula, third labour: nine months' duration: Many operations.*—E. K., æt. 27, married; admitted into the "London Surgical Home" November 1st, 1860. Has had former labours tolerably easy. Was three days in labour with her third child, and was delivered by instruments. Directly after labour, urine came away *per vaginam.* Has been operated on six times in the North of England, without success.

On examination, a large fistula high up in the vagina was discovered, and on introducing a speculum, the ureters could be distinctly seen in action. The vagina considerably contracted by cicatrization.

November 8th, 1860. First operation; seven bar-clamps being used. 29th. Second operation; Bozeman's button, with five sutures and shots. December 10th. Several constricting bands divided. January 24th, 1861. As it seemed hopeless to bring all the fistula together at once, a part was brought together with three silver sutures, simply twisted. February 7th. More brought together by six silver sutures. 8th. Ditto by five silver sutures. This patient would not keep still, and it was most difficult to effect a cure. I operated again and again; namely March 14th, using four sutures; 28th, using three sutures; again on April 11th and 25th, and on June 13th and June 27th, using three or four sutures each time.

Case XXXIV.—*Two vesico-vaginal fistulæ, sixth labour: two months' duration: Three operations for the first fistula, one for the second: Cure.*—Elizabeth B., æt. 30, married; admitted into the "London Surgical Home" January 25th, 1861. Was delivered two months ago of her sixth child. Was only nine hours in labour, but child was dead. A fortnight later, urine came away *per vaginam*, and has continued to do so ever since.

On examination, two fistulæ were discovered, one a very large one at least three inches long, stretching zig-zag across the base of the bladder, and another very small one close up to the os uteri, which was not found till the first was healed.

Operation, January 31st, 1861. Usual operation under chloroform; thirteen sutures used. February 12th. Sutures removed; all healed but a small corner. 21st. Operation; five silver sutures used. March 3rd. Sutures removed, and still a slight escape. 13th. This small corner was finally closed by three silver sutures, and when the sutures were removed on March 21st, the second fistula was discovered: it was closed in the usual manner by three silver sutures. 30th. Sutures removed, the whole perfectly healed. April 4th. Discharged cured.

Case XXXV.—*Vesico-vaginal fistula, first labour: three months' duration: Three operations: Cure.*—Mary Ann D., æt. 26, married; admitted into the "London Surgical Home" April 14th, 1861. Was delivered of her first child three months ago, after being in labour seventy-seven hours. No instruments used. Immediately afterwards, urine came away *per vaginam.*

On examination, a small fistula was discovered close up to the os uteri, the size of a kidney-bean.

Operation, April 18th. The usual operation performed; four silver sutures being used. Operation very difficult, owing to the situation of the fistula, which it was difficult to reach. 30th. Sutures removed; a very minute orifice still unhealed. May 9th. Operation on hands and knees without chloroform; four silver sutures being used. 22nd. Still a slight escape; sutures removed. 29th. Operation as before, with the same number of sutures. June 10th. Sutures removed; perfect union and complete control over her water. 14th. Discharged cured.

Case XXXVI.—*Vesico-vaginal fistula, second labour: two years' duration: One operation: Cure.*—Mary M., æt. 26, married; admitted into the "London Surgical Home" May 2nd, 1861 Was delivered two years ago of her second child, without instruments, after being in labour twelve hours. Her urine was drawn off for ten days, when a slough came away; and her urine has since always passed without control *per vaginam.*

On examination, a small triangular fistula was seen, the base of the triangle being within a few lines of the os uteri, which was nearly closed.

Operation, May 9th. The usual operation under chloroform, four silver sutures being inserted longitudinally. 21st. Sutures removed; fistula perfectly healed.

Remark.—This patient was safely delivered of a living child, at the full period, in August, 1862.

Case XXXVII.—*Very large vesico-vaginal fistula in second labour: six months' duration: Eleven operations.*—Marianne L., æt. 30, married; admitted into the "London Surgical Home" May 6th, 1861. First labour lasted three days, and was terminated by craniotomy without further accident. In her second, which occurred six months ago, was also three days in labour, and was again terminated by craniotomy. Three days afterwards the urine came away *per vaginam*, and she has been unable to hold any since.

On examination, it was found that the whole base of the bladder had sloughed away, and the internal surface of the anterior wall prolapsed through the fistulous opening. A large calcareous mass had, before her admission, been removed from near the os uteri, and had produced such a deep slough that the sacrum was exposed, and could be felt by tapping with a probe.

Vagina very much cicatrized by sloughing. Antero-posterior diameter of pelvis very small. May 9th, 1861. Bands divided. June 13th, 1861. Operation under chloroform. Mr. Brown endeavoured to form a bridge across the enormous opening by closing a portion of the centre. This he did, having previously pared the edges by four silver sutures. This was successful ; and thus having divided the fistula into two, on June 27th he closed the one on the right-hand side, using eight silver sutures, not removing those inserted in the first operation. July 11th. There was still found a small corner unhealed in the last operation ; without removing the sutures used in the first, he took out those inserted on the 27th ult., and closed the fistula on the left side, using four sutures. July 18th. The sutures first inserted were removed. All that was closed last week appears healed, but the sutures were not removed. There is apparently now only a small corner in the right-hand corner unhealed. August 8th. Mr. Brown found that not all was healed in the last operation, as he had hoped. He removed the sutures, and then endeavoured to close the corner on the right, using five sutures. August 25th. Sutures removed. Nearly all healed that was brought together by last operation. There are now two small holes in each corner. September 28th. Each corner endeavoured to be closed ; three sutures required for each. 29th. Sutures removed ; neither corner quite healed. October 10th. One corner tried to be closed by four silver sutures. 24th. Sutures removed ; not quite healed ; but that which had not been lately operated on, appeared to have closed spontaneously since the last examination. November 7th. Operated on the unhealed corner, two sutures being used. As the vagina had contracted from the repeated operations, it was incised in the anterior part, with a view of allowing the edges to approximate. In the evening all the water escaped *per vaginam*. December 4th. Has improved in health since last operation. The opening which was supposed to have closed had not done so, but there was a valve of mucous membrane over it, which lifted up when she coughed, the water escaping. December 5th. Operation on the left corner ; four sutures used without success ; she therefore went into the country and returned on February 24th, much improved in health. 27th. Fistula on right side, closed by four silver sutures. March 18th. Sutures removed ; opening not healed. 26th. Fistula on left side closed, and a tight band which prevented the other healing divided.

Case XXXVIII.—*Vesico-vaginal fistula, second labour : five years' duration : One operation : Cure.*—Mary P., æt. 42, married ; admitted into the "London Surgical Home" May 15th, 1861. Was delivered five years ago of her second child, at the eighth month of gestation. After being three days in labour, forceps were applied. Three days later the urine escaped without control. Has been operated upon twice in Melbourne, Victoria, without success.

On examination, a large irregular transverse fistula was seen, situated about an inch and a half behind the urethra. There was a quantity of phosphatic deposit on the edges of the fistula, and the patient was not in good health.

Operation, June 6th. After some weeks' preparatory treatment, the usual operation was performed under chloroform, nine silver sutures being used. 21st. Sutures removed ; perfect union has taken place. 26th. Discharged cured.

Case XXXIX.—*Vesico-vaginal fistula : three years' duration : previously operated upon unsuccessfully : One operation : Cure.*—Mrs. M. A., æt. 37 ; admitted into the "London Surgical Home" July 13th, 1861. Has been

married ten years; has had three children; two first born naturally; but with the last, born three years ago, was three days in labour, and eventually delivered by forceps, all the pains having ceased. A month after delivery, all her water came away *per vaginam*, and it has continued to do so ever since. Has been operated upon unsuccessfully eighteen months since in a Metropolitan Hospital.

On examination, there was found a small vesico-vaginal fistula, about the size of a pea, far back in the vagina.

Operation, July 18th. The patient was not under chloroform, and in the lithotomy position. Four silver sutures were required to close the opening. Complained of some forcing pains for a few days afterwards, but on August 4th the sutures were removed, and on 25th she was discharged quite cured.

Case XL.— *Vesico-vaginal fistula: eighteen years' duration: One operation: Cure.*—Elizabeth D., æt. 66, married; admitted into the "London Surgical Home" August 28th, 1861. Has had five children; the last was born eighteen years ago, on which occasion she was in hard labour twenty-four hours. No instruments were applied. The child died soon after birth. The third night after delivery, her water passed away in her sleep, and since that time she has had no control over her bladder, all her water passing involuntarily *per vaginam*. For the last twelve months has had a gradual descent of the womb, which now prolapses entirely. Has never had any operative treatment. The prolapsus gives no pain, and is simply inconvenient.

On examination, a large vesico-vaginal fistula was discovered, situated just an inch below the urethra. The uterus also prolapsed, and on the anterior lip was a polypus, the size of a bean.

Operation, September 5th. The patient being on her hands and knees, was operated upon in the usual manner, without the administration of chloroform: eight silver sutures simply twisted were used. Looking to the age of the patient, and the little inconvenience caused by the prolapsus uteri, no further operation was done but to ligature the polypus. 12th. Examined, and fistula found to be quite cured. 19th. Sutures removed. October 25th. Discharged cured.

Case XLI.— *Vesico-vaginal fistula in fifth labour: eleven weeks' duration: One operation, with great relief.*—Elizabeth O., æt. 39, married; admitted into the "London Surgical Home" November 15th, 1861. Is mother of five children. First labour occurred in 1849; was of three days' duration, and she was delivered by instruments of a still-born child. The next three labours were tolerably easy. The last took place eleven weeks ago, September 1st; was in labour forty-four hours, instruments being used before the last two hours. Was very much exhausted, and partially exhausted for the first fortnight after delivery, and then discovered that all her urine passed *per vaginam*. She had not left her bed since her confinement until her admission; but has now sat up for a short time, and finds that she is able to hold a little water. She is very weak and low.

On examination, there was found a circular fistula about the size of a sixpence, the edges of which were in a most unhealthy state, as was also the whole of the vagina. There was also partial rupture of the perinæum. Dec. 2nd. Under tonic treatment, she has much improved in health, and she says that she has lost no water for the last three days. 4th. On careful examination, it was found that the opening was closed, but only by a mass of loose granulation, so that when she coughed there was an escape. 29th. Still sometimes loses some of her water; Mr. Brown therefore determined to operate.

Operation, Dec. 26th. Being on her hands and knees and without chloro-

form, the operation was performed by Mr. Brown in the usual manner. The fistula was closed by four silver sutures. January 5th, 1862. Sutures removed ; the fistula very much smaller, but not quite healed. She left the "Home" and was heard of in July, when she was in active employ, losing hardly any water, and that only occasionally.

Case XLII.—*Vesico-vaginal fistula in second labour : thirteen months' duration : One operation : Cure.*—Amelia S., æt. 28, married ; admitted into the "London Surgical Home" November 18th, 1861. Has had two children ; first born June 24th, 1859, when she was in labour from Monday night till Friday morning. Instruments were used, but they did not terminate the labour. The child was very big. The second child was born October 14th, 1860, the labour lasting forty-eight hours. The child, which was very large, was delivered by instruments. It was dead and quite rotten. Urine came away *per vaginam* on the following day, and since that time she has been quite unable to retain any of her urine.

On examination, the vagina was seen to be much shorter than usual, owing to contraction by cicatrization, which quite shut off the os uteri. There was a small transverse fistula, rather more than half an inch in length. Patient not in good health.

Operation, Dec. 12th. The patient being now in good general health, Mr. Brown performed his usual operation, using five silver sutures. The patient did not have chloroform, and was on her hands and knees. 19th. Passes all her water comfortably, and has no escape. 23rd. Sutures removed ; the whole fistula is perfectly closed. 30th. Discharged cured.

Case XLIII.—*Vesico-vaginal fistula in eighth labour : One operation : Unsuccessful.*—Mary Ann W., æt. 47, married ; admitted into the "London Surgical Home" November 16th, 1861. Has had fourteen children. First labour tedious, and terminated without instruments, the child however being still-born. The following labours—six were good, but at the eighth she was in labour forty hours. She was attended by a midwife, who said it was a cross birth. She was seen by two medical gentlemen, and delivered of a still-born child by instruments. Her water was drawn off by catheter for the first week, and after that something came away, and the water gushed out *per vaginam ;* and since that time she has never held any water. Has had four labours since ; at one had three boys at once, all born alive, but all dying in less than an hour. All these last labours have been easy.

On examination, there was found a large transverse fissure about three inches long, and gaping.

Operation, November 21st. The patient being under chloroform, Mr. Brown performed his usual operation, and closed the whole fistula by ten silver sutures, drawing the edges together transversely. There was considerable hæmorrhage afterwards, which blocked up the catheter. The patient was very ill and low for some days, and though she could sometimes retain all her water, at others there was an escape. It was imagined that the escape came from the urethra, which from long inaction might have lost power. On the 30th she was examined, and the opening was apparently quite closed. On December 5th however, after great pain, she passed a quantity of blood and clots ; and December 8th, when the sutures were removed, the whole was found to have given way. Her health was not good, and she had been very restless whilst in the "Home ;" she was therefore discharged.

Case XLIV.—*Vesico-vaginal fistula in fifth labour : nine months' duration : One operation : Cure.*—Phœbe T., æt. 30, married ; admitted into

the "London Surgical Home" December 18th, 1861. Has had five children. First four labours were natural, but rather long; the fifth occurred nine months ago, when she was four days in hard labour, and delivered without instruments. On the following morning felt her urine suddenly gush away *per vaginam*, and it has continued to do so ever since, she being unable to retain any.

On examination, there was found a vesico-vaginal fistula about the size of a shilling.

Operation, December 19th. The patient being under chloroform, the opening was closed by five silver sutures. The operation was more difficult than usual, in consequence of the patient having suffered from hip disease in early life, and a false joint formed. January 1st, 1862. Sutures removed, and the whole opening quite closed. 8th. Left the "Home" cured in three weeks from the day of admission.

CASE XLV.—*Vesico-vaginal fistula in fourth labour: seven weeks' duration: Two operations: Cure.*—Elizabeth A., æt. 42, married; admitted into the "London Surgical Home" January 7th, 1862. Married sixteen years, and had four confinements. First two labours were very long, children still-born, and delivered without instruments. Third labour tolerably easy, twins being born, and both living. Fourth labour, November 22nd, 1861, lasted twenty-four hours. The head was born two hours before the shoulder, and then not without use of a "crook;" infant was still-born and weighed 15 lbs. Water gushed away next day. It was then drawn off for a few days; but when she moved it all came away, and now she can retain none.

On examination, a transverse fissure about an inch long was discovered, with the edges inverted into the bladder.

Operation, January 16th. The patient was under chloroform, and the operation of closing the fistula by four silver sutures lasted only seven minutes. 22nd. A sudden escape of urine. 23rd. Sutures removed; two-thirds of fistula were closed. The remaining portion closed by three sutures. There was a slight escape for a day or two, when she commenced menstruating, and the escape stopped. February 2nd. Sutures removed, and fistula quite healed. 4th. Discharged cured in a month from admission.

CASE XLVI.—*Vesico-vaginal fistula: 25 years' duration: Two operations: Relieved.*—M. A. C., æt. 49, married; admitted into the "London Surgical Home" March 14th, 1865. Has only had one child, and that twenty-five years ago. She was in labour some days; no instruments were used, and has never been able to retain her water at all since that occasion. Says she has never menstruated since her confinement, but has always enjoyed excellent health, and allows that the menstrual fluid, being mixed with urine, might have passed unnoticed.

On examination, showed a rent nearly an inch in length just behind the neck of the bladder, through which the mucous membrane protruded, forming a small tumour.

Operation, March 16th. The patient being under the influence of chloroform, I performed the usual operation, inserting seven sutures. April 5th. Stitches removed this morning. 14th. Passes but very little water; the greater part runs away by the urethra, but little through the wound. 20th. The remainder of the wound was stitched up to-day, three silver sutures being inserted. May 8th. Gets up daily and walks about. All her urine escapes. I recommended her to go home for some months and return when stronger. 10th. Discharged, relieved.

Case XLVII.—*Vesico-vaginal fistula, first labour: twice previously operated upon unsuccessfully: Three operations: Cure.*—Margaret W., æt. 32, married; admitted into the "London Surgical Home" January 8th, 1862, Married eight years and had four children. All her labours have been long, never less than forty-eight hours. Never had instruments used. Accident occurred in her first labour seven years ago. Was in labour three days, and the child, which was very large, was still-born. Ten days afterwards, on moving about, found that she could not retain any of her water. Was operated on once five years ago in a Metropolitan hospital, and again later in the same hospital by another surgeon, without success.

On examination, a vesico-vaginal fistula was found, round, and rather larger than a shilling, situated midway in the vagina.

Operation, January 16th. The patient being under chloroform, and in the lithotomy position, the opening was closed by seven silver sutures brought together transversely. 29th. No escape till this date, when there was a sudden gush of water, and it was found that one stitch had given way. 31st. Sutures removed. February 6th. Second operation; two silver sutures used. 11th. A slight escape; again one wire was found to have given way. 21st. Third operation, four silver sutures used. 28th. Sutures removed; all perfectly healed. March 3rd. Discharged cured.

Case XLVIII.—*Vesico-vaginal fistula, first labour: two years' duration: Many operations: Cure.*—Elizabeth M., æt. 34, married; admitted into the "London Surgical Home" February 21st, 1862. Married five years, and delivered of her first and only child two years ago. Was in labour seventy-two hours. Instruments were used, but without success, and the child was ultimately born naturally. Was partially under the influence of chloroform on the second day. Was very ill after delivery, and has never held any water since that time. The bladder sloughed, and discharged a large quantity of putrid matter. Nine weeks after delivery, entered Winchester Hospital, and remained there five weeks, no operation however being performed. Three months later, entered a Metropolitan hospital, where a contracting band was divided, and the surgeon wished to close the vagina completely. She however would not consent. Has had no other treatment.

On examination, there was found a large rent across the whole floor of the bladder, the mucous surface of the anterior wall prolapsing through. There was also a light cicatricial band across the vagina in front of the fistula.

Operation, February 26th. The patient being under chloroform, half the opening was closed by four silver sutures, and the contracting band divided. No catheter was introduced. March 13th. Sutures removed; all healed that was closed at operation. 20th. Another band divided and plugged with oiled lint; this caused some sloughing of urethra; so, on April 8th, the patient being on her hands and knees, Mr. Brown brought the edges of the urethra together by four silver sutures. 15th. Sutures removed; all the urethral portion healed, and that passage is now quite normal. She began about this time to fail in health, so was ordered to go home for a few days. May 6th. Returned improved in health. 8th. Being under chloroform, and in the lithotomy position, the greater portion of the remaining fistula was brought together by six silver sutures: the operation was very difficult, from the situation of the fistula. 21st. Sutures removed; a very small opening is now remaining. She left the "Home" to re-establish her health, and returned January 18th, 1864, in good health, but in much the same state as when she left two years ago. 21st. Mr. Brown operated for new urethra, closing the natural opening by nine silver sutures, and piercing a new one above. Catheter introduced and retained. 30th. Sutures removed: everything

healed, and urine retained for four hours at a time. February 16th. Discharged cured, being able to retain all her urine for six hours at a time, the power over the bladder daily increasing.

CASE XLIX.—*Vesico-vaginal fistula in fourth labour: ten months' duration: One operation: Cure.*—Margaret W., æt. 38, married; admitted into the "London Surgical Home" April 30th, 1862. Has been married four years, and had four labours. First labour tedious, and terminated by instruments — was lame for some time afterwards. Second labour easy. Third, miscarriage at five or six months. Fourth and last, was in labour seventy-eight hours; forceps were used, and she was delivered of a still-born child. A fortnight later, first noticed that her urine came away *per vaginam*, she being able to retain only a very small quantity in the daytime. Her motions also for three months came away *per vaginam*, but afterwards came naturally.

On examination, there was found a large transverse fistula, bounded in front by loose vaginal tissue, and behind by a band, which shut off the os uteri.

May 8th. The patient being in the lithotomy position, and under chloroform, Mr. Brown pared the edges and brought them together by seventeen silver sutures, the largest number ever used. Immediately after the operation, urine gushed out of the urethra. 13th. No escape; is menstruating for the first time since her confinement. 24th. Sutures removed; perfect union has taken place. 31st. Discharged cured.

CASE L.—*Vesico-vaginal fistula in nineteenth labour: One operation: twelve months' duration: Cure.*—Louisa B., æt. 43, married; admitted into the "London Surgical Home" July 5th, 1862. Has been married twenty-six years, and had fifteen children, and four miscarriages. Labours all tedious and children all large. In the last two labours instruments were used. In the last labour, twelve months ago, and which lasted three days, the child weighed 17½ lbs. It was only terminated by eviscerating the contents of the thorax, and it was at this time that the accident occurred. She passed her water naturally and freely for the three days of labour; but within an hour of delivery the water came away without control *per vaginam*.

On examination, an opening into the bladder was discovered about half an inch long, and situated in the centre of the vaginal wall.

Operation, July 10th. The patient was not under chloroform, and in the lithotomy position. The usual operation was performed, the edges being brought together longitudiually by five silver sutures. 25th. Sutures removed; fistula quite healed. 28th. Discharged cured.

CASE LI.—*Vesico-vaginal fistula in third labour: nine months' duration: One operation: Cure.*—Mrs. B., æt. 33; admitted into the "London Surgical Home" July 28th, 1862. Married four years, and had three children. First child born dead at six and a half months. Second child still-born; delivered without instruments after twenty-four hours' labour. The third labour occurred in September last, and lasted thirty-six hours; forceps were used, and the child, which was very large, was born alive, but died immediately after birth. When she began to get about, she noticed that when walking she lost all her water; but she loses none when sitting or lying down.

On examination, there was found to be a small fistula situated at the right-hand side of the vagina.

Operation, July 31st. Operation under chloroform in the usual way, five

silver sutures being used. August 9th. Passed her own water without escape through fistula. 11th. Sutures removed ; fistula quite healed. 13th. Dicharged cured.

Case LII.—*Vesico-vaginal fistula in fifth labour: ten months' duration: One operation: Cure.*—Mrs. R., æt. 33, admitted into the "London Surgical Home" October 13th, 1862. Has been married nine years, and had five children. First four labours very good ; the last, that in which the accident happened, occurred ten months ago, when she was in labour over twenty-seven hours. Suffered severe cramp in the right leg. Forceps were applied and a still-born child delivered. Her urine was drawn off for three days, at the end of which "she felt something give way," and a large quantity of water gushed out. From that time she has never retained a drop, and has lost the use of her right leg.

On examination, the vagina was full of phosphatic deposits and fearfully offensive in smell. There was a gaping fistula about an inch and a half long midway in the vagina. The vagina was much cicatrized ; she was also dreadfully emaciated, and unable to move in her bed. She was put under tonic treatment and nourishing diet, the vagina syringed with a lotion containing hydrochloric acid. In a few weeks her health improved and the parts looked healthy. November 6th. Cicatricial bands divided on each side of the vagina. 8th. Vagina to be dilated with large sponge tents, so as to prevent the incisions from again contracting. December 13th. The ordinary operation was performed, the patient being on her hands and knees, and without chloroform. The edges were with difficulty brought together by nine silver sutures. 28th. Sutures removed ; no escape, and fistula perfectly healed. January 3rd. Discharged cured, and with the recovery of the use of her leg.

Case LIII.—*Vesico-vaginal fistula, fifth labour: four months' duration: One operation: Cure.*—Eliza B., æt. 35, married ; admitted into the "London Surgical Home" February 10th, 1863. Married twelve years ; five children. All her labours easy till the last (October, 1862), when she "was in labour from six o'clock on Friday evening till Monday morning, but in strong labour for only twelve hours." The child was born dead, and was as large as most children when three months old. Was very ill for a fortnight, and kept her bed for six weeks after her confinement. Her water came away immediately after delivery, and has continued to do so ever since.

On examination, there was a large transverse fissure extending across the vagina about an inch behind the urethra.

Operation, Feb. 12th. The ordinary operation performed under chloroform, eight silver sutures being used. 22nd Sutures removed ; parts quite healed. 24th. Can pass her water freely *per urethram*. March 3rd. Discharged cured in three weeks from date of admission.

Case LIV.—*Vesico-vaginal fistula, first labour: four months' duration: One operation: Cure.*—Mrs. Elizabeth B., æt. 26 ; admitted into the "London Surgical Home" February 10th, 1863. Confined September 30th, 1862, of first child ; was in labour thirty-one hours, and delivered by forceps, the child living for only twenty-four hours. Was very ill, and kept her bed for two months. A few days after delivery, noticed her water gradually coming away, and has never since passed any *per urethram*. She cannot hold her water sitting or standing.

On examination, there was found a very small fistulous opening into the bladder, situated very far back under the arch of the pubes ; the vagina firmly and extensively cicatrized.

February 12th. Bands divided under chloroform. March 5th. The ordinary operation under chloroform ; six silver sutures used. Operation difficult, on account of position of fistula. 15th. A slight escape, which, on examination, was seen to proceed from the track of one of the sutures. Catheter reintroduced and retained, and a small plug of lint inserted into the vagina, which is to be changed every day. 19th. Sutures removed, and the fistula entirely healed, there not being the slightest escape.

Case LV.—*Vesico-vaginal fistula in first labour : thirteen months' duration : One operation : Cure.*—Mrs. Amelia B., æt. 23 ; admitted into the "London Surgical Home" July 22nd, 1863. Married three years. Was in labour with first child thirteen months ago, attended by a midwife. A surgeon was called in, when he found the head expelled, and he speedily completed delivery. The child was quite putrid. There was considerable post-partum hæmorrhage, but she ultimately made a good recovery. Catheter was introduced for two or three days after delivery, and then she passed water well for about three weeks, when a large slough came away, and she lost all control over her water. Has menstruated through the bladder.

On examination, there was found an irregular-shaped fistula, about an inch and a half long, situated two inches behind the urethra. Vagina very contracted from cicatrizations, and os uteri not able to be felt.

July 25th. The usual operation ; five silver sutures inserted vertically. August 4th. Sutures removed ; fistula quite healed. 20th. Discharged cured.

Case LVI. — *Vesico-vaginal fistula in second labour : two months' duration : Four operations : Cure.*—Elizabeth B., æt. 24, married ; admitted into the "London Surgical Home" August 25th, 1863. Married four and a half years, and confined of a still-born child three years ago. Two months since was delivered of a very large still-born child, she having been in labour four days and a half, delivery being terminated by instruments. Three weeks after, found that all her water came through the vagina.

Examination showed an enormous fistula, the floor of the bladder having completely sloughed away.

Sept. 10th. The vagina having been dilated by introduction of large sponge tents, Mr. Brown this day pared the edges of the centre of the fistula, and brought them together by five silver sutures, thus making a bridge and dividing the fistula into two. 25th. Sutures removed, the whole portion healed. October 10th. Patient being on hands and knees, Mr. Brown closed the fistula on the left side, using four silver sutures. 22nd. Sutures removed ; complete union has taken place. Free incisions were made on the right side, as there was considerable tension about that part. November 15th. The fistula on the right side closed by five silver sutures. 22nd. Sutures removed, as there is an escape, and a small portion still un-united. December 12th. The remaining portion united by three silver sutures. 26th. Sutures removed ; complete union.

Case LVII.—*Vesico-vaginal fistula, first labour : eight years' duration : Two operations : Cure.*—Harriet C., æt. 35, married ; admitted into the "London Surgical Home" September 30th, 1863. Eight years since was delivered of her first child after being in hard labour for two days. She then found that all her water came away *per vaginam*. Six years since was operated on by a surgeon, but without success. Has had no other treatment.

Examination showed rectocele and cystocele, and almost total occlusion of

the vagina by cicatrization, there being only a small hole on the left side, admitting a No. 10 catheter. There was a fistula in the bladder, admitting a large catheter easily.

Operation, October 15th. The usual operation for the fistula performed, five silver sutures being used. 18th. Almost continued bilious vomiting up to this date since the operation. 22nd. Sutures removed; one suture had cut out, the result of the great strain on them in the vomiting. November 19th. Again operated on, with three sutures; no catheter introduced. 26th. Sutures removed; the fistula perfectly healed. December 7th. Discharged cured.

Case LVIII.—*Vesico-vaginal fistula, second labour: many years' duration: One operation: Cure.* Jane H., æt. 62, married; admitted into the "London Surgical Home" November 16th, 1863. Married forty-three years, and had seven children. Accident occurred with second child, when labour lasted seven days, and instruments twice (?) used. General health impaired.

Examination showed a large vesico-vaginal fistula of irregular shape, extending close up to os uteri.

Operation, November 26th. Usual operation performed; eight silver sutures introduced, one or two through the anterior lip of the os uteri. There was considerable hæmorrhage afterwards, and the operation did not succeed.

Case LIX.—*Vesico-vaginal fistula after lithotomy: nine years' duration: One operation: Cure.*—Phœbe R., æt. 30, single; admitted into the "London Surgical Home" November 18th, 1863. Was operated on nine years ago for stone in the bladder, and since that time has never retained urine. Has been operated on twice by a provincial surgeon without relief.

Examination showed a fistula opening into the middle of the vagina, admitting freely two fingers.

Nov. 20th. Usual operation performed; nine silver sutures inserted. Dec. 3rd. Sutures removed, and fistula healed.

Case LX.—*Vesico-vaginal fistula, fifth labour: six months' duration: One operation: Cure.*—Sarah W., æt. 33, married; admitted into the "London Surgical Home" April 22nd, 1864. Married four years, and had five children; last born six months ago, after labour of twenty-four hours, which was terminated without instruments. Two days after, found that she could not retain her urine. Has been in a Metropolitan hospital three months, where she was operated on three times, but without any benefit. General health good.

Examination showed a small fistula near the urethra.

Operation, April 28th. The usual operation under chloroform; four silver sutures used. May 10th. Sutures removed; complete union of the fistula. 14th. Discharged cured.

Case LXI.—*Vesico-vaginal fistula, first labour: six months' duration.*—Mrs. M., æt. 22, came under my care May 12th, 1864. She had been delivered six months previously of a still-born child, after a tedious labour. On the ninth day after delivery, her urine escaped *per vaginam*, and she has never since held any.

On examination, there was seen a small opening, the size of a three-penny piece, situated midway between the os uteri and the neck of the bladder.

May 14th. I performed my usual operation, the patient being under chloroform. Five silver sutures were used to close the opening. She went on well without accident, and was quite well in a fortnight after the operation.

CASE LXII.—*Vesico-vaginal fistula, first labour: fifteen months' duration: Two operations: Cure.*—Avis R., æt. 19, married; admitted into the "London Surgical Home" December 9th, 1864. Fifteen months ago was delivered of a still-born child, which was alive till within two days of its birth. Was in labour five days, and delivered without instruments. Menstruation regular. Has no control over her urine.

Examination showed a large vesico-vaginal fistula.

Operation, Dec. 15th. Usual operation; twelve silver sutures inserted. No catheter introduced but to pass water as requisite. Up to the 20th there was no escape; then, urine escaping, a catheter was introduced; but the escape continued. 26th. Sutures removed; a large portion healed. 29th. Under chloroform, the operation was again performed; eleven sutures introduced. Catheter introduced for two or three days. Jan. 12th. Sutures removed; wound perfectly healed. 16th. Discharged cured.

CASE LXIII.—*Vesico-vaginal fistula in sixth labour: four months' duration: Two operations: Cure.*—Margaret W., æt. 37, married; admitted into the "London Surgical Home" December 5th, 1864. This patient (*vide* Case XLIX.) was operated on in the "Home," May 8, 1862, for vesico-vaginal fistula, and discharged cured. She soon after became pregnant, and was delivered, after an easy labour of twelve hours, of a living child, no accident occurring, March, 1862. Last August was delivered of her sixth child, after being in labour three days and nights. The head was born without instruments, but the body was delivered by their aid. A few days after she discovered her urine again passing *per vaginam*.

On examination, a very large vesico-vaginal fistula was seen.

Operation, Dec. 8th. The usual operation; fourteen silver sutures inserted. Went on well till the 16th, when there was a slight escape. 17th. Sutures removed; a very slight opening unhealed. 21st. Patient being on hands and knees, operation again performed, two silver sutures being required. Catheter introduced. Jan. 2nd. Has been in a doubtful state up to this time, there being at times a slight escape. Catheter to be left out, and patient to pass her own water. 3rd. Sutures removed. Can hold all her water. 15th. Discharged cured.

CASE LXIV.—*Vesico-vaginal fistula, fourth labour: thirteen months' duration: One operation: Cure.*—Sarah Ann N., æt. 39, married; admitted into the "London Surgical Home" February 1st, 1865. Married eight years; had four children, all still-born, all presenting at shoulder, and being delivered by instruments on each occasion. Was last confined thirteen months ago, and since then has lost all her water; was very ill and flooded freely.

Examination showed a large and irregular fistula situated by the side of the os uteri, and readily admitting the forefinger.

Operation, February 9th. Usual operation under chloroform; nine silver sutures inserted. Catheter introduced and retained till 18th. 23rd. Sutures removed; fistula perfectly closed. 27th. Discharged cured.

CASE LXV.—*Vesico-vaginal fistula with complete rupture of perinæum: seven months' duration: Operations and Cure.*—Mrs. J. M., æt. 21, admitted into the "London Surgical Home" November 1860. Was delivered of her first child seven months since by craniotomy, having been in labour thirty-five hours.

On examination, the perinæum was found to be completely ruptured, and in addition there were a vesico-vaginal and a recto-vaginal fistula, with considerable contraction of the vagina by cicatrization.

November 8th. The vesico-vaginal fistula having been previously dealt with,

the recto-vaginal fistula was closed in the usual manner by three silver sutures, and the usual operation for ruptured perinæum performed. Deep sutures removed on the third day, superficial on the eighth, and the sutures from the rectum on the nineteenth day. Everything was healed, and she was discharged cured in February, 1861.

B. *Vesico-utero-vaginal Fistulæ.*

Case LXVI.—*Vesico-utero-vaginal fistulæ: four years' duration: Single operation: Cure.*—Mrs. N., Rotherhithe, æt. 28, consulted me in March, 1858, and gave me the following history:—"Four years and a quarter since was in labour of her first child from Wednesday evening till Sunday morning, when Mr. Peete was called in, and delivered her with forceps of a still-born child. Directly after she was made comfortable in bed she found the urine escape through the vagina, and from that time it has always passed involuntarily except when lying on her back. Three months after the accident she went into Guy's Hospital, and was there for nine weeks. She then went to a hospital for diseases of women, and was there recommended a large blister on her back, so as to make a sore; but as her husband thought such a remedy could not heal the hole in her bladder, she did not apply it, and left off attending the hospital. Mr. Peete had repeatedly advised her to see me."

On examination, I found a small fistulous opening at the fundus of the bladder, close up to the os uteri, which was also much torn. The fistulous opening was about the diameter of an ordinary pocket-case director.

On March 3rd I proceeded to operate, assisted by Messrs. Nunn, Peete, Philip H. Harper, and my son, A. Boyer Brown. Placing her on her knees and hands, without chloroform, I carefully pared the edges, removing as little mucous membrane as possible, and then performed Bozeman's operation; but instead of bringing the edges together transversely, as usual, I brought them together horizontally.

13th. I removed the button to-day, and found the opening perfectly and entirely healed.

This case was altogether most satisfactory and pleasing, one operation having sufficed to cure it. She has subsequently been confined, and remains quite well.

Case LXVII.—*Vesico-utero-vaginal fistula: Duration six weeks: Single operation after preliminary treatment: Cure.* (From Notes by the Clinical Clerk, Mr. Chisholm.)—Ellen Welch, æt. 25, married; admitted into St. Mary's Hospital, March 26th, 1858. Six weeks ago she was in labour with her first child, when she sent for a midwife. She was in labour fifty-two hours, with good pains, and finally was delivered by a surgeon with instruments. A fortnight after she noticed that she could not retain her urine, which was constantly dribbling away, in greater quantity when she stood up than when she was in the recumbent or sitting posture. When admitted, Mr. Brown removed a large slough, which was to be seen protruding from the vulva.

Upon making an examination with the speculum, it was found that the lesion was far up in the vagina, just anterior to the os uteri, where a transverse fissure, about half an inch long, was to be seen, having a white appearance, indicating that a slough had yet to come away.

March 27th. The perinæum had not been torn, and in order to facilitate the intended operation, Mr. Brown made an incision downwards and obliquely to the right side, into the vagina, and dressed it with oiled lint.

28th. The margins of the incision have thrown out lymph. Dressed daily with oiled lint.

10th. The incision was quite healed, but the os uteri is still much abraded.

21st. Mr. Brown performed Bozeman's operation to-day, using a leaden button instead of the silver one.

May 1st. Mr. Brown removed the shot and button and two of the sutures to-day, and found that the fistulous opening had entirely healed. The urine which was supposed to have escaped the other day must have oozed out by the side of the catheter. For the last three or four days she has been able to retain her urine and pass it naturally, the catheter not being requisite. Nearly a pint of urine has been voided at a time.

6th. Got up yesterday for the first time.

14th. Discharged quite cured. Able to retain or void her urine at pleasure.

Remarks—The object with which I enlarged the vaginal opening in this case, was to get a better view of the parts. The pelvis was so deep, and the fistula so high up, that I felt it would be far more beneficial to enlarge the vagina, if possible, and by making the incision obliquely I ran no risk of ultimately interfering with the sphincters, whilst my intended operations were much facilitated. It was again an advantage that I was able to operate in this case so soon as the sloughs which formed the fistula had separated. The parts were thus in a favourable state. The hæmorrhage which ensued on the second day made me dread lest the parts should not unite; but by controlling it with gallic acid, it seemed to have no detrimental effect beyond lengthening her convalescence somewhat.

CASE LXVIII.—*Vesico-utero-vaginal fistula: sixteen months' duration: Single operation: Cure.*—A. T., æt. 25, married, was taken in labour on February 24th, 1857, and the pains remained very severe indeed until 2.30 P.M. on Feb. 28th, when the head of the child was born; but it was 7.30 P.M. before the body could be delivered. During this period the catheter was attempted to be used several times, but unsuccessfully. She herself is a small woman, with an average pelvis, but the child was a very large one. It was born alive, but lived only two days. After the child was born, very severe pain in the vagina remained, and the next day the urine was much mixed with blood. This continued for a fortnight, when the urine was retained, and she could not pass any for twenty-four hours. On being lifted out of bed it gushed forth, and from that time has always come away without her knowledge. She cannot retain the smallest quantity either when sitting up or lying down.

She was recommended by Mr. Bermingham to apply to me, and was admitted into the "London Surgical Home" on June 9th, 1858.

She stated that she had another child on February 25th, 1858, without any increased effect upon the parts.

On examination, an opening was found to exist which would admit easily a couple of fingers, extending obliquely across the bladder, and involving the anterior lip of the os uteri. The circumference of the opening was smooth, and not much thickened. There was also a slight tendency to prolapsus of the anterior wall of the vagina. The vagina itself was soft, and easily dilatable. The internal coat of the bladder was healthy. She was ordered an aperient medicine, and on June 10th I performed Bozeman's operation. The opening was so extensive as to require a leaden button with eight holes; and some of the sutures were inserted through the anterior lip of the os itself. There were present at the operation Messrs. Nunn and Philip H. Harper, Dr. Norton, Messrs. Bermingham, Wratislaw, Hubbard, Giles, and my son, A. Boyer Brown.

She went on very well, suffering no pain and having no escape of urine;

and on June 22nd I removed the button and sutures in the presence of Dr. Bozeman of Montgomery, Dr. Hayward of Boston, and Messrs. Nunn, Philip H. Harper, and Wratislaw. The opening was firmly healed. Not a trace of fistula remained.

29th. She was discharged quite well, able to hold her water as long as she pleased, and having no difficulty in emptying the bladder. She herself compared it to being in a dream. She could hardly realize the fact of being perfectly cured with so little suffering.

Remarks.—This was a most satisfactory cure, for the opening was the largest one I had yet been called upon to treat. The operation was facilitated by the very dilatable state of her vagina. The size of the opening had prevented the edges becoming much hardened, which also was somewhat in her favour. I have since received a letter from Dr. Hall Davies (who had frequently seen her before she came under my care, and expressed his doubts about its being possible to cure her), in which he expresses his great pleasure at the perfect success of the operation.

Dr. Davies thus wrote in a communication to the *British Medical Journal* (April 2nd, 1859) :—

" I am happy to be able to state that the above case of A.T., about which I had been consulted previous to operation, and which was discharged cured by Mr. Baker Brown on June 29th, continues cured on November 30th. The husband then informed me that his wife continued quite well, and was never in more robust health, and that she had not the slightest return of her former complaint."

CASE LXIX.—*Vesico-utero-vaginal fistula: Two operations: Cure.*—M.A.S., æt. 35, married, the wife of a missionary in India, was confined of her first child in April, 1855, after a tedious labour of three days. She quite recovered, became pregnant again, was taken in labour on the 10th April, 1857 ; had heavy pains until the 12th, when forceps were used, and she was delivered of a large male child. She went on well for three days, passing her urine naturally, and having no unfavourable symptom. She then had great pain and swelling of the vagina, and on the sixth day after the labour her urine began to escape without her knowledge, and a few days subsequently a large slough escaped from the vagina. For some weeks she could not have her bed made, but she gradually recovered her health, without having, however, the slightest control over her urine, which escaped in all postures alike. In September, 1857, she consulted me, and I performed an operation upon her ; but from the tender and contracted state of the vagina, and the peculiar situation of the opening, I was only able to close a portion of it.

She was admitted into the " London Surgical Home " on June 11th, 1858. On examination, I found that the opening now was large enough to admit a finger, and situated so close to the anterior lip of the os uteri as to involve it. From the cicatrization of the walls of the vagina, the opening was drawn as it were into a sulcus, rendering it very difficult to get at. Her general health was good.

June 12th. She was placed under chloroform, and I proceeded to perform Bozeman's operation. I was obliged to pare a portion of the os itself, and had great difficulty in passing the needles through, both on account of the hardness of the os, and the depth at which the opening was situated. However, I inserted five silver-wire sutures, and putting on a leaden button, got the edges into good apposition. There were present Drs. Priestley and Norton, Messrs. Nunn, Philip H. Harper, Wratislaw, Spencer, Hubbard, Giles, and my son, A. Boyer Brown.

June 13th. Good deal of sickness, but otherwise comfortable. She went

on well and had no escape, and on June 24th I removed the button and wires in the presence of Dr. Bozeman and others. There was some little difficulty in expanding the vagina sufficiently. A small quantity of urine escaped out of the urethra and flowed into the vagina, thus appearing as though it escaped out of the fistula. However, I thought it better not to examine minutely, so I replaced her in bed, and introduced the bent catheter again, and left it in the bladder.

July 7th. I removed the sutures and found everything well and sound.

Remarks.—I had great difficulty in dealing with this case, owing to the cicatrization of the vagina having drawn the fistula out of reach to a great extent. It will be noticed that I passed some of the sutures through the os itself, but beyond the difficulty of pushing the needle through, this does not alter the character or progrees of the case. Feb. 1861. This lady has continued well.

CASE LXX.—*Vesico-utero-vaginal fistula: five years' duration: Single operation: Cure.*—Mrs. Mc., æt. 26, married, mother of three children. Her two first labours were rather tedious, but presented nothing remarkable. Five years since, whilst living in Ceylon, she was confined of her third child. The labour lasted for a couple of days before she sent for her medical attendant. He discovered that it was an arm presentation, and, after several attempts, succeeded in turning the child and delivering. Her urine escaped immediately after the labour was over, and has continued to do so ever since. She states that she suffered so much from swellings and pains in the vagina that it was nearly twelve months before she was able to sit up: at the end of that period she had an operation performed in Ceylon, which she describes as consisting "of cutting the opening and sewing it together;" she went on well until the fifth day, when the urine escaped. A few days after this, sutures were again inserted, but the hæmorrhage was so free that the fistulous opening was only partially closed. The actual cautery was now used after every menstrual period. This treatment was continued for a year, when she came over to England for advice, and consulted me, but for various reasons did not come back that I might do anything for her. She consulted other gentlemen, who used the cautery and inserted sutures three times. Getting tired, she applied to another, who used the cautery, and whilst the edges were raw inserted sutures. He repeated this procedure, she believes, eight times, and succeeded in making the opening smaller, but not in healing it. She applied to the "London Surgical Home" on July 17th, 1858. She cannot retain any urine, either sitting up or lying down, and it is constantly running from her. On examination, an opening was found which would admit a full-sized bougie easily, situate in the base of the bladder, close up to the os uteri, which was closed, and the fistula ran into the cervix. The edges were rather callous, but not everted. The coats of the bladder were healthy: the vagina dilatable. There was a constricting band of cicatrix which extended from the lateral wall of the vagina to the edge of the opening.

After the usual preparatory treatment, she was placed under chloroform on July 19th, and I proceeded to perform the usual operation in the presence of Drs. Bozeman and Vinen, Messrs. Nunn, Philip H. Harper. Wratislaw, Spencer, Hubbard, Giles, and Royston. I pared the edges freely, and was obliged to insert some of the sutures through the cervix itself, which required a good deal of force, as it was very hard. It required five sutures, and the leaden button used was hollowed out a little on one side, so as not to compress the os.

July 28th. I removed the button to-day, in the presence of Dr. H. Bennet, and Messrs. Nunn, Philip H. Harper, and Hubbard, and found the

fistula perfectly healed. The line of union is so perfect as scarcely to be recognizable except from the position of the sutures.

August 5th. I removed the sutures, and found that the cure was quite complete. She can retain and pass her urine at pleasure, but menstruates *per urethram*.

CASE LXXI.—*Vesico-utero-vaginal fistula: Two operations: Cure.*—A. B., æt. 44, residing at Lewes, Sussex, recommended by Dr. Henry Bennet. She was admitted into "The London Home" on the 10th of January, 1859; she has had five children, all of whom were still-born, except the fourth, who is now living; she was last confined on Oct. 3rd, 1857; she has also suffered from severe menorrhagia, followed by the removal of a polypus. (Statement of her medical attendant):—After her last confinement, a piece of bladder sloughed away. Her general health improved gradually; and as hopes were held out of a cure taking place without operation, she postponed applying for further relief. She is enormously stout. The opening into the bladder can with difficulty be seen. When felt, it appears about two inches and a half across; the posterior edge being formed entirely by the lip of the os uteri, which is much enlarged, thickened and patulous. The edges of the fistula were inverted.

Jan. 17th. She was cautiously put under the influence of chloroform; but the parts were unable to be brought into view from the rolls of fat about the labia. Nothing, therefore, was done. The difficulties of the case were so great, that I advised her to give up hopes of recovery; but she begged so hard to have another trial that I determined to try and bring down her fat, and consequently kept her on milk, fish, biscuit, and water. The result was so satisfactory, that on Feb. 14th, I operated, using Bozeman's button and seven sutures. No chloroform was given; and she was placed on her knees and chest, so that she might assist us in keeping open the vagina. Every suture was passed through the lip of the os uteri. There was profuse hæmorrhage, which continued some hours after the operation. Generous diet and wine were allowed.

Feb. 15th. She suffered great pain in her right side and leg, and was obliged to be put on her back. 17th. Slight escape. 26th. Button removed; the parts look sore and unhealthy, but apparently united. In two days it was found that the opening was but little, if any, smaller than before the operation.

March 19th. I intended to operate, but finding a band contracting the parts, I thought it better simply to divide it. The parts were then kept dilated with sponge tents.

April 8th. The parts not being sufficiently healed to allow another operation, she was sent into the country for a time.

May 3rd. She returned, much improved in general health. 7th. I operated again, using my bar-clamps. I was assisted by Messrs. Nunn, Philip Harper, Wratislaw, and Spencer. The parts were brought into perfect apposition by six sutures with bar-clamps. Opium was given until sleep was induced. 15th. Catheter left out for half an hour: no escape. 16th. Bowels relieved freely after some aperient medicine; urine passed naturally. 20th. No escape; healthy and plentiful discharge of granulating pus. 23rd. The clamps were removed, and most perfect union found to have taken place; not the least appearance of escape.

She was discharged perfectly cured, and has since repeatedly reported that she is quite well.

Remarks.—This was the most unpromising case I had met with. The extreme fatness of the patient, especially around the thighs and labia, rendered

it quite impossible at first, under chloroform, to get a view of the opening, large as it was ; but when she had been reduced by diet, &c., then, without chloroform, being placed upon her elbows and knees, I was enabled to pare the edges, and bring them well together with Bozeman's button, passing every suture through the thick lip of the os uteri. When I first removed the button, I thought the union was complete, and she passed her urine comfortably. Directly she got about, all gave way again, showing that only the edges of the fistula were united. This I attributed to the character of the fistula, which was so much inverted that the button merely brought the edges into contact, and not the entire raw surface. I therefore determined to use my bar-clamps, so that each stitch might bring well together the entire denuded surface, and fall in with the inverted edges ; the result was a complete cure.

Case LXXII.—*Vesico-utero-vaginal fistula, second labour : twelve years' duration : One operation : Cure.*—Mary H., æt. 33, married ; admitted into the "London Surgical Home" July 4th, 1862. Married fifteen years, and had seven children. Accident happened at the birth of her second child, twelve years ago, when she was forty-eight hours in labour. Child was very large, and still-born ; instruments never used at any of her confinements. Two days after delivery, found that her urine came away *per vaginam*, and it has continued to do so ever since.

On examination, the anterior lip of the os uteri was found to be almost entirely sloughed away, and there was a fistulous opening into the uterus and vagina, running right into the cervix: it was irregular in shape. July 31st. The ordinary operation of paring the edge of the fistula was performed, ten silver sutures being used. From the peculiar position of the fistula, the operation was very difficult. August 14th. Sutures removed ; fistula perfectly healed. 17th. Discharged cured.

Case LXXIII.—*Vesico-utero-vaginal fistula : Operation : Cure.*—Mrs. F., æt. 35. Six years' duration. Sent to me by Dr. Hingston, of Plymouth, whom she had consulted Has been pregnant five times. Three of the labours were terminated by instruments, and the other two were miscarriages. The fifth labour took place six years since. She was in hard labour fifteen hours, and becoming exhausted, craniotomy was resorted to. The urine escaped immediately after the termination of the labour, and has since always passed away without her control. When lying down, she can hold about half a teacupful. Menstruation irregular, and general health weak. Examination showed an opening in the bladder, admitting the forefinger, and extending through the os uteri up the neck of the uterus for an inch and a half. The os was also torn, and one portion of it formed a sort of valve, falling over, and partially concealing the opening.

July 16th. I operated in the presence of Dr. H. Jones, Messrs. Nunn, Philip Harper, and Hemphill, under chloroform. I was obliged to insert the sutures longitudinally, instead of transversely, and through the cervix uteri itself. I managed thus to get the edges together. There were six sutures ; the highest one I closed with a simple shot ; the remaining ones with my bar-clamps. 20th. Complains of catheter hurting her, and is constantly withdrawing it. 22nd. There appears to be a slight escape. She is very restless and hysterical.

August 1st. The clamps removed. The opening appears entirely united.

4th. Very careful examination shows the opening to be entirely healed. She can hold her urine four hours.

In a letter I received from her husband a few days afterwards, he says, "I believe the operation has been entirely successful, and that after my wife

gains strength she will be able to move about with perfect ease and comfort. She can hold her urine four hours at a time."

Remarks.—This case was one of great difficulty. At first I passed my sutures as usual transversely, and hoped to bring down the torn os and cervix on to the edge of the fistula ; but I found that after so doing a vesico-uterine fistula would remain. I therefore removed them and inserted them longitudinally. Thus I brought the edges of the torn cervix well together, and afterwards the vaginal part of the fistula. I felt confident the operation would succeed ; but the poor lady seemed to possess no power of keeping quiet, and the catheter irritated so much that she kept constantly removing it. Thus it appeared as if success could not follow ; yet the clamps held on so well that the union was complete.

Case LXXIV.—*Vesico-utero-vaginal fistula : fourteen months' duration : One operation : Cure.*—M.D., æt. 41 ; admitted into the "London Surgical Home" January 16th, 1861; sent by Dr. Chambers Roberts, of Ruabon, North Wales, under whose notice she came subsequently to the accident.

History.—She is married, and has had six children ; her first five labours were easy and short, but the last, which took place fourteen months ago, lasted two days, and was finally terminated by perforation of the head of the fœtus. Ever since, her urine has come away entirely *per vaginam.*

On examination, there was found a fistula two inches long, extending in a longitudinal direction from the anterior lip of the os uteri, which was torn to within half an inch of the meatus urinarius. The fistula was very irregular in shape, and its edges were inverted into the bladder ; in some parts there were masses of unhealthy, flabby granulations, while other parts of the edges were hard and indurated.

For three weeks after her admission the patient was very much out of health, and not in a fit state to be operated on ; but she rapidly improved, and on February 7th, the patient being under chloroform, I operated, paring the edges very freely, and bringing them together by six silver-wire sutures simply twisted, the posterior suture being passed through the torn os uteri.

Feb. 20th. On examination, the fistula was found perfectly healed, and the patient now passes her water entirely *per urethram.*

Case LXXV.—*Vesico-utero-vaginal fistula, first labour : fourteen months' duration : One operation : Cure.*—Ellen B., æt. 26, married ; admitted into the "London Surgical Home" April 1st, 1861. Confined with fifth child fourteen months ago, instruments being used, after having been ten hours in labour. Passed no water for a few hours before delivery, but directly afterwards the urine gushed away *per vaginam.*

On examination, the vagina was found to be almost occluded by cicatrization, there being only a cul-de-sac an inch and a half long. At the right side of this and at the upper part was a fistula about the size of a goose-quill, through which the urine flowed ; and on a level within, on the left side, was another small opening, which would barely admit a uterine sound, leading to the uterus, and through which she menstruates.

Operation, April 4th, 1861. The usual operation, performed under chloroform, four silver sutures being inserted. 15th. Sutures removed ; fistula perfectly healed, and urine passed naturally *per urethram.* 20th. Discharged cured.

Case LXXVI.—*Vesico-utero-vaginal fistula, fourth labour : two months' duration : One operation : Cure.*—Elizabeth A., æt. 39, married ; admitted into the "London Surgical Home" January 24th, 1862. Married nine

years ; has been confined four times. On first two occasions labour lasted thirty-six hours each time ; no instruments were used, but children were still-born. Third labour easy, child living. Fourth labour occurred on November 27th, 1861, and lasted thirty-six hours ; child was very large, still-born, and delivered without instruments. On the third day after delivery, the urine came away with a gush *per vaginam*.

On examination, there was found a long vesico-vaginal fistula close up to and involving the anterior lip of the os uteri ; it was hidden by a valve, like a piece of mucous membrane.

Operation, February 6th. The operation was difficult, owing to the hidden position of the fistula. By grasping the os uteri with the vulsellum forceps, the fistula was exposed. A needle was then introduced, so keeping the opening in view ; the edges being pared, six silver sutures were inserted, and the whole fistula closed. February 20th. Sutures removed ; opening perfectly closed. 22nd. Discharged cured in less than a month from date of admission.

CASE LXXVII.—*Vesico-utero-vaginal fistula, ninth labour : fifteen years' duration : Two operations : Cure.*—Ann M., æt. 47, married ; admitted into the "London Surgical Home" October 18th, 1864. Married twenty-six years, and had nine children ; gave birth to her last child fifteen years ago ; labour natural, and not tedious. Thinks the fistula was caused by the attending surgeon's *nails*. Has no control over her water. Menstruation ceased.

Examination showed an opening the size of a shilling close to the os uteri.

Operation, Oct. 20th. Operation as usual, six silver sutures being used. This was a most difficult case, from the situation of the fistula. Nov. 3rd. There has been no escape ; but when sutures were removed, there was a little oozing of urine. 4th. Urine seen to be oozing through the os uteri. 17th. Under chloroform, os uteri was closed by nine silver sutures. Dec. 6th. Sutures removed ; no escape. 13th. Discharged cured.

CASE LXXVIII.—*Vesico-utero-vaginal fistula : Two operations : Relieved.*—A. M., æt. 47, married ; re-admitted into "London Surgical Home" March 7th, 1865. Was discharged from the Home on December 13th last, after having undergone two operations. There was no escape for three weeks after she left ; but latterly there has been, not, however, continually ; sometimes she does not lose a drop for even eight days. Catamenia regular.

Examination. A very small hole was discovered high up, beside the os uteri.

Operation, March 9th. Chloroformed this afternoon. I inserted three sutures. Opium suppository given. To pass her own water. 11th. Passes her own water regularly ; no escape. 12th. Has begun to menstruate : there was some escape in the night. 14th. Urine escapes as freely as before the operation. April 4th. Operated upon to-day. A small opening about the calibre of a probe, high up, beside the os uteri, was pared round, and the raw surfaces brought together by three sutures. Catheter tied in. 17th. Stitches removed this afternoon. 24th. Has been kept quite still in bed the last few days, and there has been no escape ; is to get up to-day. 26th. Now she is up and walks about, the urine escapes, but not to so great an extent as formerly. I advised her to go home and return in a few months, and have something done to the very small hole which now exists. 28th. Discharged relieved.

CASE LXXIX.—*Vesico-utero-vaginal fistula : fifteen months' duration : Four operations : Cure.*—C. W., æt. 29, married ; admitted into the "London

Surgical Home" October 30th, 1865. Has had eight children; had bad labour fifteen months ago, with a still-born child; was ill for two days, but no instruments were used. Since that time nearly all her water has escaped, but she can retain a little when walking about or when lying on her right side; she has submitted to three operations during the present year in the York Infirmary, but has not been cured. Catamenia quite regular.

Examination. Just within the cervix uteri, and behind the anterior lip of the os, there is a deep sulcus, in the centre of which is a small aperture communicating with the bladder.

Operation, November 9th. I pared the edges of the fistulous opening and brought them together by means of two silver sutures, introduced from side to side in the anterior lip, so as to leave the cavity of the cervix as patent as possible; the patient was removed to bed and a catheter tied in. This operation having been found ineffectual, I removed the sutures, and brought together the lips of the os uteri so as to close the canal entirely. December 1st. Passes her water *per urethram*, and there is no escape; sutures were removed on the 12th, when it was found that the opening was not closed. January 4th, 1866. The edges having been pared, and the projecting posterior lip of os having been amputated, the opening was closed by seven silver sutures. 14th. Sutures removed and a fistula still remained. February 1st. The edges were again pared; from 2nd to 5th she menstruated *per urethram*. 10th. Sutures removed, and fistula found to be completely closed. 12th. Returned home, perfectly cured.

C.—*Vesico-urethro-vaginal Fistulæ.*

Case LXXX.—*Vesico-urethro-vaginal fistula: Repeated operation by cauterization and silk sutures: Success on the first application of Bozeman's plan.*—Sarah M., æt. 33, married, admitted into St. Mary's Hospital on September 20th, 1853. She had had one child, and stated that her period of gestation extended over nine months, and that she was delivered by the aid of instruments of a large still-born female child, in the tenth month of utero-gestation. The labour was very long and severe, lasting four days and nights; and no urine passed during the last three days, neither was any catheter used. During the labour she felt something give way, with a great deal of pain, and she entirely lost all control over the sphincter ani. On the second day after the labour her urine escaped involuntarily in small quantities with each inspiration.

Upon examination, the perinæum was found completely lacerated, the rent also extending some distance along the posterior wall of the vagina. In addition to this the vagina was lacerated transversely across, exposing a large vesico-vaginal fistula, admitting easily three fingers.

The actual cautery was applied on December 2nd and 29th, 1853, and on January 3rd and March 28th, 1854.

The operation with silk sutures was perfomed on December 21st, 1853, and on February 1st, March 15th, and April 19th, 1854. The last operation, April 19th, was the most successful of all, and so far closed the fistula that it would barely admit a probe.

August 9th. She was operated upon with silver sutures without benefit. Subsequently, I was induced by favourable reports of other cases to lay open the whole of the urethra from the fistulous opening, hoping that it would have healed by granulation. In this, however, I was completely disappointed, and the patient was discharged from the hospital not only unbenefited, but actually much the worse for the last operation. She was re-admitted on Oct. 29th,

1858 ; and, on examination, it was found that the posterior half of the urethra was obliterated by the pressure of a hollow and pierced wooden ball, which she had worn for the purpose of conducting the urine into a bag, which she always wore. Consequently, all the urine escaped from the fistulous opening, now of the size of a shilling.

November 3rd. I operated in the following manner. The edges of the fistula were freely pared, then the urethra laid open, and the edges also pared ; a gum elastic catheter was introduced, and left in whilst the divided parts were brought together with eight silver sutures, and these sutures closed down with Bozeman's leaden button. I hoped thus to restore the urethra at the same time that the fistula was closed.

Nov. 17th. The button, or rather long plate, was removed ; and all was found to be firmly united, except about an inch of the end of the urethra, arising from one shot having been knocked off by repeatedly passing the catheter. She was, however, able to hold all her urine during the day ; and it was only when very soundly asleep at night that she lost any.

Nov. 24th. Three more silver sutures were put in, and a projecting notched plate applied so as to close all the urethra except the meatus itself.

December 4th. The button was removed, and the parts were all firmly united. She is able to retain her urine within the bladder for an hour at a time.

Remarks.—This case is worth mentioning as one of the most extensive fissures, perhaps, ever healed by a single operation, and as decisively showing the great advantages of Bozeman's plan of operation, which succeeded in closing a fissure four or five times as large as that which had been repeatedly treated by the older methods without success.

The complication introduced into the case by the division of the urethra caused it to present some resemblance to some of my former cases, in which the anterior portion of the urethra had suffered from the same injury which had produced the vesico-vaginal fistula.

Case LXXXI.—*Vesico-urethro-vaginal fistula: obliterated urethra of eight years' duration: One operation: Cure.*—Mrs B., æt. 42. This lady was sent to me by Mr. Ludlow, of Hinckley, Leicestershire ; but that gentleman did not attend her in her confinement.

History.—Eight years ago she was taken in labour with her first child, and after twenty-four hours of severe pains she became insensible. She believes that instruments were applied, but is unconscious of their nature : by their aid she was delivered of a still-born female child. She had fits for some time after her labour, and when she became conscious she found that her urine came away involuntarily, and it has continued to do so ever since. She has never menstruated since the accident.

Aug. 11th, 1860. On examination, I found a fistulous opening which would admit three fingers, situated about two inches up the vagina. The urethra was entirely occluded. There was a slight corrugation at the point where the meatus should have been. The vagina was large and roomy.

13th. Chloroform having been administered by Mr. Wratislaw, I proceeded to operate in the presence of Messrs. George Brown, Philip Harper, Spencer, and my son Mr. I. Boyer Brown. I first freely pared the edges of the fistula, which were very hard and cartilaginous, and passed through them five silver sutures. Having done this, I introduced a long sharp-pointed knife into the centre of the corrugated part which pointed out the situation of the meatus, and gently pushed it into the bladder, keeping as nearly as possible in the track of the urethra. Through the opening thus made, which was nearly two inches deep, a metallic catheter with bag attached was passed. The sutures

were then closed, one was simply twisted, but the other four were secured by my bar-clamps. In the evening the catheter became closed up with coagula, and it was found necessary to withdraw and cleanse it.

From this time she went on very well, having no escape.

On the 20th the bar-clamps were removed, and the whole opening was found perfectly healed. The catheter was retained in the bladder for a few days, after which, as the new urethra was found covered with mucous lining, it was withdrawn, and she was ordered to have her urine drawn off every four hours. In a month from the operation she could pass a certain quantity of her urine herself; but as the bladder had not entirely recovered its powers of contractility, she could not quite empty it. She was therefore directed to pass the catheter about three times a day. None of the urine escaped involuntarily.

Remarks.—Nothing could be more satisfactory than the success which attended the treatment of this very unusual condition, considering the length of time which had elapsed since the accident, and the total occlusion of the urethra. I have since heard from her. She menstruates regularly, and never loses any urine. She is still obliged to pass the catheter occasionally; but I doubt not that when the bladder has recovered its contractile power she will gradually be able to empty it without the use of the instrument.

CASE LXXXII.—*Vesico-urethro-vaginal fistula: Operation: Unrelieved.*—R. H.; readmitted into the "Home" April 24th, 1865. This patient was in the "Home" last year, when she was cured of recto-vaginal fistula. Operations were performed for the cure of the vesico-vaginal fistula, but owing to her not being in a good state of health, the parts would not heal. She was then advised to return home and come in again after the lapse of a few months. At the present time every drop of her urine escapes from her, but the fæces all pass *per vias naturales.*

On examination, disclosed a large aperture in the base of the bladder, and that there was no urethra.

Operation, May 4th. The parts round the fistula were found so exceedingly tense that I could not succeed in bringing the edges of the aperture in apposition. I therefore inserted two or three sutures to exert some pressure on them, and having made a free incision in the wall of the vagina so as to relieve tension, I next proceeded to make a new urethra, passing my knife through some of the lower fibres of the triangular ligament. The vagina was then plugged with oiled lint and cotton wool, a silver female catheter passed into the bladder through the new aperture, and the patient sent back to bed. May 18th. The patient was examined to-day and the stitches removed, but the incision made in the side of the vagina was found not to be sufficiently healed to allow of another operation; the catheter is now passed twice a day instead of being worn constantly. June 7th. On examination with a speculum this morning, the newly-made urethra was found to have given way entirely, and, as the parts have not a healthy aspect and she is herself not in particularly good health, she is advised to go home and return during the winter. June 9th. Discharged this day, unrelieved.

CASE LXXXIII.—*Vesico-urethro-vaginal fistula, with a large recto-vaginal fistula: One operation: Cure.*—J. M., æt. 21; first child; admitted into the "London Surgical Home" on the 30th of July, 1860.

History.—Was taken in labour on the 24th of April, and delivered on the 25th by craniotomy, having been in labour thirty-five hours. Ever since that time the urine has escaped *per vaginam.* Was sent up from the Leicester Infirmary by Mr. Paget.

On examination, a fistula was found situated immediately behind the symphysis pubis, transversely, destroying half the urethra ; the whole so tightly bound down by cicatrized bands, that it was almost impossible to pass a catheter from the meatus into the bladder.

On further examination, it was found that all the recto-vaginal septum, extending two inches up and including the whole of the base of the perinæum, had sloughed away, only a very superficial perinæum, composed merely of skin, remaining. This, therefore, was cut through, and the parts dressed with oiled lint. From this time, the whole vagina put on a most unhealthy, sloughy appearance, and for many weeks seemed to baffle every treatment, until Oct. 18th, when she regained her health sufficiently to admit of the division of a band which constricted the vagina, which quickly healed ; and on Oct. 25th, Mr. Brown operated, the patient being in the lithotomy position, under chloroform, Bozeman's button and six silver wires being used. At the same time Mr. Brown closed the recto-vaginal fistula up to the anus, using a button and three wires.

Nov. 3rd. Buttons taken off. The vesico-vaginal fistula was found quite healed, but the rectum was not healed, the edges looking unhealthy.

Remarks.—This case is one of great practical interest, from the fact of the patient being in such a bad state of health as to delay the first operation for three months. The propriety of the delay is proved by the rapidity of the union at the first operation. The rectum and perinæum have been since cured, except a very small recto-vaginal fistula, which causes no annoyance.

CASE LXXXIV.—*Vesico-urethro-vaginal fistula: five years' duration : Operation : Cure.*—Caroline McA., æt. 36, married; admitted into "London Surgical Home" February 7th, 1865. Married ten years ago ; has been a widow for last four years. Has only had one child, and that six years ago. She was in labour a week, and the child was then removed when dead by instruments. For about twelve months after this her water used to escape almost entirely, in whatever position she was in ; but now there is not the least loss when she is sitting or lying, and only a little when she stands or walks. Catamenia regular.

The patient was examined carefully, and though the urine could be seen trickling away, the exact site of the rupture, which was evidently small, could not be determined. There is an old partial rupture of the perinæum.

Operation, February 9th. This afternoon she was chloroformed and put on the table, and even then it was necessary to inject the bladder with water to find the fistula, when a small stream, not thicker than a probe, was seen flowing from a spot at the termination of the urethra. This rupture was pared round in the usual manner, and the edges brought together by two silver sutures. Put to bed ; opii gr. ij. ; to pass her own water 10th. There was some arterial hæmorrhage from the urethra last night, which came on after vomiting ; a small piece of ice was inserted into the vagina, which soon stopped the bleeding. 11th. Tongue clean ; no escape. Passes her water frequently, and in small quantities. 23rd. Sutures removed ; the fistula has quite healed. 25th. Discharged cured.

D.—*Recto-vesico-vaginal Fistulæ.*

CASE LXXXV.—*Recto-vesico-vaginal fistula : nine weeks' duration : Two operations: Relieved.*—Hannah H., æt. 44, married; admitted into the "London Surgical Home" April 7th, 1865. Has had seven children,—last nine weeks

ago, when she was in labour more than twenty-four hours, and instruments were used. She has kept her bed ever since, and has noticed that the greater part of her urine dribbles away *per vaginam*, and that some of her motions often pass by the same passage. During the confinement she lost the use of both her legs, and now her left leg is almost useless.

Examination disclosed a large rent in the base of the bladder just behind the neck, and a small hole high up in the vagina, communicating with the rectum. The whole of the muscles of the right leg are atrophied, but especially so the extensors of the toes. There is considerable loss of sensation over the dorsum of the foot.

Operation, April 13th. The vesico-vaginal fistula was operated upon this afternoon, when fifteen sutures were inserted. The operation was one of unusual difficulty, owing to the redundancy of the mucous membrane. May 7th. All the urine escaped from her, and on examination this morning the wound was found not to have healed in two places. May 11th. The two unhealed portions of the fistula were stitched up to-day, three sutures being inserted in one place and four in the other. She is not to have a catheter introduced, but to pass her own water every two hours. June 1st. Stitches removed; the right extremity of the fistula has a flabby granular appearance, and has not healed; the rest of the wound has quite closed. The recto-vaginal opening is not so large as it was. June 5th. Discharged relieved.

Re-admitted October 30th, 1865. Since her departure from the "Home" in June last, there has been nothing notable in this patient's case. She now loses nearly all her water, but no motion passes *per vaginam*, unless there is great relaxation of the bowels.

Operation, Nov. 2nd. I pared the edges of an irregular triangular aperture in the base of the bladder, and brought them together from above downwards by means of six silver sutures; the patient was then removed to bed, a male elastic catheter introduced and tied in, and opii gr. ij. introduced into the rectum. Dec. 7th. There is no loss of urine when in bed or sitting still; but when moving about all escapes from the urethra. Patient was put on the table this afternoon, and the actual cautery applied through a Ferguson's speculum to the edges of the recto-vaginal fistula. 14th. Goes home at her own request to-day, on account of domestic affairs, but has promised to return in a few months if necessary. Discharged very much relieved.

Case LXXXVI.—*Two vesico-vaginal fistulæ, and recto-vaginal fistula, first labour: four months' duration: Three operations: Cure.*—Mary J., æt. 25, married; admitted into the "London Surgical Home" May 5th, 1863. Married seventeen months, and delivered of first child at the commencement of the year. Was in labour three days, and delivered without instruments. Three days later found that she could retain neither urine nor fæces.

On examination, there was seen a fistula, about the size of a sixpence, behind the urethra, and a large fistula into the rectum, admitting the finger.

Operation, May 14th. The usual operation for the vesical fistula; five sutures used. Went on very well till May 26th, when symptoms of erysipelas appeared, which ultimately spread nearly all over the body. June 9th. Quite convalescent; the fistula, however, is not healed. July 2nd. Mr. Brown operated on the vesical fistula, using three silver sutures; then, having sliced the vagina on each side, he pared the edges of the rectal fistula, and brought them together with eight silver sutures. July 10th. On examination, only one suture could be found in the rectum, but the whole fistula was healed. All the vesical fistula was healed, but a fresh minute fistula was discovered. Sutures removed. August 20th. The remaining small fistula

was closed by four silver sutures. Sept. 2nd. Sutures removed ; fistula healed. 8th. Discharged cured and well.

CASE LXXXVII.—*Vesico and recto-vaginal fistula, with ruptured perinæum, first labour : three months' duration : One operation on each fistula : Cure.*—E. S. O., æt. 34, married ; admitted into the "London Surgical Home" April 10th, 1863. Three months ago was confined with her first child ; was five days in labour, and delivered, without instruments, of a very large child. Immediately after labour, the urine came away *per vaginam*, as did the fæces when her bowels were opened. She has been in a wretched state ever since.

On examination, there was found a vesico-vaginal fistula an inch and a half behind the urethra. The perinæum all sloughed away, with three inches of the recto-vaginal septum.

Operation, April 16th, 1863. The usual operation, nine silver sutures being inserted. 18th. Sutures removed ; the fistula quite healed. May 14th. Free incisions on each side of the recto-vaginal fistula. June 11th. Having pared the edges, Mr. Brown united them by six silver sutures. This enabled her to have complete control over the bowels ; so the perinæum was not further touched. July 11th. Discharged cured.

CASE LXXXVIII.—*Vesico- and recto-vaginal fistula, with occlusion of the vagina, first labour : sixteen years' duration : Four operations to occlude the vulva : Cure.*—Mary D., æt. 42, single ; admitted into the "London Surgical Home" April 1st, 1861. Sixteen years ago was delivered of her first and only child, having been in labour thirty-six hours, which was terminated by instruments. Soon after delivery, both fæces and urine escaped *per vaginam*, and for the last sixteen years she has been in a most loathsome condition.

On examination, the vagina was seen to be occluded, there being only an inch of cul-de-sac left ; there was a fistulous opening hardly admitting the point of a finger, leading into the bladder, and there was another fistula into the rectum, through which the os uteri could be felt.

Looking at the condition and age of the patient, Mr. Brown determined to close up the vagina ; thus allowing all secretions to pass per rectum.

April 4th, 1861. The edges of the vulva were pared, and three deep and seven superficial sutures inserted. A tube was introduced into the rectum. 6th. Deep sutures removed. 16th. The operation would have succeeded without doubt, but the patient is exceedingly troublesome. On this day the former sutures were removed, and a small fistula still left at the upper part of the vulva, pared and closed by a Bozeman button and six shot sutures. This did not heal ; in fact the opening, evidently interfered with, seemed to enlarge. May 20th. Again operated on two deep sutures, and three superficial used. 30th. Deep sutures all removed. Although the opening was quite healed, a day or two later an escape was observed. June 27th. The opening still left closed by three silver sutures ; by careful and constant watching, this healed, and when she left she had perfect control over her water by means of her sphincter ani.

Remarks.—This patient had lived many years on charity, and was extremely anxious not to be cured. Hence the many difficulties.

CASE LXXXIX.—*Complete rupture of perinæum, and recto-vaginal septum, with vesico-vaginal fistula : Four operations : Cure.*—E. S. O., æt. 34,

admitted into the "London Surgical Home." Married ten years; six miscarriages ; no children till Christmas, 1862. In labour five days ; delivered without instruments. Retained neither water nor fæces since that time.

On examination, perinæum was found completely ruptured, and three inches of the recto-vaginal septum sloughed away. Also a vesico-vaginal fistula. The patient very weak, and in bad health. Four operations were here required, first to cure the vesico-vaginal fistula. This was done first by incising the vagina, and then by healing the fistula, which was effected at the first operation ; then to close the rent in the recto-vaginal septum, May 14th ; then to close the perinæum, June 11th. She left perfectly well on July 11th, and quite able to retain both urine and fæces.

TABULAR STATEMENT OF CASES OF VESICO-VAGINAL FISTULA,

Operated upon at the "London Surgical Home."

No. of Case.	Age of Patient.	In which labour injury occurred.	Length of Labour.	Mode of Delivery.	Duration of Disease.	Nature of Lesion.	Date of Operation.	Number of Operations.	Result.
1	25	1st	4 days ..	Natural ..	16 months	An oblique fistula, admitting two fingers, involving anterior lip of os uteri.	June 1858	1	Cured.
2	35	2nd	2 days ..	Instruments	14 months	A fistula admitting one finger, close to and involving os uteri.	June 1858	1	Cured.
3	29	1st	3 days ..	Instruments	7 years..	Two openings, both small, close up to os uteri	July to Nov. 1858	6	Cured.
4	26	3rd	2 days ..	Turning ..	5 years..	A fistula admitting a bougie near os uteri, and running into cervix.	July 1858	1	Cured; has always since menstruated per urethram.
5	51	1st	6 days ..	Instruments	8 years..	A fistula as large as a florin, near os uteri	Oct. and Nov. 1858	2	Not cured, but large portion healed; discharged unruly.
6	25	1st	36 hours..	Instruments	4½ years..	A fistula as large as a half-crown, near os uteri; vagina much cicatrized.	Nov. 1858 to Jan. 1859.	3	Cured.
7	36	8th	14 hours..	Instruments	2½ years..	A fistula as large as a fourpenny-piece, at juncture of bladder with urethra.	Nov. 1858	2	Cured.
8	45	8th	27 hours..	Instruments	6½ years..	Three small fistulæ, near os uteri	Nov. 1858 to Mar. 1859.	4	Cured.
9	19	2nd	36 hours..	Forceps ..	5 months	A fistula as large as a florin, near os uteri	Jan. 1859	2	Cured.
10	28	1st	3 days ..	Natural ..		A large fistula	Dec. 1858	1	Not cured; health undermined by syphilis.
11	32		2 days ..	Natural ..	6 months	Fistula not large	Mar. to May 1859	4	Cured; in Jan. 1865, was safely delivered by forceps at full time.
12	44	5th	Long ..	Natural ..	1½ year ..	A fistula two and a half inches long, implicating anterior lip of os uteri.	Feb. and May 1859	2	Cured.
13	44		2 days ..	Instruments	13 years..	A fistula as large as a half-crown	Mar. and April 1859	3	Cured.
14	24	1st	Long ..	Instruments	3 years..	Fistula small	Mar. 1859	1	Cured.
15	56	8th	5 days ..	Natural ..	20 years..	Large fistula, vagina much cicatrized	May 1859	1	Died 18 days after operation, apparently from exhaustion.
16	27	1st	8 hours..	Instruments	2 years..	A fistula large enough to admit a finger; vagina much cicatrized.	June 1859	2	Not cured; fistula lessened, but would not consent to further treatment.
17	29	4th	12 hours..	Instruments	3 years..	Fistula admitting forefinger, near os uteri	Nov. 1859	1	Cured.
18	30	1st		Natural ..	10 months	Two fistulæ, one admitting a finger, another a No. 10 bougie.	Dec. 1859	2	Cured.
19	28	1st	30 hours..	Craniotomy	2 months	A large fistula, extending from urethra to os uteri ..	Mar. to Oct. 1860	4	Cured.
20	40	1st	Short, but pains stopped	Forceps ..	11 years..	A fistula admitting a thumb, midway between os uteri and urethra.	April and May 1860	2	Cured.

21	34	5th	Protracted	Natural ..	3 months	A small fistula, just behind urethra	April 1860	1	Died from pyæmia a week after operation.
22	21	1st	3 days ..	Instruments	3 years..	A fistula as large as a florin, involving half urethra ..	June and July 1860	2	Cured.
23	38	9th	7 days ..	Instruments	3 months	A fistula as large as a sixpence, at junction of urethra with bladder.	May 1860	1	Cured.
24	32	1st	24 hours..	Natural ..	3 months	A fistula an inch long, at junction of urethra with bladder.	Aug. 1862	2	Cured.
25	41	13th	52 hours..	Craniotomy	3 months	A transverse fistula two inches long; vagina much cicatrized.	Aug. and Sept. 1860	3	Cured { In both these cases, after the vesico-vaginal fistula had healed, the operation for ruptured perinæum was successfully performed.
*26	21	1st	35 hours..	Craniotomy	3 months	A fistula at junction of urethra with bladder; vagina cicatrized.	Oct. 1860	1	Cured { In both these cases, after the vesico-vaginal fistula had healed, the operation for ruptured perinæum was successfully performed.
27	27	3rd	3 days ..	Instruments	9 months	A large fistula, high up in vagina	Nov. 1860 to June 1861.	10	Not cured.
*28	34	1st	2 days ..	Instruments	4 years..	Two fistulæ, one admitting a thumb, the other smaller	Dec. 1860	1	Cured (2nd edit.).
29	30	6th	9 hours..	Instruments	2 months	Two fistulæ, one large and transverse, the other small and close to os uteri.	Jan. to Mar. 1861	4	Cured; three operations on the large, and one on the small fistula.
†30	41	6th	2 days ..	Craniotomy	14 months	A large fistula, extending from os uteri (which was torn) to within an inch of urethra.	Feb. 1861	1	Cured.
‡31	34	1st	5 days ..	Natural ..	11 years..	Small fistula, near os uteri	Mar. 1861	1	Cured.
§32	40	8th	28 hours..	Natural ..	5½ years..	A large vesico-vaginal fistula, three to four inches long, and a large recto-vaginal fistula.	Mar. to June 1861	4	Not cured; general health very bad.
33	26	1st	10 hours..	Instruments	14 months	Fistula small; vagina was only an inch long, the effect of cicatrization.	April 1861	1	Cured.
34	42	1st	36 hours..	Instruments	16 years..	The vagina nearly occluded, a fistula admitting finger into bladder; urethra gone, and also a recto-vaginal fistula.	April to June 1861	4	Cured; in this case the vulva was closed, and she passed urine per rectum.
35	26	1st	77 hours..	Natural ..	3 months	A fistula the size of a bean, near os uteri	April and May 1861	3	Cured.
36	26	2nd	12 hours..	Natural ..	2 years..	A triangular fistula into os uteri	May 1861	1	Cured; in Aug. 1862, was safely delivered at full period.
37	30	2nd	3 days ..	Craniotomy	6 months	A very bad case; most of the base of bladder sloughed away.	June 1861 to July 1862.	11	Not cured.
38	42	2nd	3 days ..	Forceps ..	5 years..	A large irregular transverse fistula	June 1861	1	Cured.
39	37	3rd	3 days ..	Forceps ..	3 years..	A fistula the size of a pea, near os uteri	July 1861	1	Cured.
40	66	5th	24 hours..	Natural ..	18 years..	A very large fistula, one inch above urethra	Sept. 1861	1	Cured.
41	39	5th	44 hours..	Instruments	2 months	A fistula about the size of a sixpence	Dec. 1861	1	Relieved; loses hardly any water.
42	28	2nd	48 hours..	Instruments	1 year ..	A fistula about half an inch long; os uteri shut off by cicatrization.	Dec. 1861	1	Cured; menstruates per urethram
43	47	8th	40 hours..	Instruments	Some years	A transverse fistula, three inches long, and gaping ..	Nov. 1861	1	Not cured; general health bad.
44	35	1st	28 hours..	Breech presentation, natural.	1 year ..	A gaping fistula, at junction of urethra with bladder; urethra impervious.	Nov. 1861 to June 1862.	7	Would not submit to further treatment.

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* The first twenty-six cases and No. 28 are published in the second edition of my work on "Surgical Diseases of Women.

† Second edition of "Diseases of Women." ‡ Under care of Mr. Nunn. § Discharged incurable.

No. of Case.	Age of Patient.	In which labour injury occurred.	Length of Labour.	Mode of Delivery.	Duration of Disease.	Nature of Lesion.	Date of Operation.	Number of Operations.	Result.
45	30	5th	4 days ..	Natural ..	9 months	A fistula about the size of a shilling	Dec. 1861	1	Cured.
46	42	4th	24 hours..	Instruments	2 months	A transverse fistula, one inch long, with inverted edges	Jan. 1862	2	Cured.
47	32	1st	3 days ..	Natural ..	7 years..	A fistula as large as a shilling, midway in vagina ..	Jan. and Feb. 1862	3	Cured.
48	39	4th	36 hours..	Natural ..	2 months	A long fistula, involving anterior lip of os uteri ..	Feb. 1862	1	Cured.
49	34	1st	72 hours..	Forceps ..	2 years..	A large rent across the floor of bladder..	Feb. 1862 to Feb. 1864.	4	Cured.
50	38	4th	78 hours..	Forceps ..	10 months	A very large transverse fistula	May 1862	1	Cured; 17 sutures used.
51	43	15th	3 days ..	Craniotomy	1 year ..	A transverse fistula, half an inch long	July 1862	1	Cured.
52	33	3rd	36 hours..	Forceps ..	10 months	A small fistula, midway in vagina	July 1862	1	Cured.
53	33	2nd	48 hours..	Natural ..	12 years..	The anterior lip of os uteri was sloughed away, and there was a fistulous communication between the bladder and cervix uteri.	July 1862	1	Cured.
54	44	1st	72 hours..	Craniotomy	5 years..	A fistula as large as a sixpence	Nov. 1862	1	Cured.
55	33	5th	28 hours..	Forceps ..	10 months	A gaping fistula, an inch and a half long, midway in vagina, which was much cicatrized.	Dec. 1862	1	Cured.
56	35	5th	50 hours..	Natural ..	4 months	Large transverse fistula, extending across vagina, about an inch behind urethra.	Feb. 1863	1	Cured.
57	26	1st	31 hours..	Forceps ..	4 months	Small fistula, situated far back under the pubis; vagina much cicatrized.	Mar. 1863	1	Cured.
58	34	1st	5 days ..	Natural ..	3 months	A large fistula, an inch and a half behind the urethra; also sloughing of rectum.	April 1863	1	Cured; the bowel afterward- cured in one operation.
59	25	1st	3 days ..	Natural ..	4 months	Two fistulæ, and a recto-vaginal fistula	May to Aug. 1863	3	Cured; the bowel cured at same time.
60	23	1st	Tedious, child dead	Natural ..	13 months	A fistula of irregular shape, an inch and a half long; vagina much cicatrized.	July 1863	1	Cured.
61	24	2nd	4½ days..	Instruments	2 months	An enormous fistula, the whole floor of the bladder being sloughed away.	Sept. to Dec. 1863	4	Cured.
62	35	1st	2 days ..	Natural ..	8 years..	Fistula admitting large catheter; vagina occluded, all but minute orifice.	Oct. and Nov. 1863	2	Cured.
63	62	2nd	7 days ..	Instruments	40 years..	Large irregular fistula, extending close up to os uteri	Nov. 1862	1	Unsuccessful.
64	30				9 years..	Fistula admitting two fingers, made after lithotomy..	Nov. 1863	1	Cured.
65	33	5th	24 hours..	Natural ..	6 months	Small fistula near the urethra	April 1864	1	Cured.
66	22	1st	Tedious ..	Natural ..	6 months	Fistula size of a threepenny-piece, midway between os uteri and urethra.	May 1864	1	Cured.
67	47	9th	Short ..	Natural ..	15 years..	Fistula size of a shilling, close to os uteri	Oct. to Dec. 1864	2	Cured.
68	19	1st	5 days ..	Natural ..	15 months	A large fistula..	Dec. 1864	2	Cured.
69	37	6th	3 days ..	Instruments	4 months	A very large fistula	Dec. 1864	2	Cured.
70	39	4th	Slow, shoulder	Instruments	13 months	A large irregular fistula, near os uteri, admitting fore-finger.	Feb. 1865	1	Cured.

CHAPTER V.

RECTO-VAGINAL FISTULA.

By this term is understood an opening between the rectum and vagina, through which either the fæces or flatus may pass from the bowel into the vagina. Although this condition is not of so distressing a nature as vesico-vaginal fistula, still it is one which is extremely annoying to the patient, and often produces so much irritation of the vagina as to induce inflammation and excoriation of that organ. Of course the amount of inconvenience will depend upon the size of the opening.

Causes. — Recto-vaginal fistula may be produced (1) by recto-vaginal abscess; (2) by stricture of the rectum; (3) by laceration during delivery, with or without the use of instruments; (4) by sloughing after long impaction of the head; (5) by corroding cancer, either of the rectum or of the vagina; or (6) it may remain as the consequence of imperfect closure of a complete rupture of the perinæum.

Treatment.—This will depend upon the nature of the cause.

1. If the lesion arise from recto-vaginal abscess, it will very often yield to the application of caustics; or it may be cured by laying open the rectum from the fistula to the anus, as in the operation for fistula *in ano*, and by subsequent dressings, so as to insure healing by granulation.

2. If it be produced by stricture of the rectum and consequent ulceration of the recto-vaginal septum, division of the stricture simply will frequently be sufficient for the healing of the aperture; if this course fails, caustics, or even laying open the bowel, as just described, may be requisite.

3. If it arise from laceration during delivery, whether by the use of instruments or by the force of the labour pains, and the rectum be torn without involving rupture of the perinæum, then, putting the patient immediately in a quiescent

state with the knees flexed, confining the bowels by opium, and applying a well-adapted perinæal bandage, will generally suffice for the healing of the laceration.

4. If it arise from sloughing after long impaction of the head, as soon as all sloughing has disappeared, the edges may be pared, and then brought together by metallic sutures, just as is done in cases of vesico-vaginal fistula. If the opening be not larger than the head of a probe, the acetum lyttæ or actual cautery may be sufficient to effect contraction and closure; and these means I have found successful, even when the opening has been larger. It will often be more advisable to apply the cautery *per vaginam* than *per rectum*. Another plan which I have found successful is to pass three or four threads of twine through the opening, bringing one end out of the rectum, the other out of the vagina, and moving the threads daily for several days, thus producing a healthy granulating surface, which heals on their removal.

5. In cases where the fistula is produced by corroding cancer of the rectum or vagina, there is nothing to be done by operative treatment, and our only resource is to allay the irritation by opium, and cleanse the parts by the frequent injection of warm water.

6. When the fistula is a sequel of imperfect closure of a lacerated perinæum, the introduction of a metallic suture, or the acetum lyttæ or actual cautery may be resorted to; the size of the fistula and other circumstances determining which is preferable.

7. A very rare cause of recto-vaginal fistula came under my observation in 1864. The lesion had followed intra- and extra-uterine pregnancy. The case had been under the care of Dr. Pennefather, of Tottenham, and is described in the *Lancet* for 1863 (vol. I. p. 688). Intra-uterine pregnancy had gone on to the full period, and the woman was safely delivered. The extra-uterine fœtus continued in the cavity of the peritonæum, and in the end descended into the pouch between the uterus and the rectum. The recto-vaginal septum sloughed, and through the aperture thus formed, and by way of the vagina, Mr. Pennefather took away the fœtus (which

had long been dead) piecemeal. After the removal of the fœtus the abnormal passage closed, but subsequently the cicatrix gave way.

Recto-vaginal fistula may be situated in any part of the posterior wall of the vagina, or it may extend from the anus upwards. The lesion may be a simple opening, or the entire recto-vaginal septum may be destroyed, from the anus to the os uteri. The fistula may be round, oblong, or irregular in form, longitudinal or transverse. When the fistula is formed by the entire destruction of the recto-vaginal septum from the anus to the os uteri, I term it complete; when it is formed by an opening through the septum, only partially destroying the latter, and not extending to the anus, I term it incomplete. The different forms of lesion can only be dealt with satisfactorily by different modes of treatment, as already described. These modes are illustrated in the accompanying cases.

After-treatment.—This consists in great attention to cleanliness, but more especially in constipation of the bowels by the frequent administration of opium. It is also necessary to confine the patient to one position on her side, and to keep her on generous and dry food. It will be observed that the success of the operation for this lesion is much greater than for vesico-vaginal fistula, on account of the great facilities offered by the use of opium in keeping the parts perfectly quiet after the operation, and also because of the more solid character of the contents of the perforated viscus.

Cases.

Case I.—*Recto-vaginal fistula from abscess in the rectum, of several years' standing: Cure.*—I was requested by Sir C. Locock, in the month of February, 1853, to visit a single lady, æt. 52, who had been suffering for four or five years from vaginitis, inflammation of the labia, &c., and had for some time past observed an occasional discharge of fæcal matter from the vagina. The most diligent search had, however, failed to discover any recto-vaginal opening, although several eminent practitioners had examined her. As she had had a deep perinæal abscess, and also an abscess in the rectum some years before, it was the opinion of Sir C. Locock that there must exist some undiscovered communication between the two passages; and in this opinion I fully concurred. I examined the rectum carefully with the rectum speculum, but found nothing. I then examined the vagina most carefully with the uterine speculum, and after some difficulty discovered a small sore about two inches up the passage, in its posterior wall; this was evidently the seat of the opening, but the mucous membrane of the rectum seemed to

close it, or to fall over it, as a valve, so that the finger introduced into the rectum could not be brought in contact with the end of the probe when pressed against the fistulous opening in the vagina, although it could be felt in the rectum by gently moving it.

Operation.—Feb. 16th. The patient being placed under chloroform, I first applied the actual cautery to the fistula per vaginam, and then divided the sphincter ani on both sides. Cold-water dressing was applied, and forty drops of laudanum administered. Feb. 17th. Severe sickness from the chloroform, which was relieved by twenty drops of chloroform given on sugar. Bowels relieved with pain. 18th, 19th, 20th. Much the same. 23rd. An external pile, which created considerable inconvenience, was excised. 25th. Bowels acted without pain ; no fæcal matter or flatus has escaped through the opening since the operation. From this time the patient suffered no inconvenience from the fistula.

Case II.—*Small recto-vaginal opening : Cure.*—Mrs. W., æt. 34, mother of one child, consulted me Nov. 30, 1853, and stated that since her confinement she had passed flatus per vaginam. On examination I found, about one inch within the rectum, a small fistulous opening in the septum, through which I could just pass the head of a probe. I then attached a piece of twine to the eye of the probe, and drew it through the opening. I twisted round this a piece of lint, which I drew into the fistulous opening, and then tied the two ends of the twine together over the perinæum. This produced, in twenty-four hours, inflammation, and subsequently the secretion of healthy pus, and in a week after the removal of the lint, the fistula was found closed. The patient has continued well to the present time, having been, in the interim, delivered of a second child.

Case III.—*Large recto-vaginal fistula : Cure.*—Mrs. D., æt. 47, consulted me in 1852. Was confined of her last child seventeen years ago, by the aid of instruments, and has ever since suffered from the passage of fæces per vaginam. On examination I found, about an inch above the anus, an opening sufficiently large to admit the point of the little finger. To close this fistula I applied the actual cautery freely and repeatedly, and succeeded in my object in the course of a few weeks. My first intention, indeed, was to reduce the size of the opening by the cautery, and then to pare and bring together the edges by suture ; but this latter operation was rendered unnecessary by reason of the success of the cauterization.

Case IV.—*Recto-vaginal fistula : Operation : Cure.*—Mrs. S., æt. 25. June 2nd, 1854, I was requested by Mr. Gay to see this lady, who gave the following history of herself :—" Has been married six years. Her first child was born before she was twenty. The labour was very protracted ; instruments were used, and the perinæum was completely lacerated. From that period until October last she had no control over her bowels. In the month of October last an operation was performed, but she still had no control over her motions, and the whole of the fæcal matter passed into the vagina ; and she considered herself in a worse condition than before the operation. Two months subsequently to this, an operation was performed for the recto-vaginal opening, but the next day the sutures were torn out by violent sickness occurring. At the end of two months more another operation was performed, which partially succeeded, but gave her no essential benefit."

Upon examination, I found an opening large enough to admit my finger just within the anus. I gave it as my opinion that no operation for the fistula would be of any avail without dividing the partially restored perinæum, and commencing the operation *de novo*. The patient was,

therefore, placed under the influence of chloroform ; and I operated in my usual manner for ruptured perinæum, taking great care to dissect the mucous membrane freely off around the opening, and to bring the parts very closely into apposition. The sphincter was freely divided on either side. Metallic clamps were used instead of quill sutures, and answered very nicely.

The after-treatment was as usual ; and on the fourth day the deep sutures were removed. During the subsequent two or three days she complained of a little wind passing through the vagina ; but it gradually decreased in quantity ; and on June 26th I made a very careful examination, and found all parts perfectly sound. No fluid escapes through the vagina even when an enema is thrown up ; and she has perfect control over the sphincter. A fortnight after this she left town for Bristol, perfectly well in every way.

Case V.—*Recto-vaginal fistula and prolapsus uteri : Cured by one operation.*—This patient was sent to be under my care in St. Mary's Hospital, in March, 1857, by Mr. Symmonds, of Bures, Suffolk. She was thirty-eight years old, the mother of several children, the last being born a twelvemonth ago. The labour being long and tedious, the perinæum was ruptured up to the sphincter ; the laceration, partially united, leaving a recto-vaginal fistula the size of a fourpenny-piece, through which the motions were constantly passing, rendering the poor woman's life very miserable and wretched. When lying down, the os and cervix uteri prolapsed externally, and, in the erect posture, the whole of the uterus came down. There was thus a double affection to deal with, which I remedied by a plastic operation on the 25th of March, making the horse-shoe denudation, and taking care that it extended beyond the fistulous opening, the edges of which were pared. Then I divided the remaining portion of the recto-vaginal septum through the sphincter, the parts being brought nicely into apposition by the quill suture, pieces of gutta-percha being used instead of the quills ; and lastly, the interrupted sutures were applied.

March 27th. The deep sutures removed.

April 4th. Superficial sutures removed ; parts quite healed. The patient soon after this left the hospital quite well ; and I have since seen her with Mr. Symmonds, and examined her, and found her perfectly well.

This is a very interesting case, on account of the two affections being cured by one operation, a procedure which had never been attempted before, and which, it is evident, is the quickest and best mode of operating when practicable.

Case VI.—*Recto-vaginal and Vesico-vaginal fistula : Operation : New urethra formed : Cure.*—The patient had a very large recto-vaginal fistula, and likewise an extensive vesico-vaginal fistula. The whole of the urethra and all the neck of the bladder had sloughed away. The opening into the rectum was completely across the vagina, and even up the sides of the rami of the ischium. The vagina was so puckered that the finger could not be introduced. There were three apparent culs-de-sac when I first saw the case, each admitting the tip of the finger. I sliced the parts freely, and dilated them. Subsequently I closed the recto-vaginal and vesico-vaginal openings, and made the patient a perfectly new urethra. After three months' treatment the patient was completely cured.

Case VII. — *Recto-vaginal fistula, 35 years' duration : Operation : Cure.*—In January, 1861, Mrs. M., æt. 60, married, was admitted into the "Home." She had been delivered of her first child thirty-five years previously. Instruments were then used after she had been in labour twenty-four hours ; but their first employment proved ineffectual. Twelve hours

afterwards instruments were again used, and with a better result. The child was dead. Two days after delivery she found that all her motions came through the vagina, and through this passage the fæces ever afterwards continued to be ejected until she was operated upon by me in the Home. Six years after her first child, she was delivered of a second. In this instance also instruments were used after she had been in labour twenty-four hours. The patient is a bathing-woman in one of our watering-places on the south-eastern coast, but is a person of better education and better birth than her position would indicate. She kept herself singularly clean, although for thirty-five years all her motions had escaped per vaginam. The fistula was situated right in the centre of the vagina. Fortunately, there was no puckering of the passage; and the bladder and perinæum had suffered no injury. The operation consisted in paring freely the edges of the opening, as in vesico-vaginal fistula; then introducing needles, with the wire ready prepared. The whole of the opening was closed by several sutures. On the tenth day the sutures were removed, the pared edges had firmly united, and the motions were passing properly through the anus. In the short space of ten days, then, this poor creature was quite cured.

Case VIII.—*Recto-vaginal fistula, with ruptured perinæum: seven months' duration: Three operations: Cure.*—Mrs. K., æt. 43; admitted into the "London Surgical Home" November 4th, 1865. Has had nine children, the youngest being fifteen months old. Since her fourth confinement has suffered from a certain degree of prolapsus. Last April she caught a severe cold, had a violent attack of flooding, and an abscess formed in the right labium. This abscess was allowed to burst, and, after discharging for some weeks, she found that flatus and thin fæces sometimes passed into the vagina. Latterly she has had pain in defæcation. She is rather hysterical.

Examination.—Just within the orifice of the vagina, and in the floor, there is a small round aperture, which communicates with the rectum by a canal, which, passing upwards and backwards, opens into the rectum two inches from the anus. There is a deep fissure of the rectum; the perinæum is also found to be partially ruptured.

November 23rd. I introduced a curved blunt-pointed bistoury into the fistula, bringing it out in the rectum, and then divided the septum through the perinæum, converting the case into one of complete rupture. The operation for ruptured perinæum was then performed, and the sphincter ani divided in the line of the fissure.

The usual after-treatment was carried out, and the patient left the "Home" December 23rd, apparently cured. She however returned on February 26th, 1866, with the following account; viz., that a week after she left the "Home" she felt flatus pass into the vagina; that constipation soon came on, and that on using an enema to relieve the bowels, some fluid always passed into the vagina. Defæcation wasattended by a good deal of pain.

A fistulous opening was with some difficulty found at the verge of the anus in front. On introducing a probe, canals were discovered passing in various directions. On the 1st of March she was placed on the table under chloroform, and an attempt made to slit up the sinuses, when a communication was established rather freely with the vagina. I therefore completed the division of the whole septum outwards, slit up every sinus I could find, and dressed the parts with a view to healing by granulation, so as to procure a healthy state of parts for future operation.

On the 6th of April the parts were quite healed, and I performed the usual operation for complete rupture of the perinæum. The ordinary treatment was adopted, and she left the "Home" on May 12th. A very careful examination, made by touch, inspection, and injection, showed that she was cured.

CHAPTER VI.

LACERATIONS AND CICATRICES OF THE VAGINA.

Laceration of the vagina may result either from forcible expulsive efforts during labour, or from the application of instruments, or from violent attempts at coition in young females; and the consequences are often of so serious a nature as to demand the careful attention of the surgeon. Because, if the laceration be considerable, or especially if the vagina be lacerated in two or more places at the same time, with or without partial rupture of the perinæum, the great degree of contraction caused by the cicatrization of the lacerated surfaces when left to themselves sometimes produces such an amount of occlusion of the vagina as to prevent sexual intercourse. Hence it is of importance that immediately after the accident the wound should be plugged with lint smeared with ointment or oil, so as to prevent the puckering which might otherwise result. If this treatment is neglected in the first instance, and severe contractions by cicatrization ensue, then the contracted parts should be freely divided and dressed as just described. My chief object in commenting upon this accident is to insist on the importance of careful examination and proper treatment immediately after its occurrence.

Besides the cases appended, several of those of vesico-vaginal fistula, in which cicatrization of the vagina had taken place, illustrate the surgical procedure necessary, so far as the removal of the contractions is concerned.

Case I.—*Lacerated vagina.*—Mrs. E. I. was called by Mr. Taylor, of Queen's Road, Bayswater, in consultation with him and Mr. Prescott Hewett, on account of a laceration of the vagina which had just occurred to this lady during delivery, although no instruments were used. The alarming symptom was the profuse hæmorrhage, which threatened the life of the patient.

However, when we saw her together, a clot had formed in the vagina and acted as a plug, controlling and almost stopping the hæmorrhage. It was therefore judged expedient to leave this clot undisturbed until the bleeding from the torn surface had ceased, and then to remove it and to plug the vagina with pledgets of lint soaked in oil, in order to keep up constant dilatation, and secure granulation without contraction. This plan was carried out with success.

Case II.—*Contraction of the vagina after laceration: Incontinence of urine: Cure.*—Mary M., æt. 27, married; admitted into St. Mary's Hospital Dec. 23rd, 1853; was confined of her first child about nine weeks ago, after a labour extending from a Thursday evening to the following Sunday morning. The head of the child was very large, and was born, according to her statement, two hours before the body. No instruments were used. Soon after she found the urine and fæces come away involuntarily, and apparently through the vagina; but after the lapse of a month the excretions passed naturally, and she regained control over the sphincter, except that, when standing up, the urine escaped involuntarily. On examination, the perinæum, which had been ruptured, was found tightly cicatrized; the vagina so puckered that it formed a *cul-de-sac* on one side, the size of a finger, and the cicatrix so dragged upon the bladder as to prevent its sphincter acting effectually when she stood up.

I divided the anterior margin of the cicatrized perinæum and the bands of the vagina, and then applied pledgets of lint dipped in oil, to keep the cut surfaces apart and on the stretch. She was then placed on a water-cushion and a catheter introduced into the bladder with a bag attached to its extremity.

Jan. 14th. Has gone on very well, but there is another band felt running across the left side of the vagina. This was divided and dressed in the same way as the previous incisions. 27th. Feels quite well. Has perfect control over her bladder when standing. Discharged cured.

CHAPTER VII.

TUMOURS OF THE UTERUS.

In this chapter I propose to treat of the several morbid growths from the uterus, including fibrous tumours; glandular, cellular, and vesicular polypi; erectile tumours; and cauliflower excrescence of the os uteri.

I. Fibrous Tumours of the Uterus.

The pathology of fibrous tumours of the womb has been so fully described in many well-known works on surgery and midwifery that it is unnecessary for me to give more than a brief summary of the subject, particularly as my principal business is the elucidation of the surgical treatment of such morbid growths.

Three forms of fibrous tumours are distinguished according to the direction of their growth,—one being imbedded in the walls of the uterus, but encroaching upon its cavity; a second projecting from the *external* surface; the third growing from some part of the *inner* surface of the uterus, or from its neck or mouth, usually considerably contracted at the point of attachment, and more or less filling up the uterine cavity, or protruding from it into the vagina. To the two first-named forms of morbid growth the term fibrous tumour of the uterus is more particularly applied, whilst the last-named is best known as a pedunculate fibrous tumour, or fibrous polypus.

Although these three varieties are alike in their histological characters, yet, in a practical point of view, and especially in respect to their relative amenability to treatment, the difference between them is sufficiently marked. Indeed, the

removal or destruction of the first-named variety has been regarded as generally impracticable; and the consequence is, that in most instances palliative measures alone have been tried. But a mode of treatment can now be suggested from which permanently favourable results may be anticipated even in this more serious form of uterine tumour.

The tissue of the so-called fibrous tumours of the womb is not truly fibrous, but intrinsically the same as that of the muscular wall in which these growths originate, although denser and firmer. The history of these growths is determined by the direction, and by the original site of their development. They may grow in the thickness of the uterine walls, causing the latter in course of time to bulge on both sides; or their development may take place from the outer surface; or, again, from the inner surface of the uterus. Under either of the two latter conditions, they may become converted into polypi by what is to be regarded as a sort of natural attempt at their expulsion from the uterine substance, made, we may presume, by the healthy muscular tissue contracting upon them as foreign bodies. At times, in fact, this spontaneous effort at expulsion is successful, either by a progressive constriction and ultimate rupture of the pedicle, or by a process of extrusion accompanied by a breaking up of the substance of the tumour.

When these polypoid tumours make their way towards the external surface of the uterus, they become sub-peritoneal, the peritoneum investing them externally; on the contrary, when they protrude from the internal surface they are invested by the mucous membrane of the uterus. The sub-peritoneal uterine tumours often attain a large size, and are frequently multiple; but except by pressure and consequent interference with the functions of neighbouring organs, they are seldom prejudicial to the patient, and their presence often remains entirely unknown until an examination after death reveals it. Not so, however, fibrous tumours in the walls, encroaching on the cavity of the uterus, or hanging from its interior by a more or less distinct peduncle. These varieties are almost invariably the cause of much suffering, and of symptoms of

serious moment to the patient, and to them our attention will be almost exclusively directed.

Further, the future history of fibrous tumours and polypi is, as we have said, partly determined by the original site of their development. When they grow close to the opening of the Fallopian tubes, they are always small in size; when near the fundus, and, as is more common, rather on the posterior wall of the uterus, they may continue to grow to a large size, increasing much the dimensions of the womb, and now and then give rise to the supposition of pregnancy. When, again, the tumour takes its rise about the cervix or os uteri, it commonly at once assumes the polypoid form, and projects into the vagina; yet instances now and then occur where the morbid growth even then takes an upward direction, and becomes hidden within the cavity of the womb. When the fibrous tumours arise low down, they produce less disturbance of the uterine functions than such as are situated internally; whilst those which bulge from the interior, or grow from its fundus, are not only attended by more aggravated symptoms, but cause also more considerable displacements of the womb. For instance, polypi of the fundus are not seldom the cause of inversion of the uterus. Lastly, the internal pedunculate variety, when it acquires the size of an orange, generally induces uterine contractions, which cause its extrusion into the vagina; and, as an ulterior consequence, the dragging down, and now and then the inversion, of the uterus.

The pedicle or stalk of fibrous polypi is of the same nature as that of their substance generally; but it is usually covered also by a layer of the ordinary muscular tissue of the uterus, pushed before the growing tumour at its emergence from within it. The extent of this covering will vary according to the site of the tumour at its origin within the substance of the uterus, to its size, and to the extensibility of the fibres. Hence we find this lamina of normal uterine tissue at times extending over the base, and in rare examples over the entire surface of the polypus; of which, consequently, it forms a partial or complete covering.

Fibrous polypi are ill supplied with blood, one or two small

vessels only being discovered entering their substance through the pedicle; but so small, frequently, that their existence may readily be overlooked. Moreover, the vascular supply is less distinct in older and larger tumours; indeed, in many such it appears to be eventually entirely cut off. These facts have rendered it a puzzle to many pathologists to account for the excessive hæmorrhage which proceeds from fibrous tumours growing from within the uterus. But the difficulty vanishes when it is remembered that these tumours are covered by the mucous lining of the uterus, with its submucous network of vessels, and that as extraneous bodies they exercise a reflex action upon the whole inner surface of the uterus, and thereby induce a determination of blood to it, tending to hæmorrhage. The circumstance observed of actual bleeding from the surface of polypi themselves is also explicable from the presence of the mucous membrane over them, the extent of which is directly proportional to the size of the tumour, and inversely to that of the uterus.

Another consequence of the mucous covering of polypi is that they are, as Dr. Charles Johnson has remarked, not altogether insensible. Moreover, it is in this envelope that œdema sometimes makes its appearance, and that ulceration is set up.

The development of fibrous tumours of the uterus is, speaking in general terms, restricted to the procreative epoch of female life. Until the uterine excitement of puberty takes place, and the menstrual flow is set up, we do not find fibrous tumours developed in the womb; and, on the other hand, it may be generally asserted that they do not originate after the cessation of the catamenia, or after the fiftieth year, although such tumours, arisen previously, may at a later period proceed with their growth. But usually, growth is feeble, or comes to a stand-still after the climacteric period. All causes which induce increased functional activity and determination of blood to the womb, favour the development and growth of fibrous tumours; hence they tend to more rapid development at each menstrual period, by sexual excitement, and by pregnancy.

Another circumstance peculiar to fibrous tumours is, that

they may degenerate. The destruction of the enveloping mucous membrane and the subsequent detachment of the tumour, occasionally in a broken state, have already been spoken of; but another termination may await the morbid growth, viz., a more or less complete degeneration and the deposition of calcareous matter. This transformation now and then happens to those tumours which grow from the outside of the uterus, but exceedingly seldom to those produced within it. Occasionally a destructive inflammatory process originates within their substance, an event occurring especially during pregnancy, and which leads to serous and purulent extravasation in their substance and to final softening.

Cancerous degeneration may be affirmed never to occur; although the coincidence of cancer of the uterus and polypus is a possible event, and said to have been observed.

Fibrous tumours of the uterus vary exceedingly in size, and also, but in a less degree, in density and firmness. Their effects on the health and well-being of patients are not, however, in direct relation with their dimensions; for at times a small tumour causes more suffering and more loss of blood than a larger one.

Again, they differ in consistence, as shown on section. Some are solid and very firm and elastic to the touch, and, among pedunculate tumours, some occasionally occur filled with a grumous or with a jelly-like matter, whilst others, as described by Boivin and Dugès, are completely hollow. But there are more of an intermediate character between the solid and the truly hollow polypi, known as fibro-cystic tumours, on account of their interior presenting numerous spaces or cysts, usually filled with serous effusion. These cystic tumours may, in many instances, owe their peculiarity to rapid development, but in others it is due, as in very many solid tumours, to the accretion of several similar morbid growths, originally separate and of independent development. This concrete form is mostly evidenced by the circular arrangement of the constituent fibres around several centres; and we may adduce this complex constitution of tumours to explain what Dr. Denman and others have noted as

of occasional occurrence, the presence of two, and, still more rarely, of more pedicles. A remarkable instance of a uterine tumour containing a gelatinous substance and hair, is recorded by Mr. Langstaff in the *Medico-Chirurgical Transactions*, vol. XVII. p. 63.

Two, and sometimes more, separate tumours in different stages of growth are met with growing from the uterus, and the possibility of this occurrence renders an accurate examination the more necessary. Should a large polypus, for instance, be removed, little benefit might be conferred upon the patient, if a smaller similar growth were overlooked and left behind to act as a source of sanguineous determination and discharge from the uterus. Dr. Barnes, in his "Essay on Uterine Polypus" (1854), calls attention to this point, and mentions a case in illustration, wherein, after removing a large polypus, he found a small one, about the size of a pea, growing from the os uteri, close to the point of attachment of the one excised.

On rare occasions a variety of fibrous tumour is met with in the uterus, possessing such inherent powers of growth that, after the mass has been detached from the stalk, the latter recommences the development of a new tumour, or, if a portion of the growth has been removed, the remainder proceeds to grow, and this too at a very rapid rate. One such case has occurred in my practice, and is hereafter recorded as Case XLI. Another example has been well described by my friend Dr. Elkington in the first part of the *Journal of the Obstetrical Society*.

With respect to pedunculated tumours, these differ extremely in size, varying from that of a pea to that of a child's head. One was excised in the Meath Hospital (Churchill, *Diseases of Women*, p. 201), some years ago, more than fourteen inches in length, and four or five in its extreme diameter; and many similar examples are mentioned by authors.

The surface of these tumours is generally smooth, and they feel firm and elastic. In colour they differ, both from their degree of vascularity and from contact with the air. Some

look nearly white, or pale yellow; whilst others are dark red, reddish-brown, and even purplish. Their appearance may be further modified by the occurrence of ulceration of the mucous envelope, and more rarely, by the throwing out of adhesive lymph on the surface.

Diagnosis of Fibrous Tumours of the Uterus.—This is often attended with difficulty. In the case of tumours growing from the external aspect of the womb, symptoms may be so far wanting, that no suspicion of them has ever arisen during life; and when symptoms are present, it is requisite to determine whether they arise from such extra-uterine growths, or from ovarian tumours. The differential diagnosis is treated of in my work on ovarian disease. On the other hand, when fibrous tumours grow from the internal surface of the uterus, we have certain general symptoms derived from disordered uterine function and displacement in position; and various signs arrived at by ocular inspection, by tactile examination, and by exploration through the abdominal walls. The general symptoms vary exceedingly in different patients, both in intensity and character. Often they progress very slowly for several years, and their cause is unsuspected. A mucous or leucorrhœal discharge is the first symptom; then come augmented catamenial discharge and increased frequency of this flux, and by-and-by floodings. Nevertheless hæmorrhage is not always an accompaniment of fibrous tumours; for it has been noted by several eminent physicians as having occasionally been absent even where such growths have acquired a large size. Pain in the back, bearing down, fulness in the pelvis, frequent desire to pass water, and occasional attacks of dysury, and general uneasiness and aching in the uterine region, accompany the frequent hæmorrhages, and increase the debility and sufferings of the patient. Dr. Barnes makes (*Op. cit.*, p. 32) the following just practical remark; that where there is a foreign body in the uterus, "even of small size, it rarely happens that contractions are not excited—that efforts are not made to expel it. The occurrence, then, of spasmodic intermitting pains, resembling those attendant upon abortion or labour, together with globular enlargement of the

womb and hæmorrhage, point . . . . with a high degree of probability to the presence of polypus." Sometimes large clots of blood are passed, and occasionally the blood and discharge from the uterus and vagina accumulate and become offensive, and then excite a suspicion of malignant uterine disease. Besides the sympathetic irritation of the bladder and strangury, the actual pressure of a large polypus low down may interfere with the escape of the urine, and also with the evacuation of the bowels. Lastly, severe constitutional symptoms are often produced, particularly when the sanguineous and leucorrhœal discharge is copious, and there is irritability of the stomach, nausea, dyspepsia, and palpitation, and if the debility be great, anæmia, and œdema of the extremities.

If the general symptoms point to the existence of a fibrous tumour, it is necessary to examine locally, and for this purpose we may employ the speculum, the uterine sound, dilatation of the os uteri by sponge-tents, and digital examination. In the instance of tumours in an early stage within the uterine cavity, we may have need to adopt each and all these means of diagnosis.

When the fibrous tumour is intra-uterine, growing from the walls without a pedicle, the first sign noticeable is, that the womb is increased in volume and unusually heavy, and that in consequence of this it is more or less displaced, usually, by reason of the more frequent development of tumours upon the posterior wall, with the fundus depressed backwards, and the mouth consequently tilted upwards and forwards towards the symphysis pubis; in a word—retroverted. When the tumour is placed near the fundus, and does not greatly distend the womb, the os and cervix uteri may be found in their normal position and state, or the lips may be merely turgid and enlarged. But when the tumour is low down, it expands the cervix, and, according to its size, causes the greater or less disappearance of the neck, and the enlargement of the mouth of the womb, just as happens in pregnancy.

It is in cases of deeply placed tumours in the uterus that the uterine sound and dilatation of the os uteri by sponge-tents

are admissible as means of diagnosis. The former indicates any obstructing tumour within the cavity of the uterus, and measures the length of that cavity; whilst by the use of the latter the cervix uteri may be so dilated, that the finger can be introduced within it, and observation by the speculum more completely made. These means should, however, be employed with much caution; and for further information respecting them I would refer to Sir James Y. Simpson's works, and to a valuable paper by the late Dr. Montgomery in the *Dublin Journal of Medicine*, August, 1846.

Sometimes the tumour can be felt in the uterus by the finger introduced just within the cervix, or the uterine sound may be passed around it, when we may conclude that it grows from the fundus of the uterus; because if it spring from the cervix or its vicinity, this passage of the finger or sound round it would be interrupted by the pedicle.

The time for searching after a polypus is, as Sir Charles Locock has shown, whilst hæmorrhage is going on. He says, "I never discovered the polypus when I examined the uterus in the intervals between the attacks of hæmorrhage, either by the finger or speculum. The os uteri closes in the intervals of the attacks. The tumour comes down during hæmorrhage."

To bring a tumour into view when it is pretty clearly made out to be pedunculate, it is the practice to give ergot of rye, or to apply galvanism to the uterus, in order to induce expulsive action; indeed, Dr. Copland has employed both biborate of soda and ergot of rye with the view of entirely expelling and removing polypi without the aid of other treatment. Dugès advised the free application of belladonna to the os uteri; and Dupuytren proposed incisions to be made into it, in order to expand it; but neither of these methods has found favour in this country. It is sometimes practicable to seize the tumour with a tenaculum, or a pair of "bull-dog" forceps; and where it is desirable to maintain traction on the tumour, in order to bring it out of the uterine cavity, this may be done by allowing the forceps or the tenaculum to retain its hold, and by attaching a weight to the end of the instrument by a

piece of string, and suffering it to hang from it over the side of the bed.

In the case of the internal tumours, many of the symptoms are like those of pregnancy; and it is chiefly to the physical means of diagnosis above indicated, in comparison with the many signs of pregnancy so well known, that we must resort, to give precision to our judgment.

The absence of the auscultatory sounds, the slower progress of tumours, and the frequent attacks of hæmorrhage, are especially important.

In using the stethoscope for the purpose of diagnosis, it is important to note that an error might be made from the occasional presence of a *bruit de soufflet*, synchronous with the pulse, in some part of the uterus enlarged by a fibrous growth. On this auscultatory sign, Dr. McClintock has remarked in his admirable *Clinical Memoirs on Diseases of Women* (1863, p. 130), "the sound is not to be heard in all cases, though I cannot say in what proportion of cases it does exist. But I have met with it in several of the cases where it was specially sought for, so that I am disposed to think it is not unfrequently present. Sometimes it is short and abrupt, a mere whiff accompanying each arterial pulsation. At other times it is prolonged and musical, and not to be distinguished by the most acute and practised ear from the *bruit placentaire*. Not only may it simulate this in the character of its sound, but also in its rhythm—occasionally being loud and intense for some pulsations, and then becoming feeble or inaudible. I have, too, observed that it may possess another character that belongs to the placental murmur, viz., it can be diminished or suppressed by moderate pressure of the stethoscope over the spot where the sound is heard, leading us to suppose that it was produced somewhere near the surface of the tumour. The last character is not always observable; but even so, it is sufficient to disprove the assertion that the production of this sign is solely due to pressure on the iliac artery by the tumour or enlarged uterus. Indeed, the character of the sound itself would often be enough to throw doubt on this hypothesis. I can offer no opinion as to the

causation of this sign, or the particular combination of circumstances under which it is developed. It was present in those who had sustained no loss of blood, as well as in the anæmic. All the cases where I have met with it were, to the best of my judgment, examples of interstitial or submucous non-pedunculated fibroids. Although a very interesting phenomenon, it is not one of any special diagnostic value, being common to pregnancy and ovarian disease, which are the two conditions most likely to be mistaken for fibrous tumour of the uterus."

Some years ago I saw a case, with Mr. Musgrave, of a lady who had engaged him to attend her in her anticipated approaching confinement. He had never examined her, and had no cause to suppose her not to be pregnant: the only possible proof to the contrary being a slight monthly sanguineous discharge. At length he was suddenly summoned to her, as she experienced expulsive pains, and felt something pass into the vagina as she sat on the night-stool. This Mr. Musgrave at once found not to be a child, but a large polypus, which had been thus suddenly propelled from the uterine cavity into the vagina, and grew by a stalk from the cervix uteri. On my seeing her, I immediately excised it through its pedicle, not waiting to apply a ligature. No hæmorrhage of any account followed, and she soon recovered completely.

A polypus in the vagina is readily distinguishable, as Dr. D. Davis states (*Obstetric Medicine*, vol. II. p. 622), by its feel from a vaginal hernia; for the latter is elastic and compressible in a much higher degree, is sensitive to the touch, and "covered by a production of the mucous membrane of the vagina itself."

From *vaginal cystocele* (or protrusion of part of the bladder into the vagina) polypus may be thus distinguished:—In the former condition, the tumour is covered by the mucous membrane of the vagina, and if a catheter be introduced into the bladder, the end of it may be felt in the tumour. The tumour may also be pressed up above the arch of the pubes, which cannot be done in polypus.

From *scirrhus uteri*, a diagnosis of fibrous tumour is effected

by the absence of the severe pain which precedes ulceration in this disease; and although hæmorrhages occur in both forms of disease, in cancer it is after ulceration has commenced, whereas in fibrous tumours no ulceration can be detected. If a polypus be within reach, of course the diagnosis is very easy.

From *cauliflower excrescence* polypus differs by its greater smoothness and density, and by not bleeding when touched.

From *prolapsus uteri,* by the absence of the os uteri in the projecting part, and the normal length of the vagina, which is shortened or obliterated in prolapsus. The sensitiveness of the uterus and the insensitiveness of the polypus will also distinguish the one from the other.

From *inversio uteri,* polypus is discriminated by the gradual advance of the latter; by its not occurring suddenly after labour, or with symptoms of collapse; and by the vagina admitting the finger, whereas in inversio uteri there is no vaginal canal to be found. From retroversion of the uterus intra-uterine tumours are not readily distinguishable; indeed, the two conditions are frequently associated together. In such instances the uterine sound is available both for determining the displacement and the presence of the internal tumour.

Prognosis.—The prognosis must always be unfavourable so long as the tumour remains within, or is attached to the uterus, on account of the severe hæmorrhages to which the patient is exposed. If the polypus be not removed, it may prove fatal by causing exhaustion, or may produce prolapsus or inversio uteri. It may prevent conception, or give rise to abortion; or if the patient should complete her full term of pregnancy, it may offer a serious obstacle to delivery, or may tend to promote after-flooding by preventing contraction of the uterus.

Treatment of Fibrous Tumours.

1. *Treatment of Intra-uterine Fibrous Tumours.*—The treatment of fibrous tumours of the uterus will depend much on their character. Those without pedicles were formerly considered to be amenable only to palliative measures—

to such, namely, as obviated determination of blood to the uterus, and relieved the hæmorrhage and leucorrhœa. Attempts, indeed, were made to induce their absorption by deobstruents, such as iodine and mercury, but no distinct success could be pointed out; and it was not until surgical measures were devised that these internal tumours could be considered curable.

M. Velpeau suggested the removal of such tumours by what is termed enucleation, or the dislodging of them from their muco-cellular envelope and the uterine wall; and to effect this he proposed to make incisions through the os and cervix uteri. M. Amussat carried out the plan in 1840, and subsequently many other surgeons have followed his example, but with very indifferent success. It is, moreover, an operation fraught with danger both at the time, and afterwards from pyæmia.

In December, 1859, I read before the Obstetrical Society of London the "*Report of a case of fibrous tumour of the uterus, illustrating a surgical operation for the cure of this affection,*" the case referred to having been operated on by me in the February preceding. As I stated in that essay, I had put the operation in practice before I knew that Dr. Atlee, of Philadelphia, and M. Recamier, of Paris, had suggested and carried out a mode of treatment similar in general features.

The reflection that polypi and fibrous tumours of the uterus are identical in pathological nature, that the former may be readily destroyed by cutting off by a ligature their source of nutrition through the pedicle, and that the portion posterior to the ligature perishes as well as the anterior or distal mass, gave rise in my mind to the idea that, if we could destroy the integrity of a fibrous tumour, and produce a gradual death of its tissue, we might hope for its complete disintegration and removal.

This opinion was strengthened by an observation made by me some years ago, in the case of a lady at Shaftesbury, in whom such a tumour gradually broke up, and was thrown off as a purulent vaginal discharge. The process went on for a long time—some two or more years—but was eventually com-

pleted, and left the patient in the enjoyment of good health, in which she has ever since continued.

A case occurred to me at the "London Surgical Home" in February, 1859, in which I resolved to carry out the mode of treatment I had for some time previously conceived.

CASE I.—*Intra-uterine fibrous tumour: Operation: Cure.*—The patient's age was 49, face sallow, skin wrinkled, and flesh wasted; and her whole appearance indicated great and protracted suffering.

She had been ill for six years, the first symptoms being pain and swelling in the lower parts of the abdomen, and a profuse menstrual discharge. The swelling gradually increased, accompanied by augmented pain in the pelvis, a frequent desire to pass water, and great difficulty in defæcation. The obstruction to the relief of the bowels at length became so great, that she was obliged to resort, as a rule, to purgatives. She was almost always in pain from the pressure of the tumour on the neighbouring viscera.

She had been under medical treatment a long time, and latterly under the able care of Mr. Teale, of Leeds, who candidly told her that he had no hopes of her being cured.

Examination.—By external pressure on the abdomen, I discovered a tumour extending from the pubes halfway up towards the umbilicus, and of the size of a five months' pregnant uterus.

On a vaginal examination, I found I could only pass the finger about an inch up, as it came into contact with the os uteri, which was slightly patulous and very rigid. The cervix had been entirely obliterated by having been taken up in the enlargement of the body of the uterus. The whole cavity of the pelvis was felt to be occupied by the uterus, which was pressed back into the hollow of the sacrum, and on the other side squeezed the bladder under the arch of the pubes.

The patient was suffering much from dyspepsia and palpitation of the heart, and was altogether so much out of health that I at first hesitated to try any operative procedure. However, by careful attention to her diet, and the administration of appropriate medicine, she improved much in health, and earnestly desired to have the operation performed, the general character of which I explained to her. On the 21st of February I accordingly operated in the presence of several surgeons, and with the assistance of my colleagues, in the following manner:—

I placed the patient in the lithotomy position, and after gradually dilating the vagina, I introduced Bozeman's speculum, and brought into view, by means of two vulsellum forceps, the os uteri, which I then divided in three places by a straight-pointed bistoury, and thus brought well into sight the fibrous tumour, which I pierced in the centre, and then cut out from it a portion, much in the manner of coring an apple. Through the cavity thus formed, I broke down as much as possible the surrounding tissue of the tumour, and then concluded the operation by placing oiled lint in the incisions in the neck of the uterus, and by plugging the vagina with the same material.

As soon as the patient (after having been put to bed) had recovered from the effects of chloroform, I gave her two grains of opium, and subsequently, for the next three or four days, kept her slightly under its influence. On the third day the oiled lint was removed, and the vagina afterwards syringed night and morning with water containing a small quantity of chloride of lime. For the first few days there was considerable uneasiness and pain on pressure over the whole uterus; but these symptoms steadily subsided under the influence of opium, and by the maintenance of perfect quiet.

After fourteen days the nurse reported that she could pass the injection-tube two inches into the vagina instead of one inch only, as at first, and that the discharge was free and not offensive.

In another fourteen days the tube could be introduced still further, and a small quantity of water could be retained in the bowel when injected, whereas, before the operation, not an ounce could be kept. An examination of the abdomen at the same time rendered it evident that there was a considerable decrease in the size of the tumour.

At the end of four months, during which a progressive improvement was manifest, nothing more than a slightly enlarged uterus could be discovered on the most careful examination. The bowels acted freely, the urine passed without difficulty, and the general health was so much improved that the patient could take daily drives in a carriage, and at the end of July was able to leave London for her home in the country.

In the course of the November following she wrote to me to say she was quite well, and could walk four or five miles without undue fatigue.

Remarks.—In all probability the tumour was, in the instance just recorded, gradually disintegrated and mostly carried off in the vaginal discharge; but the opinion may be hazarded whether the decrease was not also due in some measure to the operation of absorption carried on by the uterine veins, and first brought into action by the serious interference with the processes of nutrition and growth of the tumour.

I have introduced the above case, as I first published it, in illustration of my views and procedure at that time, though subsequent experience has suggested to me the desirability of certain modifications, which may be traced in the history of the several other cases in which I have operated. First, I found that it was best to make two stages of the operation, and subsequently, I ascertained that the first stage only was sufficient to arrest the progress and cause the decrease and disappearance of the tumour in some cases.

The first stage of the operation consists in making the incisions into the os and cervix uteri; the second stage in the cutting out, or the gouging out, of a piece of the tumour, a procedure which often calls for repetition. The second stage is undertaken, when requisite, after the incisions made in the os and cervix are healed, the interval of time being usually two or three weeks. This division of the operation into two parts is intended to furnish security against the production of pyæmia; for when the incisions about the os uteri are recent and unhealed, they present an absorbing surface for the purulent discharge proceeding from the tumour above. To the omission of this point in practice I attribute one of the

deaths which occurred after I had operated and completed the whole proceeding at the same time.

The *rationale* of the operative proceeding is, as Dr. Atlee expressed it, that "these tumours are very imperfectly organized; consequently their vitality may be very easily destroyed. A section made through their thin investing membrane will sometimes be followed by the death of the whole mass. This may be owing to the admission of atmospheric air causing it to degenerate. Indeed, it would appear that the action of the air, like a portion of yeast in a fermentable mass, may originate in any part of a fibrous tumour an action of eremacausis, which may extend throughout the whole." (*Medico-Chirurgical Review*, vol. XIV., 1854, p. 263.)

To Dr. Atlee's first statement I must express my assent, viz., that from the low vitality of fibrous tumours they may be destroyed by a partial breaking up of their tissue; but to the hypothesis that this event is the consequence of eremacausis or decomposition by contact with the air, I am not prepared to accede.

There is another important practical fact referred to by Dr. Atlee in the following passage (*Op. cit.* p. 263):—"The excessive hæmorrhages which sometimes occur, arise not from the uterus itself, but from the vessels of the membrane which covers the tumours. These floodings, I think, occur in this way: the veins of the investing membrane become at times greatly engorged, in consequence of their circulation being impeded by the muscular action of the uterus, while the arteries, by reason of their more resisting coats, continue to supply them with blood. The point of least resistance must consequently be at the os uteri, as all the other parts are compressed by the contracting uterus. The veins on the surface are thus distended. The mucous membrane is delicate, and offers but little resistance to the rupture of these vessels. Now, the practice which I wish to inculcate, as based upon the above fact, and which has invariably arrested hæmorrhage instantaneously, is, during hæmorrhage, to pass the bistoury along the vagina into the cavity of the uterus, and make a very free incision into the most exposed portion of the tumour."

This recommendation coincides very nearly with one I am prepared to make—arrived at quite independently, in the course of my own experience, and which I may put in the form of a proposition—viz., That the hæmorrhage attending fibrous tumours within the uterus is almost always arrested by a free incision into the os and cervix uteri, even without any operation on the tumour itself.*

I first recognized this fact about ten years ago, during the treatment of a case of fibrous tumour of the womb, admitted into St. Mary's Hospital. At this time I was testing the value of the operation by enucleation, and had, in the patient referred to, freely divided the os and cervix uteri with a view to future enucleation, when I was struck by the circumstance that the flooding which had previously proceeded so copiously was arrested. Seeing this, I desisted from the further operation, and watched the case, and having ever since kept it under observation, am enabled to state that the hæmorrhage has never since recurred, and that the tumour has ceased to grow. This relief to the patient was followed by great improvement of the health and strength; and although she has frequently expressed a wish to have the tumour entirely removed, I have refused my consent, since it causes her no suffering, the only evidence of its existence being afforded by its slightly pressing on the bladder.

On mentioning this case, as illustrative of a new fact in

* Dr. McClintock (*Clinical Memoirs on Diseases of Women*, 1863, p. 154) has remarked on my method of incising the os and cervix uteri, and gouging or excavating the tumour :—"Most of the published cases treated by Mr. Brown on this plan reflect the highest credit on his ingenuity, perseverance, and surgical skill. If the same results continue to attend the operations, it must be regarded as a most valuable addition to our resources in the treatment of uterine fibroids. At the same time I think that the discovery of a safe and effectual means of restraining hæmorrhages incident to this disease would entitle him to more lasting gratitude than the discovery of a formidable operation that *may* cure, but which is undoubtedly attended with a good deal of risk." When Dr. McClintock has again occasion to write on this subject, I trust it will be in his power to add, that incision of the os and cervix uteri, as I propose, is a safe and effectual means of restraining hæmorrhage in these cases, and that by simplifying the entire operation for fibrous tumours, I have largely diminished its risk.

medical knowledge, to several gentlemen present at my clinical instruction in June, 1860, at the "London Surgical Home," among whom were Dr. Olier, of Lyons, and Dr. Echeverria, of New York, but at that time house-physician of the new hospital for paralysis in London, I learnt from these two physicians that they had been made acquainted with the fact during their attendance on M. Nélaton's lectures in Paris, and that it had also been noticed by others.

Though thus forestalled in the possession of this practical fact, it is satisfactory to find it confirmed by the experience of such distinguished men as Nélaton and Atlee; for the latter had evidently seized on the essential circumstances of the matter, though he speaks of incision of the tumour itself as the prime object, and advances a hypothetical explanation of the result which seems to my mind unsatisfactory. In lieu of this explanation, I would offer the suggestion that the division of the os and cervix uteri permits the fibres of the body of the uterus to contract upon the contained tumour, and thereby to compress the vessels and prevent hæmorrhage; that is, it puts the uterus in the same condition as it was previously to and during labour, where the os and cervix are annihilated as sphincter-like muscles, by the taking up of their fibres into the body of the uterus, which then contracts upon the body of the child.

In Dr. Atlee's hypothesis it is a manifest error to assume that the hæmorrhage proceeds only from the surface of the tumour; for, as we have before remarked, the blood comes also, and except the tumour be very considerable, in larger proportion, from the surface of the whole uterine cavity. Whatever be the explanation of the cessation of hæmorrhage after incision of the os and cervix uteri, the value of the fact remains the same to the practitioner, who now knows that, if he cannot cure or remove the tumour, he can relieve its most important symptom or consequence—that is, the loss of blood from it.

In unmarried females where the hymen is entire, and in others where the vagina is much contracted, preliminary treatment is requisite to dilate the canal; as well indeed for the

purposes of diagnosis as for those of the operation for removal of the tumour, and equally, also, whether the case be one of internal fibrous tumour or of polypus. The dilatation may be effected by the use of bougies, or of tents made of sponge put into oiled silk bags, like those I employ in vesico-vaginal fistula.

My later observations have taught me that when a tumour is small and of recent origin, incision of the os and cervix will not only arrest the hæmorrhage from the womb, but also the growth of the tumour, and in many cases cause the entire disappearance of the latter. Of fourteen cases, the reports of which I communicated to the Obstetrical Society, in January, 1864, in two instances only was it necessary to gouge the tumour.

Much has been written of late on incising the os and cervix uteri—*hysterotomy*—by Simpson, Routh, Sims and others. Some always use Simpson's one-bladed instrument, others a double-bladed one, as Routh's. I always use Simpson's hysterotome. Some incise the os and cervix whilst the patient is lying on her side, without exposing the part cut. I prefer placing the patient in the lithotomy position. Then, pressing the perinæum down with the bent speculum, I seize the superior lip of the os uteri, and hold it firm, an assistant steadying the speculum. In this way I obtain a perfect view of the os and cervix. Having determined to what extent I will excise, I introduce the hysterotome within the os and cervix, and cut freely, first on one side, then on the other. If the uterus be not steadied by the forceps, it will recede before the hysterotome, and it will be difficult to make the incisions of the requisite depth and with sufficient freedom. Having made incisions from the outer to the inner os, including the whole length of the cervix, I next plug the cervix and the vagina thoroughly and firmly with lint soaked in sweet oil, fixing the whole with cotton wool, so that hæmorrhage is prevented and air entirely excluded from the cut surfaces and the uterus. Upon the care with which the plugging is effected will depend the subsequent favourable progress of the case. In one case of uterine hæmorrhage,

treated in the London Surgical Home by incision, the vagina was very large and, as it were, pouched. I did not plug it sufficiently with lint or cotton wool, and, for the first time in that institution, severe hæmorrhage occurred, and subsequently pelvic abscess. This is a lesson not to be forgotten. The impunity with which I incise the os and cervix uteri so frequently as I do, arises from the fact that I am extremely careful to plug well afterwards. The plug should remain forty-eight hours.

Some operators consider hysterotomy to be so slight an operation that they perform it on hospital out-patients and on private patients in the consulting-room, suffering them to return home immediately afterwards, and not confining them to bed. I protest against this reckless and off-hand method of performing the operation. I have known several deaths, besides serious attacks of hæmorrhage and cellulitis, to have arisen from it. The patient should be placed in bed directly after the operation, and an opiate should be given and perfect rest enjoined for several days.

It is the practice of some operators to introduce a metallic plug or stem within the os and cervix immediately after incision. Others often leave the parts without interference. I believe that the best method is to plug the vagina in the manner I have described.

There is great diversity of practice as to the extent of the incisions. Some always cut through the inner os; others never do so. I believe that if the operation be performed for dysmenorrhœa, retroversion, or retroflexion of the uterus, the incision should *not* extend through the inner os; but if it be performed for hæmorrhage or intra-uterine fibrous tumours, then the incision should include the inner as well as the outer os, extending through the entire canal into the uterine cavity.

For breaking up the tumour I now use a pair of long-handled, blunt-pointed, curved scissors. It is simply necessary to remove a portion of the tumour, and this is more easily effected by the scissors than by Harper's gouge, an instrument which I was formerly in the habit of using.

An important rule of practice is not to postpone the opera-

tion until the poor patient is broken down in health and strength, and positively unfit to undergo it, by reason of the exhaustive drain on her system from the mucous and sanguineous discharges, and by the sympathetic disorders set up. If it is made out that there is a uterine tumour, and that it cannot be expelled from the interior of the womb in the form of a polypus, then it should be decided whether the removal of its chief symptom by incisions in the os and cervix will suffice, or whether its destruction by inducing suppuration in the manner I propose be attempted. The powers of endurance of the patient materially affect the conclusion; for if she be very exhausted, it would be wiser to content ourselves with the preliminary incisions, even should we feel justified in subsequent interference with the tumour itself.

Where the operation is carried out completely, and the solution of the tumour set up, it is obviously necessary to support the patient's strength to withstand the drain, by generous diet and the exhibition of tonics. Further instructions on this point are not needed.

2. *Treatment of Fibrous Polypi of the Uterus.*—The treatment almost invariably pursued for these tumours is surgical. Dr. Copland, as previously stated, has sometimes attempted their separation by the administration of drugs calculated to induce such uterine contractions as may break them from their pedicles and set them loose in the vagina. I believe these medicinal means find little favour with most practitioners, especially as the operation for the removal of fibrous polypi is very simple, and not in any way necessarily or ordinarily dangerous. There are various modes of operating pursued:—1. Torsion, or twisting the polypus from its pedicle; 2. The application of ligature, and allowing the polypus to slough off; 3. Excision; 4. The actual cautery.

1. *Torsion* has been practised by several surgeons, and especially by Mr. Toogood, late surgeon to the Bridgewater Infirmary. It is simply enough effected. The polypus is seized by the finger and thumb, or by a pair of forceps, and gently twisted until the stalk breaks. The only after-treatment usually required is frequent syringing with tepid water

to keep the parts clean. This method is applicable only in those cases where the pedicle is very slender.

2. *Ligature.*—Deligation to cut off the nutrition of the tumour through its stalk, and thus cause its separation by the process of sloughing, has been more resorted to than any other plan, and to perform it various instruments have been from time to time invented, as noticed in every standard work on midwifery. For the ligature, sundry materials have been employed, such as silk, wire, silk woven with wire, whipcord, and common twine or thread. The usual practice has been to tie the pedicle of the polypus tightly, day by day increasing the tightness, and thus to strangulate the tumour, until it perishes and separates. It is evident that this plan must fail where the neck of the polypus is so thick that the pressure of a single ligature is not sufficient to strangulate the tumour. In this case a needle with a double ligature is passed through the neck of the tumour, and tied on both sides. Dr. Robert Lee tells me that he usually removes the ligature after a few days, without waiting for the entire separation of the polypus, and with a view of relieving the patient of a source of irritation.

3. *Excision.*—Many eminent practitioners, impressed with the inconveniences and dangers of the ligature, have substituted for it excision by the scissors, bistoury, or écraseur. Amongst them we find Osiander, Siebold, Mayer, Dupuytren, Brodie, Arnott, Locock, &c. Dupuytren states, that he has removed by excision two hundred polypi in the course of his practice, and that hæmorrhage occurred in two cases only. Dr. Fleetwood Churchill has recommended that a polypus should be excised after a ligature has been tightly applied twenty-four hours.

4. *The Actual Cautery.*—This method has been recommended by Siebold, who states that he has employed it with success. An ingenious mode of applying the actual cautery to detach a polypus has been suggested, consisting in surrounding the neck by the two wires of a galvanic battery, which, on the setting up of the voltaic current, become red hot, and so cut through it, and at the same time sear the bleeding surfaces.

In preference to any of these modes, I proposed some years since another plan, namely, the application of a ligature or ligatures (according to the size of the pedicle), and, instead of allowing the polypus to slough off in the ordinary way, or to remain twenty-four hours, as Dr. Churchill recommends, to excise that portion of the polypus external to the ligature *immediately after its application*. This mode of proceeding has since been adopted by several surgeons with success. My reason for preferring it to the simple ligature is, that I have seen the most serious consequences ensue from allowing a putrid polypus to remain within the vagina. Not only does the decaying tumour emit a most offensive smell, detrimental to the health and comfort of the patient, but it also produces excoriation and irritation of the vagina and labia. A still more serious result is the occasional absorption of some of the secretion from the putrid mass, which poisons the system, and produces sometimes uterine phlebitis, sometimes boils in different parts of the body, and sometimes abscesses in one or more organs; and the patient is frequently many months recovering from the effects of this poison. Cases of uterine phlebitis succeeding the operation are recorded by Mr. Babington, late surgeon of St. George's Hospital, and also by M. Blandin. Dupuytren also relates that he met with eight or ten fatal cases which presented all the symptoms arising from the absorption of pus into the system.

I need not say that the plan above proposed is only applicable to those cases where the ordinary ligature would be applied by others, and is not at all intended to supersede the plan of excision where it can be safely adopted. My friend Sir C. Locock almost invariably prefers excision even in cases which would be thought by others unfit for that mode of treatment; and I have heard him state that he has never seen any ill results.

The following are the details of my mode of procedure:—

The patient is placed in the position for lithotomy, under the influence of chloroform, and the vagina gently opened by retractors, when the polypus is seized by a pair of vulsellum forceps with long handles, and, if its pedicle be small, a liga-

ture is passed round it by the fingers; if large, a long needle, carrying a double ligature, is passed through the centre of the pedicle, and tied on both sides. The polypus is then removed, either by a pair of curved scissors or a blunt-pointed bistoury, and a piece of lint soaked in a strong solution of alum is applied to the cut surface, to prevent hæmorrhage. If hæmorrhage occur after this application, the actual cautery should be applied through a speculum.

The use of the écraseur is advocated by some surgeons in these cases. Much as I value the écraseur, I do not think it suited to polypoid growths of the womb. The operation with this instrument is long and tedious, and offers no advantage which outweighs the brevity and simplicity of removal with the scissors, knife, or the combination of ligature and knife, as I have suggested. The instrument designed by Dr. Braxton Hicks is far preferable to the écraseur.

There are no special rules for after-treatment requiring detail. Rest and the recumbent posture must be insisted on for some days at least after the operation, and the vagina requires to be cleansed by frequent injections of tepid water, or, if the discharge be offensive, of chlorinated solutions. At the same time, the strength of the patient must be sustained by nutritious diet, and anæmia and other constitutional derangements treated by appropriate medicines. But I must not dismiss the subject of treatment without observing that the mere removal of the tumour is not in all cases sufficient to re-establish the health of the patient, as Dr. Montgomery and Dr. Henry Bennet have shown; for where the tumour has acquired a large size, its magnitude and long continuance often involve local changes about the uterus, such as congestion, hypertrophy, enlargement, and sometimes ulceration or induration of the mouth and cervix; and then, as a consequence, leucorrhœa or hæmorrhage may persist, though the tumour itself is removed. It is, therefore, necessary to ascertain the condition of the uterus after the operation has been carried out, and to apply remedies to any such abnormal states as those indicated.

Cases of Intra-uterine Fibrous Tumours.

Summary.—I give the notes of thirty cases treated by myself. Of these, *twenty-three* were *cured; one* was considerably *relieved;* in *one,* treatment *failed;* and *five died.* Death resulted from pulmonary mischief in one case; from pyæmia in two; and from peritonitis in two.

I could add many other cases, if it were necessary, but these will suffice to illustrate the subject. I may remark, however, that since I have incised the os and cervix uteri only, I have lost a less number of cases by death.

Case I.—(See p. 240.)

Case II.—*Intra-uterine fibrous tumour: Ill seven years: Cure.*—A. M. E., æt. 35, unmarried, admitted into the "London Surgical Home" April 14th, 1859. Was in a state of great debility and anæmia; countenance haggard, and skin dusky and yellow; suffered a constant feeling of "sinking" and prostration, with occasional sickness and pain in the epigastrium; floodings at intervals of a fortnight or eighteen days, lasting for a week at a time. On examination, a fibrous tumour the size of a fist was discovered within the uterus. Her condition had been pronounced incurable, and the only remedies she had administered to her were of a palliative character. Having gained some improvement of her general state, I performed the preliminary operation of incising the os uteri on the 26th of May. After this the hæmorrhage ceased; menstruation, however, occurred every three weeks, and was slightly in excess of the normal amount. On July 21st, I sent her away into the country to recover strength, and it was not until the lapse of three months—viz. on Oct. 27th—that I proceeded to destroy the tumour by gouging a piece out of it. The breaking-up of the tumour and its dissolution by a muco-purulent discharge followed, as in other cases; an accession of pain recurred about every three weeks, but diminishing in intensity at each return until it at length ceased altogether. This recurrent pain preceded each catamenial period, and was doubtless due to the increased determination of blood at that time.

By February, 1860, the discharge had ceased, the uterus had regained its normal dimensions, and all the symptoms of the tumour disappeared. Her health had simultaneously greatly improved, and on the 21st of the month she was discharged cured.

I have since heard several times from her; she is in vigorous health, and capable of taking active bodily exercise without pain or bearing-down. Menstruation also is now quite natural both in time and quantity.

Case III.—*Intra-uterine fibrous tumour: Cure.*—C. W., æt. 30, admitted into the "London Surgical Home" May 19th, 1859.

History.—Is married, and the mother of three children. After her first confinement, observed an excessive uterine discharge, of a red colour and containing clots of blood. This continued for three months uninterruptedly. Her labour had been very severe, and was terminated by instruments. Her

child had only reached the eighth month of fœtal life, and was supposed to have been dead four days before delivery. After the discharge ceased, she again became pregnant. She enjoyed good health until sixteen months after her confinement, when she weaned her child; the discharge then recommenced and lasted about four months. She again conceived, and about the fourth month, she suffered from severe loss, which lasted one day and night. She then continued well till her third confinement, since which she has suffered continuously from a copious discharge, rendering her quite anæmic, and so very weak as to be unable to walk. About two years after giving birth to her last child, she felt a tumour in the abdomen, which gradually increased. She has been under much medical treatment, and has been salivated, blistered, &c., without the slightest benefit.

On admission, I examined her and found her very weak and pale. There was a large quantity of white discharge from the uterus, which could be felt from above the pubis, enormously enlarged, sometimes rather harder than others, aud rather tender on pressure. She was put on tonic treatment, and the uterus rubbed for ten minutes every morning, and the leucorrhœa soon disappeared. July 2nd. Had an attack of hæmorrhage, for which gallic acid was given, and the vagina plugged with ice; but in spite of all it continued more or less for nine days, reducing her strength very much.

Oct. 1st. Left the Home, not having had any more hæmorrhage, and being much stronger and better. Menstruates regularly.

May 29th, 1860. Readmitted very weak and almost bloodless, and after her admission became insensible, and remained so four hours. She was brought to by liberal doses of port wine, &c. Her history of herself since she left the Home is as follows. From October, when she left, till February, she was pretty well, with the exception of a very bad cough. In February, after a menstrual period, she suffered much from hæmorrhage, losing at one time three pints of blood. The hæmorrhage recurred every eight or nine days, till the time of her readmission, when she was in the state mentioned above. Ordered steel and port wine freely.

June 24th. She has been rapidly improving till the last week, when severe hæmorrhage came on again. July 2nd. On examining the os uteri, I found that it was open and patulous, and the tumour could be felt just inside it. July 5th. I divided the lips of the os with guarded scissors, and plugged the vagina with oiled lint: there was very little bleeding. July 11th. Is going on very well, and seems relieved by the operation. 21st. There has been slight bleeding, but nothing like that on former occasions.

July 26th. I divided a little more the lips of the os uteri, and then introducing a pair of sharp-pointed scissors, broke down the tumour in several places. The patient was not under chloroform. 27th. Very comfortable; no pain, no sickness. Aug. 9th. Still very comfortable, but feels weak; ordered port wine, brandy, good soup, &c., and tonics. The abdomen is one and a half inch less in circumference than before the operation, the tumour is breaking up, and is passing away in lumps, and as an offensive discharge from the vagina. Aug. 17th. Has lost much blood, which came away with muco-purulent and broken-up fibrous matter from the womb, rendering her very weak. Aug. 21st. Symptoms of pyæmia set in; but under the administration of chlorate of potash and bark, with good nourishing diet, they passed off in about a week's time, leaving her rather weak.

Aug. 28th. Tumour, as felt from without, much smaller; appetite and general health improving.

Sept. 27th. Lost a great deal of blood from the womb, the hæmorrhage

lasting twenty-four hours. Ordered bark and acid. She gradually got stronger, and lost no more blood ; and on Nov. 27th she menstruated, there being only a normal amount of discharge.

Dec. 10th. She left the Home ; her general health is very good, and she can get about with comfort. The tumour can still be felt, but exceedingly diminished in size, and causes her no inconvenience.

Feb. 1861. This patient is now in good health, has a healthy complexion, and is increased in flesh. At the last menstrual period she only used three napkins.

Case IV.—*Fibrous tumour : Operation : Death.*—J. M., æt. 46, unmarried, admitted into the "London Surgical Home." Has suffered from a fibrous tumour of the uterus for twelve years, which has gradually increased, and is now the size of a six months fœtal head : it causes great uneasiness and pain in her back, frequent desire to micturate, and an inability to sit up for a long time together. On examination, I found the hymen almost imperforate, and the os and cervix uteri not altered from their normal character.

Nov. 19th. I operated, in the presence of Dr. Hall Davis, Mr. Charles Mann, and Mr. Philip Harper, dividing the os and cervix uteri ; and found a fibrous tumour embedded in the left side of the uterus down to the os internum. I then cut through the capsule of the tumour, gouged out a piece from its centre, and broke it down on each side of the opening thus made. I next plugged the vagina with oiled lint. There was very little bleeding. Nov. 20th. Has had some cold shivers and pain in the abdomen. Twelve leeches were applied to the abdomen, and a powder of hyd. c. cret. and pulv. Doveri given. 21st. At ten and four o'clock a shiver. At 2 P.M. gave three grains of quinine, which dose was repeated at night, and in the night. Pulse 120. 22nd. Passed a good night, without opiates ; the pain of abdomen gone. Pulse 120, but soft. From this time symptoms of pyæmia became apparent, purulent effusion occurred within the pleura, and the patient died on the tenth day after the operation. A post-mortem examination was made, and diffused purulent infiltration discovered.

Remarks.—The fatal termination of this case is attributable to the several stages of the operation having been performed together, and to the consequent absorption of pus by some of the recently cut surfaces.

Case V.—*Fibrous tumour.*—A. B., æt. 37, married ; mother of one child ; admitted into the "London Surgical Home" October 14th, 1859. Had an attack of profuse flooding in May last, and four others since that time, producing great debility and anæmia. On examination, a portion of a fibrous tumour, of the size of an orange, was seen projecting through the os uteri, and found to be adherent to its anterior lip, but it had no pedicle.

On Dec. 1st, I detached the tumour from the os by a pair of scissors, but in a day witnessed its reappearance : and although I cut a portion off on the 5th, yet on the 15th it was again protruding into the vagina, and called for further excision. On the 29th, another large portion was removed. After each operation, the patient suffered much sickness and depression, with loss of appetite. January 12th, 1860. I removed several pieces from the morbid mass which then filled up the vagina. Feb. 2nd. Excised three more pieces. March 29th. Cut off a portion as large as a hen's egg ; and on April 5th, two large pieces, the size of the fist, for the morbid growth then protruded even through the vagina. On April 24th, I removed large quantities again. She was very weak after this operation, and soon after left the institution ; but a few weeks subsequently I removed another large piece at her lodgings. From

this period I lost sight of her, but subsequently learnt that she had fallen into the hands of the Rev. Mr. Read, the professed cancer curer, and had died.

Case VI.—*Fibrous tumour : Operation : Cure.*—E. B., æt. 41, married, no children ; admitted into the "London Surgical Home" February 18th, 1860.

History.—About four years ago she first began to suffer from debility produced by continual flooding, which has continued up to the present time. On examining the patient, I found her pale and weak, with a large fibrous tumour in the uterus. Feb. 27th. I slit up the lips of the os uteri, the patient being under chloroform, and plugged the vagina with oiled lint.

March 2nd. Has a regular attack of jaundice, which commenced two days after the operation. For this she was treated with three-grain doses of calomel, followed by a senna draught every other day for about a week, when she began to get better, her skin clearing, appetite improving, and strength increasing. Ordered tonics.

April 17th. Her menses appeared, and on the 18th, hæmorrhage came on, which continued for three days, but was kept quieter by ten-grain doses of gallic acid every four hours, and ice applied to the vagina.

May 7th. The patient having much improved in health and strength, I made an incision through the centre of the tumour, and plugged the vagina with oiled lint. May 12th. Catamenia appeared, followed by a good deal of hæmorrhage, which did not cease entirely for three days. For two or three weeks after the operation there was a bloody, offensive discharge from the uterus, and the tumour gradually lessened in size. June 26th. Catamenia appeared, not much more in quantity than normal. The patient has much improved in health and strength.

July 7th. She left the Home, the tumour being very much less in size, and the patient much better and stronger than on her admission. I have since heard from her that she is now in good health, can take exercise without pain or annoyance, and has had no return of the hæmorrhage.

Case VII.—*Fibrous tumour of uterus : Operation : Cure.*—M. A., æt. 35, single ; admitted into the "London Surgical Home" July 2nd, 1862. Enjoyed good health until about a year ago, when she began to suffer from pain in left side. Menstruation has always been rather profuse ; latterly the blood absolutely rushes away from her ; has become very weak and quite unfit for her usual occupation as nurse. Was in St. Thomas's Hospital last March for an attack of retention of urine.

Examination showed a patulous os and a large fibrous tumour of the uterus.

Operation, July 17th. Os and cervix. 19th. Lint removed ; feels very comfortable. 28th. Menstruating. 30th. Menses have stopped, having only lasted two days, instead of from seven to ten. August 12th. Left the Home. There was still some slight enlargement of the uterus ; but as there was no bleeding, I thought it better not to do anything more.

Case VIII.—*Fibrous tumour of uterus : Operation : Cure.*—E. G., æt. 32, single ; admitted into the "London Surgical Home" June, 1863. Was in the Home twelve months since with a fibrous tumour of the uterus, about the size of an orange, from which she suffered great pain in the back, and some bleeding, and great loss of blood when unwell. This was removed, and she continued well for four or five months, when the bleeding and other

symptoms returned; has been troubled with the bleeding more or less for past fifteen years.

Examination. There is a small flesh-like tumour on posterior lip of os uteri, about as large as a French bean. There were also the usual signs of habits of delection.

Operation, July 2nd. Tumour removed with scissors; clitoris and labia also excised. Left August 4th, perfectly well.

Case IX. — *Fibroid tumour of uterus (from delection): Operation: Cure.*—K. W., æt. 26, single; admitted into the "London Surgical Home" November 18th, 1863. Enjoyed pretty good health until December last, when she began to suffer from severe shooting pains at the lower part of abdomen, generally at night, and lasting some hours. Consulted me six months ago for leucorrhœa, vaginitis, and pain in womb; confessed to habits of delection, particularly before and after menstrual epochs; great pain in womb after each indulgence; local and general treatment benefited her very much, and she was strictly enjoined to abstain from her former habits, at the same time being told, if she did not, more tumours would grow in the body of the womb.

Examination. A fibroid tumour about the size of a walnut on the posterior wall of the uterus: this organ itself was partly retroverted.

Operation, December 1st. A menstrual period which was fourteen days before its time just being over, she was operated upon by incising freely the os and cervix up to the inner os, plugging the wound, and afterwards removing the clitoris. This case went on well to its termination, and left the Home quite cured, December 24th. She has had no recurrence of her former symptoms.

Case X.—*Fibrous tumour of uterus: Operation: Cure.*—M. L., æt. 33, married; admitted into the "London Surgical Home" November 27th, 1863. Married eleven years; no pregnancy; had good health until six years since; then began to feel a bearing-down from the bowels, particularly when requiring aperient medicine; catamenial discharge profuse at regular intervals.

Examination. The os is felt very high up; a fibrous tumour in the left iliac fossa, which seems to grow from the walls of the uterus towards the fundus; very moveable. There is an acutely painful fissure of rectum preventing the admission of the finger: the usual signs of delection.

Operation, December 3rd. Os and cervix freely incised; fissure divided and clitoris removed. Left perfectly well, January 13th, 1864.

Case XI. — *Fibrous tumour of uterus: Two operations: Cure.* — W. B., æt. 43, single; admitted into "London Surgical Home" February 3rd, 1864. Perceived a swelling of abdomen about five or six years since; has felt severe pains of a bearing-down nature; swelling has increased rapidly the last three months. Always regular; suffers acute pain during menstruation.

Examination disclosed a fibrous tumour of the uterus.

Operation, February 18th. Os and cervix divided, and vagina plugged with oiled lint. April 2nd. On examination, I found the tumours much smaller, and permission was given to her to leave her bed. 9th. Made a careful examination, and proposed a second operation. 28th. Os and cervix again divided, but higher up this time. June 21st. Left perfectly well.

Case XII. — *Fibrous tumour of uterus: Operation: Cure.*—M. W.,

æt. 32, single ; admitted February 18th, 1863. Menstruated regularly until she was 18 years of age ; a whole year then passed without any appearance of the menstrual fluid ; during that time she suffered great pain in her eyes. Since then has been regular, but the discharge is more copious than heretofore ; has felt a substance on the left side of abdomen for past two years, which has been gradually increasing.

Examination showed a large fibrous tumour of uterus. On account of frequent attacks of flooding, the operation was delayed until March 3rd.

Operation, March 3rd. The os and cervix were freely divided with a hysterotome and the vagina plugged with oiled lint. 23rd. The patient being very excitable was examined, and clitoris found much inflamed, it was therefore divided. May 31st. Left the "Home" perfectly well.

Case XIII.—*Fibrous Tumour of Uterus : Operation : Death.*—C. D., æt. 41, married ; admitted March 7th, 1864. Married 20 years, felt pain in left side four years ago, and weight on whichever side she lay in bed ; after some months the tumour appeared to have become stationary, until about twelve months ago, since which time it has grown very fast. Has entirely lost the use of her left side several times. Bowels naturally costive. Menstruation irregular, sometimes every fortnight, and flow profuse.

Examination. Uterus somewhat retroverted, and fibrous tumour of uterus.

Operation, March 10th. After great difficulty I succeeded in getting my index finger a little way into the uterus, but found it impossible to divide the os and cervix in the usual manner. I therefore cut through the walls of the uterus with a knife, and found, on inserting my finger through the opening, that the tumour was not adherent to the walls ; the vagina was then plugged with oiled lint. Was attacked by peritonitis, and died March 15th. On examination of the body, twelve hours after death, the cavity of the abdomen was discovered to be filled by a tumour weighing 12 lbs., in shape not unlike a calf's head, the pointed end bearing towards the vagina. On removal it was found to consist of three fibroid tumours, that near the vagina being quite loose and free, the middle and upper ones quite adherent.

Case XIV.—*Fibrous Tumour of Uterus : Two Operations : Cure.*—A. O., æt. 33 ; admitted into "London Surgical Home" March 21st, 1864. Twelve months ago caught cold, and experienced severe pain in womb, in September last first felt the uterus enlarging, and consulted a physician, who pronounced the growth to be a fibrous tumour. Tumour presses so much on the bladder, that micturition is difficult. Menstruation regular.

Examination. A fibrous tumour was found to be quite filling up the cavity of the uterus ; the uterine sound could only be passed about an inch.

Operation, March 24th. The os and cervix, which were patulous and very rigid, were freely incised. Patient progresses very well, but is at times very hysterical. May 2nd. On examination, the clitoris was found to be hypertrophied and inflamed ; it was excised the same day. July 6th. Left the "Home" to-day quite cured, not having had a bad symptom since the last operation.

Case XV.—*Fibrous Tumour of Uterus : Operation : Cure.*—H. J., æt. 28 ; admitted into "London Surgical Home" March 28th, 1864. Married sixteen months, one child, suffered much during her labour, the placenta came away in pieces after some hours ; since then has suffered almost constant pain. Suffers great bearing-down pain during the menstrual periods.

Examination showed a fibrous tumour of the uterus.

Operation, April 3rd. Os and cervix divided freely, and plugged in usual way with oiled lint. June 3rd. Left the "Home" perfectly cured.

CASE XVI.—*Fibrous tumour of uterus: Three years' duration: Operation: Cure.*—E. H., æt. 47, admitted into the "London Surgical Home" July 18th, 1864. Married; two miscarriages, in 1855, with severe flooding each time. In July, 1861, she received a kick in the abdomen, and since then she has suffered from great pain in the region of the uterus. A tumour has also formed, which has been pronounced ovarian. She suffers from morning sickness; bowels are regular, but she suffers much from piles.

Examination. A large fibrous tumour of uterus.

Operation, July 21st. Os and cervix freely divided, followed by the usual plugging. After-treatment as usual. October 25th. Left the "Home" cured.

CASE XVII.—*Fibrous Tumour of Uterus: Operation: Death.*—J. B., æt. 49; admitted into "London Surgical Home" August 17th, 1864. Married, no children; miscarriage; catamenia regular until three years ago, when she had a discharge of a scarlet colour, attended with much pain; frequently has pain in left breast; has been troubled with varicose veins for last nine years; feels herself swelling; has a feeling of tension in womb; is as large as a woman eight months pregnant. Frequently floods.

Examination showed a large fibroid tumour of uterus.

Operation, August 23rd. Os and cervix divided in the usual way, vagina plugged with oiled lint. August 25th. Plugging removed, no bleeding.

August 26th. Very weak, is taking quinine and brandy. 27th. Is very low. 28th. Mr. Harper removed a large portion of the tumour, which had been expelled from the uterus, at 2 p.m.; is very restless, and appears to be sinking fast.

Post Mortem.—Twenty-four hours after death, on cutting through the uterus, it had the appearance of old leather; the cause of death was pyæmia.

CASE XVIII.—*Fibrous tumour of the uterus, with fissure of the rectum: Operation: Cure.*—M. G., æt. 46; admitted August 23rd, 1864. Married fifteen years; four children; three miscarriages. Catamenia regular, but quantity small. Suffers from flooding occasionally. Complains of bearing-down pains in womb. General health good until three years ago.

Examination. A tumour of a fibroid character occupied the neck of the uterus. Clitoris somewhat hard. A fissure and small polypus in rectum.

Operation, August 24th. The tumour was removed, and clitoris divided; polypus removed by scissors, and fissure laid open.

October 4th. Left quite well.

CASE XIX.—*Fibrous tumour of uterus: Operation: Cure.*—C. R., æt. 43; admitted October 14th, 1864. Four years ago had much difficulty in passing her urine, necessitating the introduction of a catheter; then noticed enlargement of uterus. Experienced great pain during catamenial period; often floods. Three years ago came up to University Hospital; was examined; told she had a fibroid tumour, but that nothing could be done for it.

Examination. I found a large tumour in the uterus, soft, and somewhat fibroid; the examination caused considerable bleeding. November 3rd. Examined again, under chloroform; os could not be detected. To undergo treatment previous to operation.

Operation, December 1st. Vagina was dilated with a speculum, so as to expose the uterus, the walls of which were cut through with a straight knife;

considerable hæmorrhage ensued, arrested by plugging the wound with oiled lint, and vagina with cotton wool. 2nd. Intense pain over tumour, relieved by turpentine fomentations and gr. ii. opii *per rectum*. 3rd. To take as much nourishment as possible; 5 gr. of hyposulphite of soda every three hours; and ½ gr. of quinine every four hours. 11th. Actual cautery applied to the wound, which looks healthy. March 7th, 1865. Left quite well.

Case XX.—*Fibrous tumour of uterus, with fissure of rectum, enlarged clitoris: Operations: Cure.*—S. A. P., æt. 27; admitted into the "London Surgical Home" December 30th, 1864. Married two years; one child; no miscarriages. About seven years ago hurt herself by lifting a heavy weight, and ever since, during, and some hours after, each catamenial period, has suffered great pain in the hypogastrium; has been regular generally. Six months after her confinement was attacked with flooding, which lasted, more or less, for six weeks. Blood occasionally seen in her motions during menstruation.

Examination. A small fibrous tumour was found on the anterior lip of the os uteri; a slightly enlarged and hardened clitoris, and a fissure of the rectum.

Operation, January 5th, 1865. The os and cervix were incised, and a small fibrous tumour, about the size of a walnut, removed from the cervix. 29th. Menstruation has lasted as long as usual, and there is quite as much flooding. February 2nd. The clitoris and nymphæ were removed, and a fissure of the rectum incised. March 1st. Left to-day—cured.

Case XXI.—*Fibrous tumour of uterus: Operation: Death.*—A. R., æt. 47, from Canada; admitted into the "London Surgical Home" June 6th, 1865. Married, four children, youngest eighteen years old. In her last labour the placenta was retained a long time, and was then forcibly removed. For some years past she has suffered from menorrhagia, and has had three bad attacks of flooding, the first four years ago, and the last four months since. Last summer she consulted an obstetric physician, who told her that she had a fibrous tumour as large as an orange. During the last eighteen years she has been obliged to have purgatives or injections daily, to procure a motion. She had a bad attack of peritonitis before these, and recovered with a contracted intestine. Has had prolapsus ani the last two years.

Examination. The posterior lip of the os uteri is very much hypertrophied, and the surface is covered with large granular ulceration.

Operation, June 15th. Mr. Brown removed the posterior lip of the os, with a fibrous mass attached, about the size of a large egg. The bleeding surfaces were seared with the hot iron, and the vagina then plugged with cotton wool. 19th. Has strongly-marked symptoms of peritonitis. Vomited several times in the night; a free dose of opium kept her pretty quiet; 20 leeches to abdomen, calomel gr. v. 20th. Pulse 132, small and compressible. Skin moist, tongue dry; calomel gr. i., continued every three hours. Towards evening pulse became small and intermittent; skin cool, and somewhat clammy; quinine, opium, and starch enema to be given. 21st. Gradually sank, and died about mid-day. No *post-mortem* allowed.

Case XXII.—*Fibrous tumour of uterus: Operation: Cure.*—M. B., æt. 38, from Shaftesbury; admitted into the "London Surgical Home" June 15th. 1865; single. The catamenia were quite regular until three years ago, when the discharge began to increase considerably in quantity, and has continued to do so since. At the present time menstruation lasts five or six days per month, and she passes a quantity of dark-coloured clots. Ten months ago she first noticed a swelling at the bottom of the abdomen, then

about the size of an orange. For years she has suffered more or less from pains radiating from the uterus and left ovarian region round to the spine. The last few months micturition has become much more frequent.

Examination. There is a tumour of considerable size occupying the cavity of the uterus.

Operation, July 12th. Mr. Brown freely divided the os and cervix with a hysterotome, and plugged the vagina with oiled lint and cotton-wool. 15th. Plugging removed this morning; no hæmorrhage. 20th. Has commenced to menstruate very freely; feels very sick, and complains of great tenderness over tumour. 24th. Menstruation has all but ceased, and with it the pain and tenderness of abdomen. From August 2nd to 7th was troubled with pleurodynia; on the latter date could bear pressure over tumour very well; is certainly very much reduced in size; menstruation has just commenced; is now twenty-four days since discharge last ceased. 11th. Right arm considerably swelled just above the elbow, which improves daily under treatment. 24th. Goes home; abdomen much smaller and softer than before the operation; tumour can scarcely be felt; has not menstruated for twenty-eight days.

Result—Cured.

Case XXIII.—*Fibrous tumour of the uterus: Operation: Cure.*—M. W., æt. 39, admitted into the "London Surgical Home" June 26th, 1865. A widow six years; has had two children, the youngest being eight years old. Enjoyed very good health until last twelve months. Has been treated for ulceration of the womb. Catamenia regular, but have been more scanty of late, and there has been a profuse vaginal discharge. Is low-spirited, nervous, has lost her memory; sight much affected occasionally; has suffered pain in defæcation.

Examination. There is a small fibrous tumour about the size of a hen's egg. The clitoris is large and irritable, and there is a deep fissure of the rectum.

Operation, July 13th. Mr. Baker Brown made an incision into the tumour, divided the os and cervix, removed the clitoris, and cut through the fissure. 14th. Pretty free hæmorrhage from the wound, made by removal of clitoris, stopped by pressure and perchloride of iron. 15th. Tenderness on pressure over hypogastrium; no hæmorrhage; plugging removed from vagina; had erysipelas of buttocks and thighs, from which she recovered by August 1st, the tinct. Ferri Perchlorid. being given. By August 5th she had almost regained her natural appearance. Aug. 17th. Can walk about pretty well, the wounds have healed; complains occasionally of pain over the right ovary; has no vaginal discharge, and has not menstruated since the operation; leaves the Home to-day.

Result—Cured

Case XXIV.—*Fibrous tumour of uterus: Operation: Death.*—S. W., æt. 36, admitted July 6th, 1865. Married; has had one child, now thirteen years of age; has suffered very much from leucorrhœa the last ten years, and for six years from pain in back and down back of thigh. The catamenia have been more profuse the last three or four years, and she has had four bad attacks of flooding, the first two and a half years ago, and the two last during the present year. Has had piles for many years, and lately has been extremely constipated. Menstruation now lasts five days per month, and the discharge is of a greenish colour and very offensive.

Examination. There is a mass of some size, which protrudes from the posterior lips of the os uteri, and can be traced up the cervix posteriorly.

Operation, July 13th. Mr. Baker Brown freely divided the os and cervix,

and plugged the vagina in the usual way. Aug. 3rd. Mr. Baker Brown removed, by means of a knife and scissors, a fibrous mass about the size of a small orange from the posterior lip of the os. In severing its deep attachments, a rent was made in the vaginal septum. The vagina was lightly plugged with cotton-wool, and the patient removed to bed. 9 P.M. Pulse 110, small and weak. The house surgeon was obliged to introduce more wool into the vagina to stop hæmorrhage, which came on about two hours after the operation. Complains greatly of pain in the stomach, and cries out when touched in hypogastric region. Aug. 6th. Vomiting very troublesome, and is very restless; tenderness of abdomen on pressure very marked; abdomen is a good deal swollen and tympanitic. Peritonitis of a low type has evidently set in. To have an effervescing saline mixture every three hours, hot linseed poultices, sprinkled with turpentine, and large doses of opium. 9th. Gradually sank, and died at 6.30.

Death, in this case, was entirely due to rupture of the vagina, allowing absorption of muco-purulent secretion.

CASE XXV. — *Fibrous tumour of uterus: Operation: Relief.*—M. L., æt. 22, admitted into "London Surgical Home" November 13th, 1865. Single. Says the catamenia have always been regular, and that she has never flooded. Has never had fits of any kind, nor felt hysterical. Complains most of pain in back, and weakness. Has had leucorrhœa very badly, and great irritation about the clitoris. She acknowledges to habits of delection for several years. Has no pain in abdomen or groins, and no bearing-down; no pain or difficulty in defæcation.

Examination. The os uteri is nearly obliterated by a fibrous growth; the clitoris is hard, and very excitable; and there is a fissure in the rectum.

Operation, November 16th. Mr. B. Brown freely divided the cervix uteri as far as the internal os, and divided the anal fissure; the vagina was plugged with oiled lint and cotton-wool in the usual way. 28th. Says she feels very well. There is scarcely any discharge from the vagina. December 16th. Doing well; bowels act regularly, almost without pain; is up all day, and walks about the room. On examination, *per vaginam* and externally, the tumour is found to be considerably diminished in size. 18th. Goes home to-day, very much relieved.

CASE XXVI.—*Fibrous tumour of uterus: Operation: Cure.*—C. P., æt. 43, admitted into the "London Surgical Home" November 13th, 1865. Married. Has never had any children. The catamenia were quite regular until two years ago; since then they have been irregular, but usually too profuse. About eight months ago she noticed a tumour in the abdomen, and this has continued to get larger. She has been troubled for some time with great pain in the act of micturition, and has a very frequent desire to pass water.

Examination. There is a large fibrous tumour of the uterus, and a small vascular growth about the meatus urinarius.

Operation, November 16th. Mr. Brown removed with a knife the growth from the meatus urinarius, and touched the bleeding surfaces with nitric acid. 21st. Doing very nicely, as far as the operation is concerned; complains of great heat and violent pains across the lower part of the stomach. 30th. Mr. Brown cut through the fissures, and removed with scissors the polypi. December 24th. Went home perfectly cured.

CASE XXVII. *Fibrous growth of os uteri: Operation: Cure.*—A. D., æt. 45, admitted into the "London Surgical Home" November 15th, 1865. Married.

Had twelve children and four miscarriages, the last four years and a half ago. Considered herself well until two years ago, when she began to lose flesh, and feel generally out of health, and had occasional darting pains through the back and left side. Six months ago she felt a tumour in the left side, which remained stationary until the last month, during which its size has rapidly increased. The catamenia have always appeared every three weeks, and been profuse; but in the latter respect they have been considerably worse during the last year. Had rheumatic fever nine weeks ago, and has been since confined to bed.

Examination. The abdominal tumour in this case entirely disappeared when chloroform was freely exhibited. The uterus is large, and there is a growth in the posterior lip of the os. The perinæum is ruptured, and there is a vaginal rectocele. The clitoris is large and irritable.

Operation, November 23rd. The os and cervix were divided with a hysterotome, and the vagina plugged in the usual way; and the clitoris and nymphæ were then excised. December 18th. Up and walking about. 21st. Operated upon for vaginal rectocele. Mr. Brown made the ordinary incisions, and stitched up the perinæum in the usual way. There was free hæmorrhage during the operation; the patient put to bed, and catheter passed; much pain in the evening; opium in full doses administered. 25th. Superficial sutures removed. January 1st. Continues to improve; complains of very acute pain in vagina; no discharge. 25th. Leaves to-day, cured.

Case XXVIII.—*Fibrous tumour of uterus: Operation: Cure.*—M. E. H., æt. 28, admitted into the "London Surgical Home" November 22nd, 1865. Single. When young was remarkably strong and healthy, and never ailed anything. Two and a half years ago the catamenia, which had previously been regular, began to be rather profuse, and her health gradually began to give way. Shooting pains in abdomen came on, and very shortly afterwards she noticed an enlargement in the umbilical region, which has since slowly increased in size. She has consulted many medical men in Paris, Dublin, &c., and has been told that there is no cure for her disease. Menstruation lasts seven days, recurs every three weeks, and she passes a quantity of dark-coloured clots. She is very weak, almost incapacitated from walking, and has constant dull aching pains in back and across loins.

Examination. There is a large intra-uterine fibrous tumour; the sound can be passed up about five inches. The patient is very anæmic and cachectic.

Operation, December 1st. Mr. Brown divided freely the os and cervix with a hysterotome; the plugging was immediately introduced, so that there was no loss of blood. 3rd. Good deal of tenderness over abdomen; plugging removed from vagina this morning. 5th. There is a fœtid discharge, mixed with the menstrual fluid; latter very abundant and clotted; great pain and tenderness over uterus; weak solution of Burnett's fluid (1 in 200) to be injected at once, and repeated every day. 18th. Much better; no discharge worth noticing. 22nd. The tumour has been gradually diminishing, and now it can scarcely be felt. Goes away to-morrow, cured.

Case XXIX.—*Fibrous tumour of uterus: One year's duration: Operation: Death.*—M. S., æt. 35, admitted into the "London Surgical Home" January 2nd, 1866. Married; four children and one miscarriage. Has been ill for about a year. Catamenia very irregular, excessive in quantity, usually recurring every fortnight, and the flow often continuing for fourteen

days ; on several occasions it has lasted even twenty days. The periods are accompanied by pain in tke back and thighs.

Examination. Posterior lip of os uteri hypertrophied ; clitoris and nymphæ large and pendulous ; pupils dilated.

Jan. 4th. Division of os and cervix followed by plugging, and then extirpation of the clitoris and nymphæ in the usual way. In the evening the patient disturbed the dressings, and hæmorrhage ensued. Replugged at 10 p.m. 14th. Awoke at 3 a.m. in a shivering fit, which lasted for over two hours, and was followed by a burning sensation in the epigastrium, and a feeling of nausea, with thirst ; tongue white ; pulse 100, small. Quinine, gr. 2, every four hours. 18th. Rigors daily, but less severe. To-day symptoms and physical signs of broncho-pneumonia. From this date the pulmonary affection ran its course, so that at the end of the month there only remained a rather troublesome cough. The rigors, however, had not ceased, and on the 31st, Liq. Arsenicalis, ♏ 5, three times a day, was prescribed. On February 2nd, the rigors had ceased. On the 6th, 1 a.m., she became much worse, with severe pain in right side and back of chest ; large crepitation on auscultation, and she died in the afternoon. No post-mortem allowed.

Case XXX.—*Fibrous tumour of the uterus : Nine years' illness : Operation : Cure.*—Mrs. H., æt. 30, admitted into the "London Surgical Home," April 17th, 1866. Has had three children and four miscarriages. Has been ailing for nine years, and been much worse during the last six years. The menses were regular up to six months ago, but since then periods have returned every ten days or fortnight, with clots as well as general excess.

On examination, the uterus is found to be irregularly enlarged by fibroid tumours, and tender on pressure. *Per vaginam*, one of the tumours is found to encroach on the cervix uteri, the os being patulous, as if expanding under the efforts of the uterus to expel the mass. This tumour is situated in the left postero-lateral region of the uterus.

April 19th. I divided the cervix in the usual way through the inner os, the right incision involving the tumour. A good deal of inflammatory action, with fever and other usual attendant phenomena, ensued. A copious discharge was set up, consisting in part of broken-down fibroid tissue, a portion as large as a walnut escaping on the 24th. On the 3rd of May, the discharge was still abundant, and there was a good deal of irritative fever. By the 1st of June, all discharge had ceased, with the exception of an occasional small clot of blood during the syringing. On the 20th, she was allowed to lie outside the bed. Menstruation began on the 29th, normal in quantity and without pain, and ceased on the 2nd of July. From this time the patient went on well, rapidly gaining strength, and she left the "Home" on the 9th July.

Her condition was as follows :—By palpation the tumours were found to have diminished more than one-half, and there was no tenderness. *Per vaginam*, there was found a very good cervix and os, presenting no trace of the tumour.

Cases of Pedunculate Fibrous Tumour.

Case I.—*Polypus : Removal : Cure.*—E. P., æt. 29, unmarried, consulted me December 2nd, 1852. She is anæmic in appearance, and has not menstruated for three months. She complains of headache at the vertex, and depression of spirits. On examination *per vaginam*, I found a small polypus growing from the superior lip of the os uteri, and extending up the cervix, making the os very patulous. I applied leeches to the os uteri every three or four days, and gave blue pill and ammoniated tincture of iron. After ten days the catamenia returned, and, though rather scanty, they continued for some days. On the 27th, the patient being placed under the influence of

chloroform, and in the lithotomy position, I seized the os with a pair of vulsellum forceps, and the vagina being held open with retractors, I brought the polypus into view, and carefully dissected it away from the os and cervix uteri. It was irregular in shape, and about the size of a two-shilling piece. Lint soaked in a strong solution of alum was applied to the os, and the patient placed in bed. One grain of opium to be taken every four hours.

28th. No bleeding, little pain in the abdomen; the urine is drawn off by catheter. This case progressed favourably without any untoward symptom, and now, after the lapse of some considerable time, no recurrence of the polypus, nor, indeed, of any inconvenience about the uterus, has troubled the patient. This was a case where the base of the polypus was so broad, and the polypus itself so short, that it could not very easily be tied. But many surgeons would have thought the base too broad for excision.

Case II.—*Polypus, from the fundus uteri, adherent to os and cervix: Removal: Subsequent death from disease in the chest.*—E. S., æt. 45, married; has had five children. She enjoyed good health until two years ago, when she was admitted into the Middlesex Hospital for some affection of the uterus. Fourteen months ago she applied at St. Mary's for retention of urine, which she had frequently suffered from, and became an out-patient under my care. She had also chronic bronchitis, which added very much to her distress. On making a vaginal examination, I found an enlarged uterus, with the os and cervix very patulous, through which the finger could be easily passed, and discovered a polypus, the size of a small apple, occupying the whole cavity of the uterus. It was, moreover, evident that the pressure of the enlarged uterus on the bladder had produced the suppression of urine. This poor woman had suffered from repeated attacks of hæmorrhage, and her general health was much impaired. A few months after this examination, the polypus gradually protruded out of the uterus, tightly encircled by the os and cervix, giving great pain and suffering to the patient. A portion of the polypus, about an inch and a-half in length, was seen projecting from the vulva, of a yellowish colour, surrounded by a margin of fleshy substance, which, on careful examination, was found to be the os uteri extremely dilated, and inseparably adherent around the polypus; and when the patient was placed on her back for examination, it presented exactly the appearance of a distended glans penis projecting from the vagina, and completely filling up the orifice of that cavity. It could, however, be pushed back out of sight, but did not remain so. She was now admitted into Boynton ward December 12th, 1852, the chest was examined, and no disease found except chronic bronchitis.

December 29th. She was placed under chloroform, in the lithotomy position; the end of the polypus was seized by a pair of vulsellum forceps, and held by an assistant. I proceeded first to make a circular incision around the tumour at the point of juncture with the os uteri, dividing some of its fibres; then carefully dissected back the os and cervix, separating their very firm adhesions to the tumour, which extended upwards two inches. Above this the bands of the adhesion were fewer, and easily broken down by the finger. The polypus could now be distinctly felt growing from the fundus of the uterus. Having forcibly pulled out about three inches of the polypus, I passed a needle with a double ligature through its body as high up as possible, and tied a ligature on either side, so as completely to strangle it. I then cut off with a scalpel the portion anterior to the ligature. The operation occupied rather more than an hour. The patient was then removed to bed, had a rigor immediately afterwards, and vomited freely. Some brandy and water was given her, which having subdued the sickness, one grain of opium was taken, and ordered to be repeated every four hours. In the course of the evening

she complained of slight shooting pains about the abdomen, with pain on pressure over the lower part. Her tongue being dry, she was allowed to suck ice freely. An injection of alum and water was ordered to be thrown up the vagina night and morning. A draught composed of one drachm of Hoffmann's anodyne, half-a-drachm of the liquor opii sedativus, and camphor mixture, was given her at bed-time.

30th. Slept well during the night; complains of pain on pressing the abdomen; very troublesome cough; tongue dry, with some little sickness; pulse 130. The portion of the polypus behind the ligature appeared to be sloughing. Diet, milk and arrowroot. Towards the afternoon, the pain in the abdomen became more severe, and twelve leeches were ordered, and a linseed-meal poultice to be kept on constantly after their removal.

31st. Slept well; pain very much less; pulse 100. 6.30 P.M. Bowels have been twice relieved; no pain in the abdomen; states that she feels very comfortable.

Jan. 1st. 1853. The discharge from the vagina is fœtid. Ordered a lotion with chloride of soda. Bowels much relaxed; has been very sick; is depressed; extremities cold. Ordered an ounce of port wine every four hours, two pints of strong beef-tea during the day, and half a drachm of the compound chalk powder with opium. 2nd. The bowels were quiet some hours after the powder, but are again very much relaxed this morning. Powder to be repeated. 3rd. Bowels quiet; complains much of thirst. Vaginal discharge free, and less offensive. 5th. Has slept well; bowels once relieved; the polypus is nearly separated. 11 P.M. All the polypus has sloughed away. She is very low: pulse 132. Ordered a sedative draught, and to have some brandy and arrowroot from time to time. 6th. Much better; enjoys her food. 7th. Bowels very much relaxed during the night. An opiate enema ordered. 8th. Pulse 116; mouth and throat very sore. Ordered the biborate of soda lotion. 10th. Did not sleep well; cough very troublesome; mouth still very sore; very slight discharge *per vaginam*. Ordered compound tincture of bark and dilute sulphuric acid, in addition to the four ounces of port wine daily. 12th. Mouth aphthous: complexion of a dark sallow colour; feeble quick pulse. From this time she gradually got worse, and died on the 3rd of February, five weeks after the operation.

Post-mortem.—Uterus well contracted, containing no remains of the polypus; no evidence of any disease of the pelvic viscera, but on examining the chest, both lungs were found studded with small tubercles in a state of suppuration, although no evidence of this condition was discovered before the operation. The lining membrane of the larynx, trachea, and bronchial tubes was found in a state of chronic inflammation, and the aphthous condition of the mouth extended through the œsophagus to the stomach.

Remarks.—This case I have related as being one of unusual interest from the various complications in connection with it. The constitution of this patient was so shattered by her long suffering antecedent to the operation, that it is evident her death was not attributable to the latter, whilst the complete removal of the polypus, and the absence of disease in the pelvic viscera, clearly show the success of, and the justification for, the operative procedure.

Case III.—*Polypus: Operation: Cure*.—Mary P., æt. 44, married, by occupation a laundress, was admitted Sept. 2nd, 1853, into Boynton ward, St. Mary's Hospital.

She is a healthy woman, was married at seventeen, has had three children, and always enjoyed good health till two years since, when the catamenia stopped suddenly, which gave no inconvenience except occasionally, when she had headache. Three weeks afterwards the catamenia returned violently

and continued for ten days; after which she was unwell regularly every fifteen days, and continued so for a twelvemonth, since which time the hæmorrhagic discharge has never ceased for more than a day. The discharge consists of large clots of blood and a transparent fluid. On the 26th ult., she was obliged to go to bed and send for her medical attendant, who attributed the hæmorrhage to a tumour, and advised her to go to the hospital.

Sept. 3rd. On examination, there was found a polypus of the uterus from three to four inches in circumference. On the 17th, the patient being placed under the influence of chloroform, I brought the polypus well down with a pair of vulsellum forceps, transfixed it with a needle with double sutures, and tied the tumour in two portions.

9th. A mixture with sulphuric acid, tincture of henbane, and decoction of bark was given.

In the evening of the 11th, she had a violent attack of peritonitis: five grains of Dover's powder were given, and twelve leeches and a linseed poultice applied to the abdomen.

12th. Repeated the Dover's powder, leeches, and poultice.

13th. She is much better; ligatures have come away, pulse 80, bowels opened, tongue not very clean; a mixture of sulphuric acid, syrup of white poppies, and tincture of orange-peel was given three times a day.

11. P.M. She has been very unwell from diarrhœa and cold, but is now doing well.

14th. Pain in right groin extending down the leg, œdema in foot, tongue foul, bowels open, pulse 108; fomentation of poppy-heads to be applied to the leg, and ordered to take a mixture of sulphuric æther, opium, and camphor mixture.

From this time she gradually improved in health, and on Dec. 3rd was discharged cured.

II.—Polypi of the Uterus.

Besides the fibrous polypus of the uterus, to which I have as yet called attention, there are yet other varieties of heterologous growths from that organ, of which the following are specially distinguished, viz., the "glandular polypus," the "cellular," the "vesicular or cystic," and the "erectile or vascular" polypus. The last-named variety is a sort of pathological curiosity; it grows by a broad base from the fundus uteri, and is excessively vascular. I have no practical knowledge of this form of polypus. Of the others, the "vesicular or cystic" is simply a modification of the common fibrous polypus, having the tissues closely connected, so as to form numerous cysts, which are filled with albuminous fluid. Or it may possibly be a variety of the next described "cellular" polypi.

These "cellular" polypi are otherwise named "gelatinous," mucous," "vesicular," and "fibro-cellular." The last name

is applied to them by Dr. Barnes (*Op. cit.*, p. 25), who thus speaks of them:—"These polypi most commonly spring from the cavity of the cervical canal; they are but rarely found in the cavity of the uterus, and perhaps this may be accounted for by the scarcity of the celullar tissue in the constitution of the mucous membrane in this latter situation. The microscopical characters of these polypi are similar to those of the fibro-cellular sub-mucous tissue." Mr. Paget has accurately described them as presenting "delicate fibro-cellular tissue, in fine, undulating and interlacing bundlets of filaments. In the interstitial liquid, or half-liquid substance, nucleated cells appear imbedded in a clear or dimly granular substance; and these cells may be spherical, or elongated, or stellate, imitating all the forms of such as occur in the natural embryonic fibro-cellular tissue; or the mass may be more completely formed of fibro-cellular tissue, in which, on adding acetic acid, the abundant nuclei appear. In general, the firmer the polypus is, the more perfect, as well as the more abundant, is the fibro-cellular tissue." To this it may be added, that these polypi are covered by mucous membrane, containing blood-vessels in greater or less abundance. Their size varies greatly; they seldom, however, attain the magnitude sometimes reached by the fibrous polypi. In colour, they have a pale violet or yellowish tint, and in this respect, as well as in their consistence, they resemble the mucous polypi of the nose.

The "glandular" is otherwise known as the "Nabothean" polypus, because it appears to originate in hypertrophy and dilatation of one of the glandulæ Nabothi of the neck of the womb. The surface is very vascular, hence these tumours give rise to serious hæmorrhage and copious mucous discharges, as also to great irritation. Dr. Lee says (*Medico-Chirurgical Transactions*, vol. xix. pp. 127, 128):—"One of these bodies (*i. e.* the glandulæ Nabothi) is sometimes converted into a cyst as large as a walnut, or even a hen's egg, and hangs by a slender peduncle from the cervix or lip of the os uteri. It is smooth and vascular, and contains, in some instances, a curdy matter, or yellow-coloured viscid fluid."

The removal or destruction of these varieties of uterine

tumours is effected in a similar manner to fibrous polypi. Small soft excrescences from the os uteri may even be eradicated by the finger nail; or, when they cannot be thus reached, the instrument invented by Sir Charles Locock, resembling an elongated finger-nail, or scoop, will be found useful; or again, they may be pulled away by a pair of vulsellum forceps, with or without a certain amount of torsion, according to their size and proneness to bleed. For tumours of larger size, ligature and excision become necessary, or the latter only, by the probe, bistoury, or scissors, or by a ligature of silver wire tightened around their base until it cuts its way through.

For some small growths caustics have been employed, and among these the acid nitrate of mercury and nitric acid.

III.—Cauliflower Excrescence of the Uterus.

The morbid growths from the uterus as yet considered belong to the "innocent" or "benignant" class of tumours, but those known under the name of cauliflower excrescences are nearly related to growths of a malignant character, and are sometimes spoken of as epithelial cancer. These excrescences grow rapidly, have a soft, elastic feel, and an irregular or finely-lobated appearance, and, what is very characteristic of them, they bleed on the slightest touch, like vascular fungoid growths elsewhere. They grow from the mucous membrane of the os or cervix uteri, and consist in appearance of a congeries of pale-red, lenticular and moderately firm bodies, and are microscopically composed, according to Rokitansky, of "hypertrophied papillæ, composed of epithelial cells, richly supplied in their interior with large and delicate vessels, and covered by a thick layer of epithelium. The enormous looped capillaries of the cauliflower excrescence explain the abundant hæmorrhages, and the profuse serous discharges which attend it; whilst the absence of that solid structure which is found in other forms of epithelial cancer accounts for the favourable results that have followed its extirpation."

Fortunately this close ally to malignant disease may be

cured, if treated early, by excision, and as a rule it does not reappear. But this remedy is applicable only when the excrescence occupies a portion of the circumference of the os uteri; when it has invaded the whole, then I hold operative proceedings to be useless, and well nigh unjustifiable.

To carry out excision, the patient should be placed in the lithotomy position, and the vagina drawn backwards by the "duck-bill" (Bozeman's) speculum, just as for vaginal fistula. The excrescence should next be seized well back by a pair of vulsellum forceps, and then completely cut away by a blunt-pointed bistoury, a piece of the subjacent tissue of the os uteri being removed with it.

If there be much bleeding, I prefer touching the surface with strong nitric acid, of course taking care to guard the surrounding parts from being corroded, and, if necessary, after this to plug the vagina with pieces of ice; beyond this it is better to apply no dressing, merely syringing out the parts with water night and morning. This simple mode of operating is far preferable to that by ligature, the latter often producing great constitutional disturbance; and, moreover, it appears by the history of recorded cases, that a greater number die after the removal by ligature than by the knife. As far as can be judged, there is in cases such as just described a very fair chance of arresting the disease for life, and certainly for some years. Of late I have applied the actual cautery directly, cutting off the growth, with the best results.

If, however, the disease is found to involve the whole, or the greater part, of the os uteri, then no possible good can arise from any operative procedure; on the contrary, the great hæmorrhage produced by any interference very materially aggravates the danger, and tends to shorten life. This cannot be too much impressed upon the obstetric surgeon, as the contrary practice is still in vogue with some operators. Not long ago I met with the case of a lady who had borne thirteen children, and in whom the disease had involved the whole of the os uteri. An obstetric physician was in the habit of performing one or more operations every week for the removal of portions of the growth, although the hæmorrhage

was afterwards so severe as to exhaust the patient seriously. I advised very strongly that she should do nothing but apply astringent injection, and on my recommendation she consulted two of the most eminent physicians in London, who both concurred with my advice; the result was that the poor lady returned to her home to die gradually of the disease, and was spared from the tortures of repeated operations.

These cases seem to be very amenable to constitutional treatment by cod-liver oil, iodide of potassium, steel and iodine, after the manner so well laid down by Mr. Weeden Cooke, in his work on scirrhus, &c.

CASE.—*Cauliflower excrescence of uterus.*—Mrs. A. W., æt. 32, married; one child born ten years ago. Admitted into the "London Surgical Home" October 15th, 1860. About three months ago was first taken ill, but had no medical advice for two months, when she was under the care of Mr. Obre, of Harewood-square, who treated her for the great weakness, pain in back, and discharge from the womb, from which she was suffering. Under his care the discharge lessened, but did not stop. He recommended her to come under my care. On examination, I found an epithelial growth on the anterior lip of the os uteri.

October 25th. The patient being under chloroform, I removed the anterior lip of the os, and then for precaution the posterior; afterwards applied nitric acid, and plugged the vagina with ice. November 1st. The patient has progressed very favourably, the wound healing by healthy granulations. I applied caustic to it. November 20th. She left the "Home" quite well. There is no discharge from the uterus, and she has wonderfully improved in health. There is slight enlargement of the posterior lip, which looks unhealthy. To this I applied the actual cautery. The patient has quite lost the watery discharge.

My note-books contain many other cases of a similar character, but it would occupy space to no useful purpose to publish them.

CHAPTER VIII.

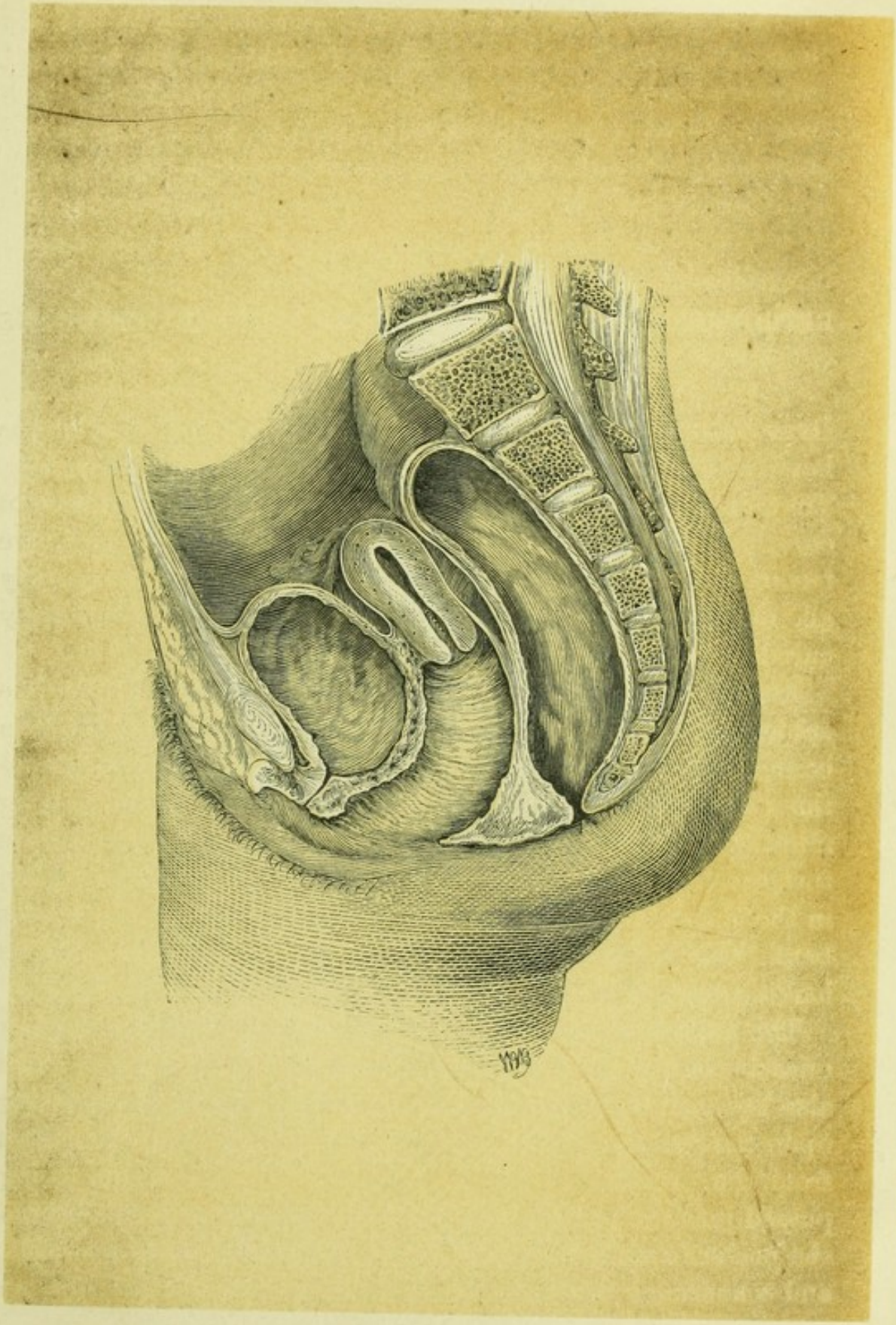
RETROVERSION, RETROFLEXION, AND ANTEFLEXION OF THE UTERUS.

Retroversion, retroflexion, and anteflexion of the uterus have, as a rule, received from the profession but little notice. They have been looked upon very much as out of the reach of cure, and attention has been directed chiefly to palliative treatment. I hope to be able to show that they can nearly all, especially the more aggravated forms, be permanently cured.

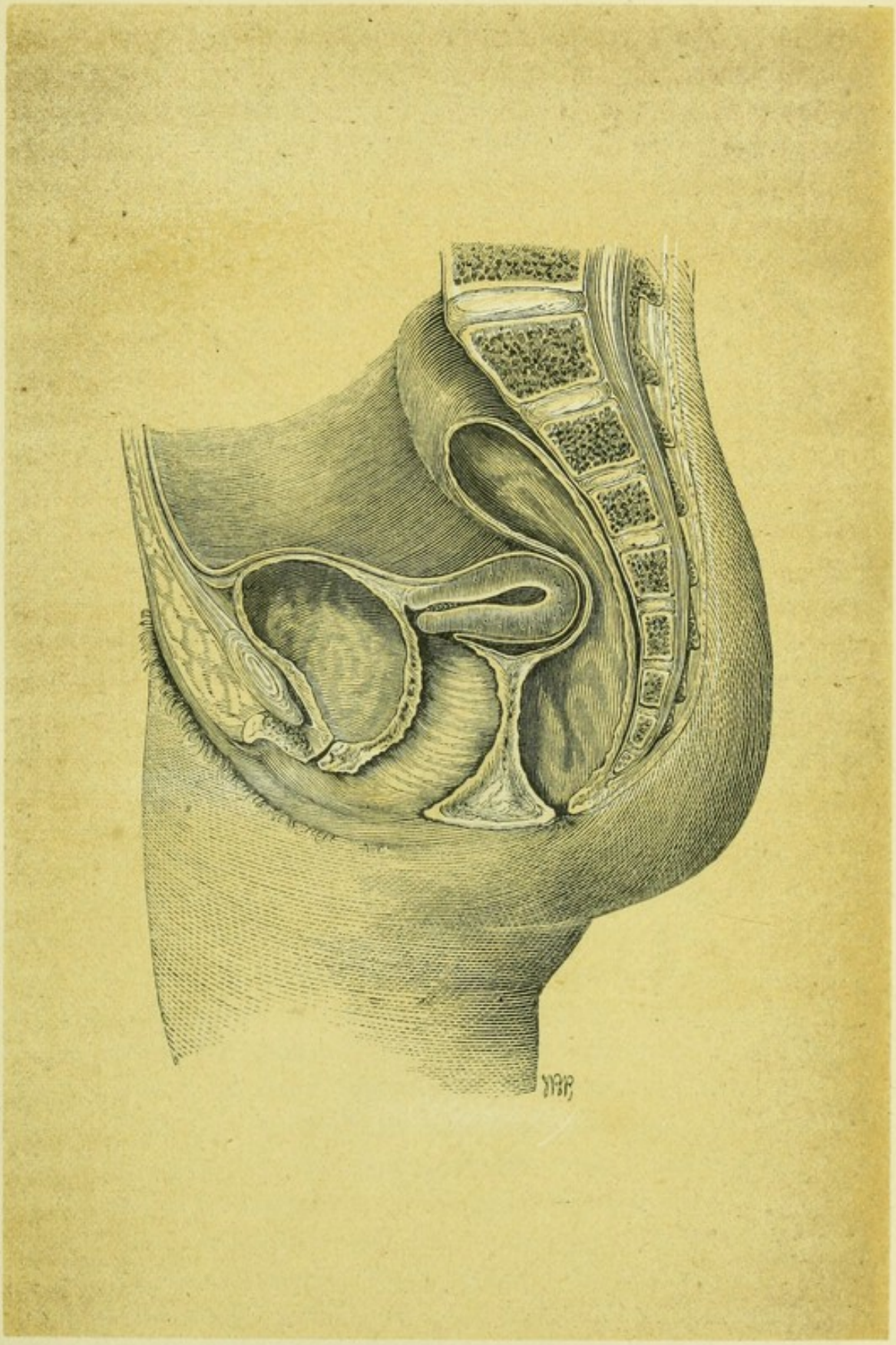
Let me first take retroversion. I shall not enter upon the subject in its obstetric aspect. I shall deal with it solely in connection with the unimpregnated state. Plate XII. shows the normal condition of the pelvic organs, the uterus lying midway between the bladder and the rectum, the fundus towards the abdomen, and the os towards the vagina. Now, in the simplest form of retroversion, the uterus has the fundus bent back towards the hollow of the sacrum, and the os looking towards the arch of the pubis. (Plate XIII.)

The patient who suffers from retroversion complains of great uneasiness and pain in the back, with bearing-down. She also has pain on defæcation, the fundus of the uterus pressing upon the rectum. When the bladder is distended, she suffers from the pressure of the os upon it. On the finger being passed into the vagina, the body of the uterus is felt behind the posterior wall, while the os is found projecting forwards, and sometimes upwards, so that neither the finger nor an instrument can be introduced into the cavity.

But retroversion is often, and, I believe, invariably, when the lesion has existed some time, complicated with flexion of



Section showing the NORMAL position of the Uterus with reference to the Bladder and Rectum.



Section showing complete RETROVERSION of the Uterus, and consequent pressure on the Rectum.

the womb. The neck becomes bent, and the finger can detect a distinct sulcus at the point of flexion.

Retroversion may be caused by the sudden lifting of a heavy weight, by a loaded state of the bladder or rectum, or by excessive uterine excitement — normal or abnormal. It can be easily understood in what manner a too greatly distended bladder tilts over the loosely suspended uterus. Sir Charles Locock relates a very instructive case. A young lady, the third or fourth week after her marriage, was seized with severe pain in the back, bearing-down, and great difficulty, if not impossibility, of micturition. On examination, the uterus was found completely retroverted, and the bladder inordinately distended. The urine having been withdrawn by a catheter, on pressing slightly on the fundus of the uterus, the organ almost immediately returned to its normal position. The catheter was used daily for a short time, the viscus recovered its tone, and no recurrence of the retroversion took place. In this case the over-distension of the bladder, no doubt, was brought about by neglect to empty it with sufficient frequency. A sensitive, newly-married lady, constantly with her husband, she shunned attending to natural calls.

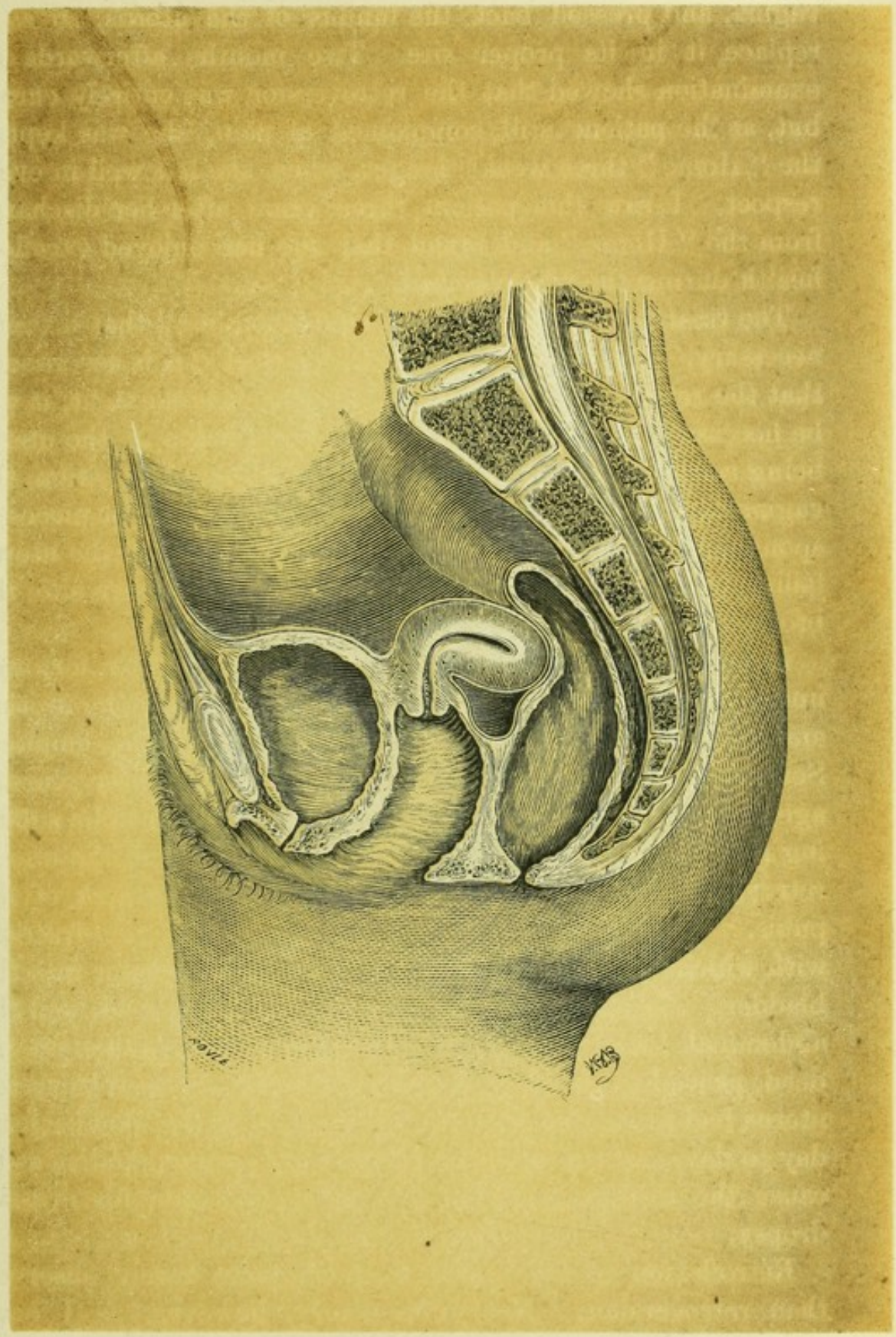
The following are the notes of a case treated in the "London Surgical Home:"—The patient was a housemaid, aged thirty-two years, and single. A week before she was admitted into the "Home," she attempted to lift a sofa upon which a young lady was sitting or laid, and whilst doing so she experienced a sensation of something dropping in the lower part of the abdomen, accompanied with great pain in the loins. About an hour afterwards she vomited a teacupful of blood. The pain in the back continued, subsequently extending to the abdomen, and was attended with "bearing-down," which was not relieved when the patient lay down. She persisted in her duties, however, for three days. On examination, after the patient reached the "Home," the uterus was found to be retroverted, with the fundus pressing on the rectum as if its attachments were separated. She was ordered to lie constantly on her stomach, and was kept so for some weeks. In addition, I passed from time to time the finger into the

vagina, and pressed back the fundus of the uterus, so as to replace it in its proper site. Two months afterwards an examination showed that the retroversion was entirely cured; but, as the patient still complained of pain, she was kept in the "Home" three weeks longer, when she left well in every respect. I saw this patient three years after her discharge from the "Home," and found that she had enjoyed excellent health during the whole period.

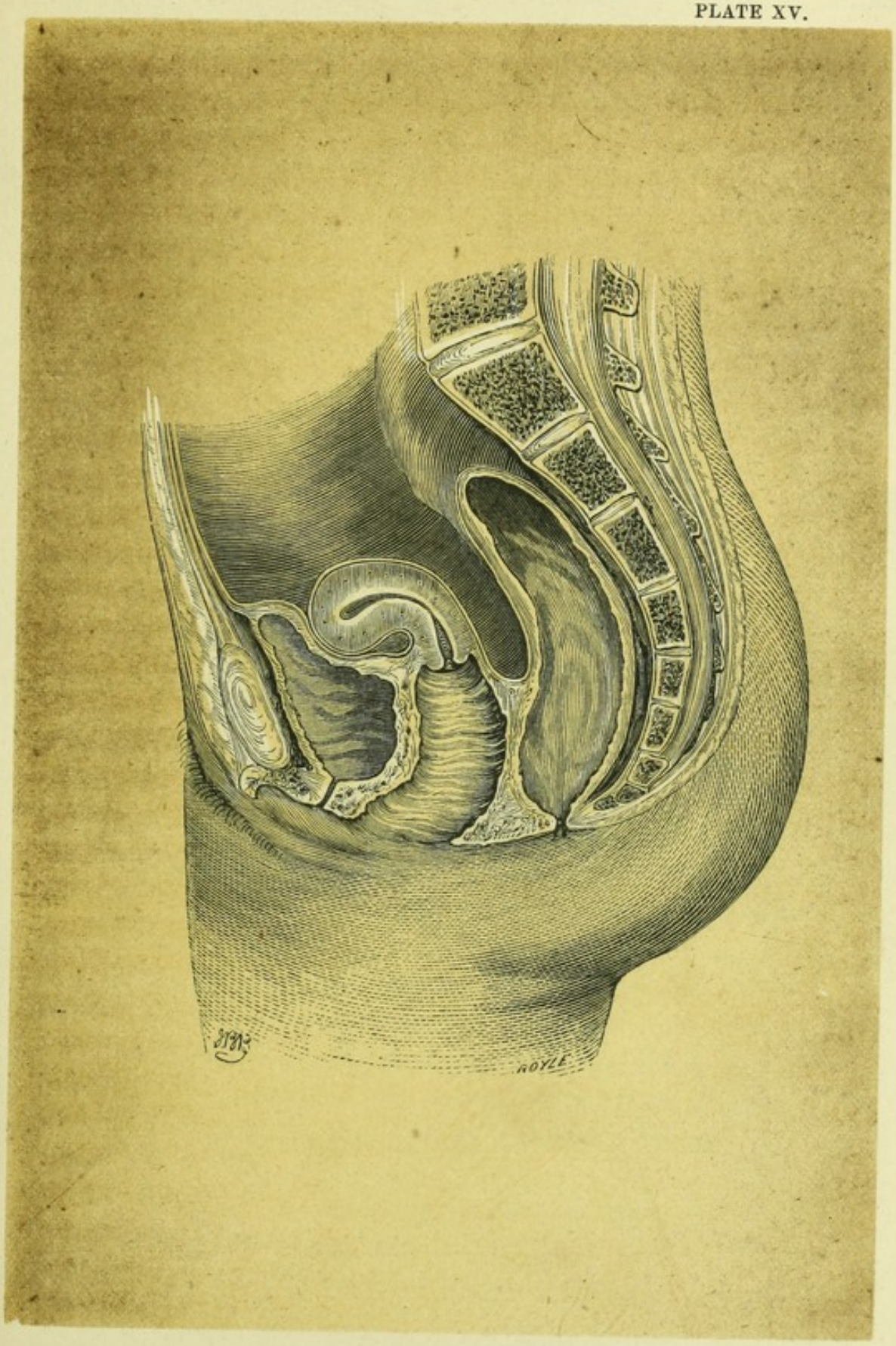
The treatment pursued in this case is often all that is found necessary. But if, after two or three weeks, it is ascertained that the retroversion recurs to a greater or less extent, it will be necessary to plug the vagina. The fundus of the uterus being restored as nearly as possible to its proper position, the vagina should be carefully filled with cotton-wool or pieces of sponge, so as to interpose a mechanical obstacle to the uterus falling back. The uterus being fixed in its proper site, the broad ligaments will quickly recover their tone.

In retroversion, the os uteri is sometimes thrown forwards under the arch of the pubis, so as to press upon the urethra and prevent the bladder being readily or fully emptied. Several years ago, an unmarried lady, about thirty years of age, was brought to me from Brighton, supposed to be suffering from ovarian dropsy. On examination, I found the uterus retroverted, the os being fixed tight under the arch of the pubis. Being dissatisfied with her account of the freedom with which she passed water, I introduced a catheter into the bladder. An enormous flow of fetid urine followed, and the abdominal tumour disappeared. The supposed tumour, indeed, proved to be the distended bladder. The retroverted uterus had prevented the proper emptying of the bladder from day to day, and the urine had gradually accumulated so as to cause the distension which had been mistaken for ovarian dropsy.

Retroflexion of the uterus is much more rarely observed than retroversion. Not unfrequently, however, as I have already stated, more or less flexion of the neck of the cervix uteri accompanies retroversion. In complete retroflexion (Plate XIV.) the mouth of the uterus is felt immediately upon



Section showing the RETROFLEXION of the Uterus, and consequent pressure on the Rectum.



Section showing the ANTEFLEXION of the Uterus, and consequent pressure on the Bladder.

the introduction of the finger into the vagina, and the fundus is discovered in the rear. In anteflexion (Plate XV.) the os uteri is directed towards the bladder, and the fundus is bent forwards upon that viscus. But anteflexion is very rarely observed. The general symptoms of retroflexion and anteflexion differ little from those observed in retroversion. The rectum suffers more severely in retroflexion, the pressure exercised upon it by the displaced organ being greater.

The first patient received into the "London Surgical Home" was a widow lady who had had a large family of children. She was suffering from complete retroflexion of the uterus. The treatment ordinarily pursued in such a case—a treatment supported by the high authority of Professor Simpson—is rest, and the use of the stem pessary. The stem is introduced into the os and cervix, while the cupped extremity rests upon the floor of the vagina. I had been exceedingly dissatisfied with the effects of the pessary, and I cast about for some other means of affording relief. It occurred to me that the muscular tissue of the uterus was not passive in retroflexion, and that there was probably active contraction at the point of flexion. If this were the case, incision of the os and cervix should relieve to some extent, and possibly remedy, the retroflexion. I determined to act upon the supposition in the case in question. Proceeding in the manner described in the previous chapter (VIII.), I fixed the uterus, introduced the hysterotome within the os and cervix, and divided the parts freely up to, but not through, the internal os. The result exceeded my anticipations. Without adopting any other means, excepting rest, the uterus resumed its normal form, and in two months the patient left the "Home" perfectly cured.

Shortly after the occurrence of this case, a very distinguished lady, who had been suffering for fourteen years from retroflexion, placed herself under my care. She had been subjected to every known mode of treatment, and had even worn a stem pessary three years and a half, without obtaining any benefit. The difficulty of relieving the bowels was exceedingly great, and the sense of bearing-down, when she stood erect,

was so oppressive as to prevent walking exercise, or standing, except to a very limited extent. Finding that the fundus moved freely, and feeling certain that there were no adhesions to prevent the uterus resuming its proper position, I urged her to submit to the same mode of treatment as had proved so successful in the case just stated. After some hesitation she assented. I incised the os and cervix. The os had become so hardened, doubtless from the use of the stem pessary, that it resisted the blade like firm cartilage, and the sound of the incisions was distinctly heard throughout the room. Immediately after the incisions had been made, the uterus seemed to spring into its place. I plugged the vagina well with oiled lint, as I am accustomed to do after incision of the os and cervix. On the third day after the operation an injection was given with great ease, and the bowels acted without discomfort. For fourteen years the bowels had never acted without the use of five or six injections, and great difficulty had been experienced in administering them. In the subsequent treatment of the case the bowels were readily relieved by mild laxatives, which were substituted for injections. Five weeks after the operation my patient was able to walk an hour with comfort and advantage. The uterus had recovered its normal form and position, and the sufferings to which she had been exposed many years were entirely done away with. Since then there has been no return of the retroflexion.

The happy results of these two cases convinced me that the method of treatment I had adopted was sound; and subsequent experience has confirmed my early conviction. I have pursued the same method frequently in private practice, and on several occasions in the "Home," and in every instance with success. Let me mention, that the introduction of the hysterotome into the cervix uteri in cases of retroflexion is sometimes attended with considerable difficulty, and some little tact must be exercised in order to pass the instrument beyond the flexed part.

Incomplete retroflexion is not uncommon in unmarried females. The following case may be cited as an example: —M. O., aged twenty-six, was admitted into the "Home" on

the 18th of March of the present year. She had never been strong. For nine years she had suffered great pain, particularly in the groin, at the menstrual periods, and menstruation had been very irregular. She had also been subject to frequent vomiting for six years; and for some time she had experienced much pain whilst evacuating the bowels and bladder. On examination, the uterus was found to be slightly retroflexed, the clitoris was large and hard, and there was a painful fissure of the rectum. The patient had worn pessaries for fifteen months at a time, but with no permanent benefit. This case is an apt illustration of many often met with. The abnormal condition of the uterus had arisen from, and was kept up by, habits of delection, to which the patient confessed she freely gave way. The hardness of the clitoris was due also to this cause, and probably the fissure of the rectum—a condition often present in these cases. The true treatment, then, would be to remove the great incitement to self-indulgence, the enlarged and excitable clitoris, and cure the fissure of the rectum. This being done, the uterus probably would recover its normal state without further interference. I excised the clitoris, therefore, and divided the fissure, and in two months the patient left the "Home" cured. The uterus was normal in form and site, the fissure of the rectum had healed, and the tendency to self-indulgence was removed.

The true source of uterine disturbance and displacement in both the married and single is to be sought more frequently than is commonly supposed in habits of self-indulgence. In cases thus originating, it is only by excision of the clitoris that permanent relief can be obtained. I stand probably alone in attributing so important a part in the production of uterine disturbance and displacement to self-indulgence; but the extended experience I have had of cases which have yielded to no other treatment than excision of the clitoris, and the happy results which have followed early recourse to this operation, convince me that the opinion I have formed, and the practice which I have based upon it, are both sound. Self-indulgence, it is important to remember, is not confined to the unmarried, and it is frequently a source of sterility in the married, chiefly

in consequence of the retroversion and retroflexion of the uterus to which it is apt to give rise. In such cases, excision of the clitoris is a sure remedy for the sterility, and dilatation of the mouth of the uterus will prove of no utility.

Little need be said of anteflexion of the uterus. The condition is rare, and, on the whole, it gives rise to less inconvenience than either retroversion or retroflexion. The treatment to be pursued is similar to that recommended for retroversion.

The following cases, selected from many in my note-books, will illustrate some of the preceding remarks.

Retroflexion.

Case I.—*Retroflexion of the uterus: Menorrhagia: Delection: Double operation: Cure: Pregnancy.*—On the 29th of January, 1864, I was called by Dr. Willshire to see Mrs. S. G., æt. 44, who gave the following history :—Has had four children ; has been ill for several years, and is becoming emaciated. She has frequent uterine hæmorrhage ; the catamenia occurring every ten days, and lasting for eight. She also suffers from pain in the back, and has leucorrhœa. Of late she has seldom had connexion with her husband, because of the great suffering produced by the act.

Examination.—The face is thin, but bright and intellectual ; pupils dilated ; body very much wasted ; rectum loaded with scybalæ ; uterus retroflexed, and pressing on the rectum ; os patulous and spongy to the touch ; epithelium abundant ; vaginal mucous membrane very red, and labia minora roughened in their inner surface and elongated ; clitoris hard, elongated, flabby, and its attachments loosened. She confesses to suffering from great irritability of these parts, and to seeking relief by friction.

I gave it as my opinion that the whole train of symptoms arose from habits of delection, and that the only remedy was extirpation of the clitoris, and incision of the os and cervix for the retroflexion. She consented to this treatment, and on the 30th of January, assisted by Dr. Willshire and Mr. Philip Harper, I operated in the usual way, dividing the os and cervix, and extirpating the clitoris. The patient was put on an unstimulating diet, and ordered perfect rest. In a month she was quite well, and was recommended to resume cohabitation. On the 17th of June, the following notes were made :—" I have seen Mrs. G. this day. She has gained flesh, and is looking fat and well, very cheerful and bright. Says she is two months pregnant, and has had no irritation of any kind since the operation ; while the backache and uterine symptoms have disappeared. In answer to inquiry as to whether the operation had deprived her of sexual pleasure, she emphatically answered, " *No, quite the contrary.*" On examination *per vaginam*, the uterus is found to be pressing against the bladder, so that there is rather a state of anteversion than retroflexion.

This patient was delivered in due time of a healthy boy, she made a good recovery, and is now in perfect health.

Case II.—*Retroflexio uteri: Polypus ani: Hysteria: Delection: Operation:*

Cure.—M. S., admitted into the "London Surgical Home" November 1st, 1864.

History.—Æt. 36 years; married 14 years; has had neither child nor miscarriage. Complains of bearing-down of the uterus, frequently experiencing the sensation as if it would be forced away; a fulness about the organ; a never-ceasing pain in the lower part of the back. Catamenia regular up to twelve months ago; since that period has suffered from excessive menstruation, which continues generally twelve days. Suffers from incontinence of urine, and greatly from hysteria; any little excitement causes a well-developed attack, which often lasts for days. Bowels obliged to be kept regular by medicine.

An examination showed a retroflexed condition of the uterus; a polypus in the rectum; and an abnormally sensitive condition of the clitoris, which was much congested.

November 17th. Operation: I excised the polypus in the rectum, divided the os and cervix uteri, and extirpated the clitoris. December 1st. Has not had a bad symptom. 11th. Quite well. 19th. Discharged this day, cured.

Retroversion.

Case III.—*Retroversio uteri: Operation: Cure.*—C. H., admitted into the "London Surgical Home" February 6th, 1865.

History.—Æt. 26 years; married 4 years; had one child two and a half years ago, and has been ill more or less since her confinement. No miscarriages. Catamenia regular, rather profuse the last six months. She has been attended by several medical men, all of whom have told her she is suffering from ulceration of the os uteri. There was for a long time a considerable yellowish-white vaginal discharge, but latterly, having used astringent injections, this has almost ceased. Occasionally suffers from great pain in her side, which she says sometimes swells. Has had hæmorrhoids for years, and is in the habit of using an enema daily.

Examination.—Retroversion of the uterus, with a good deal of congestion of the os uteri.

February 16th. Patient chloroformed and placed upon table. The uterus was found to be completely retroflexed, and at the same time a fissure of the rectum was discovered, and two small polypi. The os and cervix were incised with a curved hysterotome; the fissure divided and the polypi removed; the vagina was then plugged with oiled lint and cotton wool. The patient removed to bed. Pil. opii. gr. ij. given immediately. 17th. Pulse 100; passed a restless night, with good deal of pain. 18th. Plugging removed from vagina. Evening. Menstruating freely,—she expected the courses to come on to-morrow. 19th. Pulse 120. Feels ill this morning; tongue clean; complains of pain in right groin; slight swelling over the region of right ovary, which is tender to touch; states this generally appears at the menstrual period. 21st. Pulse 120, small, and compressible. Menstruation has ceased, and the swelling is going down. Tolerably free discharge from the vagina; appetite little improved. 28th. Sits up daily; complains still of the left side. March 10th. Began to menstruate; pain in right side, groin, and leg. 13th. Still menstruating profusely. 20th. Leaves the "Home" to-day. There is still some amount of vaginal discharge, but she has lost all her pains; bowels opened regularly without the injection.

Case IV.—*Retroversion of Uterus: Subcutaneous division of the clitoris: Continued delection: Subsequent extirpation of clitoris: Cure.*—G. A., admitted to the "London Surgical Home," February 28th, 1865.

History.—Æt. 29, single. Has practised habits of delection to a great extent for some time. Her clitoris was divided two months ago by myself, but it would appear she has not given up her mal-practices. The last six weeks she has been subject to fits of some kind.

Patient attributes all her maladies to the shock of jumping out of a railway carriage fourteen months ago. She has since been subject to most distressing headaches. Several months ago she suffered from slight dragging-down pains in the groins and lower part of the stomach; latterly these have been very much worse, extending down the inside of her thighs to her heels. Has had much trouble with her bowels, for some time being obliged to use injections. Catamenia generally regular.

On examination, retroversion of the uterus and signs of irritation of the clitoris were discovered.

Was admitted into the "Home" to undergo incision of the os and cervix uteri. Had several fits on the day of admission.

February 29th. Scarcely retained anything on her stomach since admission, vomiting almost constant. Ordered Calcii Chlor. gr. ij., ut opus sit, and brandy and beef-tea injections. March 1st. Rather better; strong mercurial fœtor about breath; tongue very foul. To rinse mouth with diluted Condy's fluid. 3rd. Has not vomited for twenty-four hours; bowels twice relieved; several greyish ulcerated spots on mouth. ℞. Pot. Chlor. gr. xv. 4tis horis. 5th. Mouth improved. Ulcers brushed over daily with a dilute solution of Arg. Nit. No vomiting. 9th. Patient was chloroformed this afternoon and placed on the table; it was then discovered that the uterus had almost returned to its place. I therefore decided not to divide the os and cervix, but excise the clitoris. Evening. Hæmorrhage free, rather troublesome to control. 10th. Pulse 128, weak. Had several fainting attacks during the night; vomited several times. 11th. Pulse 156, feeble and jerking. Passed some clots of blood from the uterus in the night whilst vomiting. Vagina examined, no more clots could be found. Is very low and weak. To have brandy, eggs, and mutton-broth. Evening, Pulse 112; is better; no more bleeding or vomiting. 13th. Pulse 116. Mouth nearly well, breath still foul. Bowels relieved by enema, micturates frequently. Wound dirty and œdema of labia. 15th. Last three days has been menstruating. 17th. Still menstruating slightly. 18th. Pulse 100; bowels opened regularly without injections. 22nd. Says she has not felt or looked so well for many months; retains her water for four hours; complains of irritation about the mammæ. 28th. Has begun to menstruate freely a week before her usual time. The menstrual fluid is more abundant and healthy-looking than it has been for months. 31st. Still menstruating. April 3rd. Has been up the last two days; no pain nor trouble in walking; appetite good. 7th. Complains of pain and uneasiness in left mamma, and of scalding in micturition. Has been out for a walk. 14th. Has lost the pain in the mamma and in micturition; can hold her water four or five hours; bowels opened regularly without medicine; no pain anywhere; appetite small. 21st. Is much stronger; no uterine symptoms. 25th. The retroversion completely disappeared. Discharged cured.

Anteflexion.

Case V.—*Anteflexio uteri: Three years' duration: Operation: Great relief.*—S. C., admitted into the "London Surgical Home" August 8th, 1864.

History.—Æt. 50 years; married 20 years; has had no family. For three years she has suffered from much pain in the left groin, extending into the thighs. Complains of great irritability of the bladder, with frequent

desire to micturate. Catamenia regular until three years ago, when they ceased; bowels regular.

Upon examination, the uterus was found considerably anteverted, and pressing to the left side; the ovary of same side was found enlarged.

Operation.—August 23rd. After the administration of chloroform, Mr. Brown divided the os and cervix uteri with a hysterotome, and plugged with oiled lint and cotton wool. On the 28th, complained of pain over region of left ovary. To have Hyd. Chlet pulv. Opii aā grs. ij. 4tis horis. September 5th. Pain in small of back. Sodæ Biborat. gr. xv. ter in die. 12th. Hypodermic injection of Morphiæ Mur. gr. $\frac{1}{4}$ into the back. October 17th. Leaves the "Home" to-day greatly benefited.

Case VI.—*Anteversion of uterus: Fissure of rectum: Ill three years: Operation: Cure.*—S. W., admitted into the "London Surgical Home" March 7th, 1865.

History.—Æt. 28 years; married 7 years; no child nor miscarriage. Catamenia regular, but rather scanty. Has been ailing for three years, but much worse since July last. Complains much of pain in small of back, across lower part of stomach, and down the left thigh. There has been a good deal of vaginal discharge: none now. Has not been troubled much with her bowels, but suffers much pain after defæcation. Micturition very frequent and painful.

Upon examination, the uterus was found to be anteverted, the os being posteriorly and to the left side.

March 9th. After Chloroform had been administered, I freely divided the os and cervix in the usual manner. 10th. Pulse 112. Great pain in left side all night; no sickness. Plugging removed this morning; no hæmorrhage. 13th. Began to menstruate. 14th. Pulse 100. Pain in side gone; tongue clean; painful micturition. 16th. Pulse 72. Headache; pain over region of left ovary; very little discharge. 22nd. Complains of pain over right ovary, and in lower part of bowel; urine thick and rather fœtid. 27th. Gets up daily; dragging pain in groins gone; a good deal of pain in the back.

On the 4th of March, a fissure of the rectum was divided; on the 22nd, she was about the Ward, and left on the 25th cured.

CHAPTER IX.

CERTAIN OPERATIONS ON THE UTERUS.

Under this head I propose to bring together for consideration several operations on the uterus, which require only a brief notice. These are incisions of the os and cervix uteri, dilatation of the os for stricture, and excision of that part.

Incisions of the os and cervix uteri are had recourse to in the following conditions :—

1. Hypertrophy.
2. Imperforate os uteri and retained menses.
3. Contraction of the os and cervix.
4. Certain displacements of the uterus.
5. Floodings in connection with tumours of the uterus.

1. *For hypertrophy, or enlargement of the os uteri,* accompanied by congestion, with or without ulceration, free scarifications of the os, carried sometimes into the cervix, will be found much more speedily effectual than the application of caustics, or of the actual cautery, especially if proper constitutional treatment be adopted at the same time. The medicine I find most useful in such cases is the bichloride of mercury, $\frac{1}{24}$th or $\frac{1}{30}$th of a grain, with tincture of bark, in water, its use being continued for a considerable time. At the same time the bowels must be kept regular and the diet attended to, stimulants and spiced food being avoided.

The following cases illustrate the line of practice I recommend :—

Case I.—*Enlargement and ulceration of the os uteri : Caustics and incisions : Cure.*—S. M., æt. 34, admitted into the "London Surgical Home" March

22nd, 1859. Is married, and has one child. Since the birth of her first child, twelve years ago, has had five premature labours, and has suffered much from weakness and pain in the back and womb. Has always menstruated very regularly. On examination, I found the lips of the uterus ulcerated, and the organ itself much enlarged, and a small vascular tumour in it, which was very painful when touched. I ordered bark and the bichloride of mercury three times a day, and touched the uterus with caustic. April 2nd. General health improved. I applied caustic again. April 12th. Again applied caustic; uterus looking more healthy, but she suffers much sometimes from pain and a sensation of fulness in the womb. April 22nd. I freely scarified the womb, which bled considerably, giving great relief. I also ordered her quinine three times a day. May 1st. Applied caustic. May 11th. Uterus much smaller and tumour quite disappeared; much less ulceration; caustic applied. Much stronger, and able to go out in a Bath chair.

20th. Uterus normal size, and not at all tender on pressure. Ulceration all disappeared except one little spot, to which I applied caustic. General health quite restored.

23rd. Left quite cured.

Remarks.—No real relief took place from the application of the caustics until the os had been freely scarified, and then the relief was most marked and the cure speedy. If I had scarified in the first instance, as in many other cases, I have no doubt the patient would have been well sooner. It will be seen that, as it was, she got well in two months.

Case II.—*Congestion of uterus: Hypertrophy of os and cervix: Treatment by incisions: Cure.*—E. C., æt. 35, married; has had three children and five miscarriages; admitted into the "London Surgical Home" Oct. 31st, 1860. About a year ago, after undergoing great exertion, felt a sinking sensation at the lower part of the abdomen, as if the womb had fallen down. Ever since has suffered from great pain and a dragging round the loins, increased by exertion. Has always had bad labours, and the miscarriages have taken place about the third month. On examining her, I found the os and cervix uteri in a state of great hypertrophy, but there was no ulceration. Nov. 4th. I incised the os and cervix, which bled freely, affording almost instant relief. Ordered bark and bichloride of mercury. 7th. I incised the os and cervix again. 11th. Repeated the operation; the uterus is much better. 20th. Applied caustic. 24th. Congestion of uterus nearly disappeared; applied caustic again. 27th. Dismissed perfectly cured.

Case III.—*Enlargement of os and cervix uteri: Caustics and incisions: Cure.*—A. W., æt. 37, married; has had eight children. Admitted into the "London Surgical Home" June 28th, 1860. Since last April has suffered from pain in the womb and back, with a sensation of heat in the pelvis. On examining I found the lips of the os uteri puffy and very much hypertrophied, the cervix being also enlarged. July 1st. I scarified the os freely, and ordered her bichloride of mercury and bark three times a day. July 16th. Applied caustic to a small ulcerated surface on the os. 21st. Again scarified the uterus. August 6th. On examining the uterus, I found it looking much smaller and better; but there was a small ulcerated spot, to which I applied caustic. August 14th. Complains of pain and fulness in the womb. Iodine was applied to-day, and a zinc injection ordered night and morning. 27th. Not so well. Ordered carbonic acid gas to be injected into the uterus, which gave relief. Sept. 7th. Since the last date she has complained of great pain, and has had iodine applied to the os uteri repeatedly with marked benefit. Sept. 13th. I examined her, and found her uterus nearly well, with the exception of a very small spot of ulceration, which I touched with caustic. She gradually became

convalescent, and on October 9th left for the country, quite well in every respect.

2. *Incisions for imperforate os uteri and retained menses.*—In this unusual condition, it is necessary merely to puncture with a bistoury or a pair of scissors, or otherwise to apply caustic so as to produce an eschar. One such case I am enabled to quote from my own practice, illustrating what operative measures are needed, and the fatality too often observed. But notwithstanding the loss of such cases, we cannot forego operating, because if left alone matters become progressively worse, the retained menstrual fluid distends the uterus and its appendages, and death sooner or later must ensue; whereas, if we remove the impediment, we give the patient the best possible chance of cure.

CASE.—*Imperforate os uteri and retained menses: Puncture: Death.*—S. L., æt. 16, the daughter of a monthly nurse, was brought to me at the "London Surgical Home" by her mother. She had never menstruated. About every month she suffered great pain in the abdomen and back, and lasting for a period varying from a few hours to three days. This was accompanied by all the usual symptoms of menstruation, without, however, there being any external appearance. The pain was described as being so severe as to cause her to roll about the floor in agony. She had all the usual marks of confirmed puberty, and was tall and well made.

On making an examination *per vaginam*, I found it terminated superiorly in a perfect cul-de-sac. The neck of the uterus could be felt in its normal position; but no os uteri was distinguishable. The lips of the os could be obscurely made out, covered, as it were, with the lining membrane of the vagina. By examination through the rectum, the uterus could be felt increased in size, and presenting to the touch a sense of fluctuation. It was evident that the case was one of retained menses from congenital closure of the os uteri. The general health was becoming a good deal affected. I explained to the mother that the closure of the os uteri must have existed from birth, and that nothing but an operation would be of any service.

She was therefore admitted into the "London Surgical Home" on March 5th, and on the 8th of the same month she was subjected to the influence of chloroform, and further examined by Dr. Hall Davis and Mr. Philip Harper, who both agreed with me as to the nature of the case and the necessity of an operation. I therefore proceeded to operate in the presence of those gentlemen and Dr. Menzies, Messrs. Ince, Ince, jun., Andrews, Mr. Spencer, and Dr. Giles. She was placed in the lithotomy position, and I passed my finger into the vagina until the end of it was in contact with the obscurely-felt lips of the os uteri. I now introduced a pair of sharp-pointed straight scissors along the finger to the obstruction, and gently pressed them through it, without opening them. It required very little force to penetrate the membrane. On withdrawing them, a quantity of thick fluid, of treacly consistence, but of the colour of red-currant jelly, immediately flowed out. I now passed one finger into the rectum, whilst gentle counter-pressure was made on the

abdomen, and thus a quantity of the fluid flowed out (about five or six ounces, subsequently increased to nearly three-quarters of a pint). The vagina was syringed out with warm water, a napkin and binder put on, and she was placed in bed. When she had recovered from the chloroform, one grain of opium was given to her, which was to be repeated every six hours. There was not the least hæmorrhage.

The following account of her progress is from the notes of Mr. Wratislaw, the visiting surgeon in charge :—

March 9th. Nine A.M. : Has had a good night, and felt so well this morning, that she was found sitting up in bed doing some crochet work. The thick fluid had continued to flow during the night, and the nurse had collected about six ounces of it. It had now changed to a brighter red, having the appearance of natural menstruation.—Nine P.M. : Slight sickness had come on in the course of the day, and there was some uneasiness with tenderness in the epigastrium. The countenance was swarthy ; tongue coated. Ordered hot linseed poultices over the abdomen ; and to take three grains of grey powder with five grains of Dover's powder at bedtime, and effervescents every three hours.

10th. At 3 A.M., as she had not slept and was very restless, a grain of opium was administered as a suppository. Not being relieved, another grain of opium was given by the mouth. This produced no effect, and at 9 A.M. vomiting of dark bile came on, and was very frequent. The pain in the epigastrium was severe ; pulse 120 ; tongue foul ; bowels have not acted. She lies upon her back with the legs stretched out. Turpentine epithems were applied over the abdomen, and a dose of castor-oil given. This produced dark bilious motions, but the sickness continued. In the course of the day tympanitis came on, and the tongue became very dry ; pulse 130, very weak. She became so prostrate and sinking in the evening, that frequent doses of ether were administered.

11th. Had a bad night ; the vomiting of the same bilious matter is incessant ; pulse 140 ; tympanitis and tenderness of the epigastrium ; tongue dry and brown, except at the edges, where it is red. A grain of calomel was given, and a blister applied to the abdomen. The sickness ceased after this, but she continued to sink, and died soon after 4 P.M., continuing perfectly sensible to the last.

The following account of the post-mortem appearances was drawn by Mr. Leggatt, of William Street, Lowndes Square, her usual medical attendant, and Mr. Philip Harper :—

Examination twenty-six hours after death.—On opening the abdomen, there was not any appearance of general peritonitis ; but on examining that portion of the intestines which was in contact with the uterus, there was evidence of local inflammation, plastic lymph having been recently thrown out. The uterus was large, and had recovered from its retroflexed condition. On being removed from the body, it was laid open through the cervix. Its lining membrane was very vascular and injected, from the long contact of the menstrual fluid. The puncture had been made into the os, and its surrounding edges presented a dark and ecchymosed appearance. The ovaries were enlarged softened, and granular in appearance and feeling. Liver quite healthy.

Many similar cases are recorded. I now recommend that, immediately after puncturing the womb, the vagina should be plugged, in order to prevent the admission of air to the uterus. Sometimes the uterus is distended with menstrual fluid, there being no outlet for it, in consequence of absence of the vagina.

A case of this kind was admitted into the "London Surgical Home" in 1861. The patient was fifteen years of age. She had suffered for two years great pain at each monthly period, without any show of menses. Latterly the pain had been constant and excruciating. Mr. Teale, of Leeds, had attempted to make an artificial vagina, but failed, from want of sufficient tissue. The uterus externally felt the size of a four months' gravid organ, and it could be felt bulging in the rectum. The girl was otherwise well developed.

I introduced a curved trocar into the uterus *per rectum*, and fastened the canula in its place by tapes. At the time of the operation, a good deal of treacly-looking matter escaped through the canula, and continued to do so for two or three days after. Three days after she had some pain, followed by a discharge of some healthy, fresh menstrual fluid through the canula. On the sixth day, the bowels were opened, the canula remaining in position. The canula was kept in for a fortnight, the bowels acting regularly every day. Six weeks after the operation, and after two or three days' suffering from uterine pain, the patient again menstruated through the rectum, and shortly afterwards she returned home in good health.

This patient some time afterwards again returned to the "Home," suffering from retained menses. I at once operated with the trocar; but, before reaching the os uteri, the fundus of the bladder was punctured. Ever since she has menstruated both through the bladder and rectum.

3. *Incisions of the os and cervix for contraction or stricture* are now and then called for, on account of difficult and painful menstruation and concurrent sterility. But incisions are not the only means resorted to to cure this morbid state; for dilatation by catheters or bougies, caustics, sponge tents, and other mechanical contrivances, are employed, and some of them, at times, more beneficially than incisions. But incisions are called for where dilatation has failed, and particularly in chronic cases, where the tissue of the os uteri has become so indurated as to have a cartilaginous consistence.

The operation necessary to relieve the constriction is similar to that used for checking hæmorrhage in cases of fibrous tumour, as already described (Chapter VIII.).

4. *Dilatation of the os uteri.* — I could adduce several instances where the protracted use of ordinary elastic, or of metallic bougies, has been successful; but two will suffice for illustration. Before detailing them, I would call attention to a set of dilating instruments I invented, extending the excellent plan suggested by Mr. T. Wakley for strictures of the urethra to the treatment of constricted os uteri. I have several elastic tubes, much like catheters, of different bores, and a sort of long stilette. This last is first pushed through the mouth of the womb, through the speculum, as in the ordinary method of introducing the uterine sound. After this is done I pass over the stilette, first the smallest-sized elastic tube, and allow it to remain for a longer or shorter period, according to the pain produced. When this has fulfilled its purpose it is withdrawn, and a tube of the next size larger introduced in its place. It will be found that cases which present almost insuperable difficulties to their dilatation, will yield under this simple contrivance, and without producing any bleeding or laceration, the not unfrequent results of ordinary dilatation. The most advantageous period for the introduction of the instrument is immediately after the ceessation of the catamenia, before the canal has contracted and returned to its usual size.

I have never seen the necessity for the introduction of caustics into the cervix for the purpose of dilatation, and I think that no one who has studied the delicate structure of the lining membrane of the uterine cervical canal, and who recollects the necessity for its expansion and contraction at each menstrual epoch, would ever be induced to destroy any portion of it by such means. Many cases have come under my notice where partial occlusion of the os and cervix has been the result of their use; and I feel quite certain that they have caused sterility more frequently than is generally supposed.

CASE I.—*Stricture of the cervix uteri.*—Mrs. F., married at the age of 27, had always suffered from dysmenorrhœa, for which she consulted me three years after marriage. On examination, I found it impossible to introduce a uterine sound on account of the firm constriction of the cervix uteri. Having first enforced a separate bed, I commenced the treatment of the case by passing the smallest-sized male elastic bougie, one of the firmer sort. Having succeeded in this, I gradually increased the size, and after three months' perseverance was able to pass one of Simpson's large uterine dilators. The result of this treatment was the complete cure of the dysmenorrhœa, and in a short time afterwards this lady became pregnant, and at the full period was delivered of a healthy child.

Had I possessed at this period the set of dilators I now employ, a favourable result would have been secured in a much shorter period, and have involved less discomfort and difficulty both to the surgeon and patient.

CASE II.—*Stricture of the cervix uteri with displacement.*—Mrs. C., a lady from Scotland, æt. 31, consulted me in the early part of 1856 on account of the following conditions. She had been married a second time, but had never borne children, although she believed that about a year after her first marriage she had a miscarriage. She suffered considerable pain at every menstrual period. On examination, I discovered retroflexion of the womb, and on attempting to pass the uterine sound I found a stricture not to be overcome. I commenced treatment by using small elastic bougies and catheters, and was at length able to dilate the strictured parts ; on each occasion of its introduction the instrument was allowed to remain as long as it could be borne without discomfort. Two months' steady perseverance effected such a change that I was enabled to pass a full-sized dilator.

The painful menstruation ceased, and the retroflexion of the uterus was completely cured. After the patient's return home she became pregnant, and at the end of her full term was confined of a child.

5. *Incisions for certain displacements of the uterus ;* and 6. *Incisions for flooding, consequent upon fibrous tumours of the uterus,* have been considered in Chapters VII. and VIII.

7. *Excision of the os uteri* has been proposed and practised for scirrhus ; but the results are such as not to afford encouragement to the plan. In my opinion, all operative proceedings on the womb, when affected by malignant disease, are useless, and should never be resorted to.

CHAPTER X.

STONE IN THE FEMALE BLADDER.

Urinary Calculi are probably formed nearly as frequently in the female bladder as in the male; but the shortness of the female urethra and its remarkable degree of dilatability, commonly permits the spontaneous escape of the stone before it arrives at any great size, so that the surgeon is less frequently consulted by women suffering from stone than by men.

Diagnosis. — The symptoms of calculus in the female are somewhat analagous to those in the other sex, but differ in this, that they are particularly liable to prove fallacious. Nothing is more common than for hysterical girls to complain of pain at the neck of the bladder, and at the extremity of the meatus, of frequent calls to micturate, and of a sudden arrest of the flow of urine before the bladder has been emptied; but upon examination by a sound or catheter, no stone can be detected. It is also by no means uncommon to find the female bladder occupied by a solid substance, very different in form and structure from ordinary calculi. Many cases are on record in which the bladder has become the receptacle of extraordinary articles. A case is related in the *Medico-Chirurgical Transactions* (vol. i. p. 123), by Mr. Thomas, in which an ear-pick was extracted from the bladder of a young woman.

Dr. Toogood, formerly of Bridgewater, in his most interesting volume, *Reminiscences of a Medical Life* (page 155), relates two cases, in which the surgeon accidentally allowed a catheter to slip into the bladder of females. In one case the instrument was in the bladder fifteen days, and produced but slight irritation. It was removed by dilating the urethra by a sponge-

tent, then introducing the finger, so as to direct the catheter into the long axis of the bladder, and afterwards seizing it with a pair of forceps, as recommended by Sir Astley Cooper. In the other case, the instrument was in the bladder seventeen days, and removed in the same manner.

In January, 1853, a young girl was admitted into St. George's Hospital under Mr. Hawkins (*Lancet*, May 28th, 1853), suffering from symptoms of stone in the bladder for four years, in consequence of having passed a hair-pin through the meatus into the organ. Attempts had been made repeatedly to extract it, but without success. On her admission the urine was found to be offensive, and it contained a large quantity of ropy mucus, but no blood. It came away involuntarily at first, but not afterwards, though the patient was obliged to pass it very frequently. When the sound was introduced, a foreign body, not easily movable, was felt in the bladder. It was extracted with extreme difficulty by first incising and then dilating the urethra and introducing the forceps. The hair-pin was broken on extraction, and was surrounded by an incrustation of triple phosphate, and with phosphate of lime. The urine was alkaline. After the operation the patient could not retain her urine more than three hours at a time, except at night. In this, as in many cases of calculus in the female, there was, before the extraction, rather an impediment to the retention of urine than a difficulty in passing it.

Among other symptoms of stone in the female, it may be noted that the meatus is always dilated, that there is invariably pain after passing the urine, generally pain in sexual intercourse, and that the urine often deposits a mucous, and sometimes a sandy, sediment. Frequently there is vaginal cystocele in the first instance, followed by prolapsus uteri. Although the urgency of these symptoms varies a good deal in different cases, there is often much suffering. Sir Astley Cooper says (*Lectures on Surgery*) :—"I think the symptoms of stone in the female are more urgent than those in the male. It is horrible to witness the sufferings which a woman experiences in consequence of this disease. She has a dreadful pain at

the extremity of the meatus urinarius, and in addition to this, there is a forcing-down of the lower parts of the pelvis, as if they were about to protrude; a frequent disposition to make water, and all the pains suffered during delivery. There is generally a prolapsus uteri, and a discharge of bloody urine. In addition to these symptoms, there is almost constantly an incontinence of urine, a great urgency to discharge it, and an incapacity to retain it."

These symptoms, or some of them, may arise from scirrhus, or from chronic inflammation of the mucous membrane of the bladder, polypous tumours within the bladder, or excrescences in the meatus. The detection of the stone by the sound is the only satisfactory evidence of its existence.

Treatment.—Although stone in the female does not always produce much distress, yet, when discovered, it ought not to be allowed to remain, as it may grow to a size indefinitely large; and, if the patient should become pregnant, it may prove a source of great difficulty and danger during parturition, and may even lead to vesico-vaginal fistula.

The three ways of removing calculi from the female bladder usually resorted to are dilatation of the meatus, breaking them up (lithotrity), with or without dilatation, and incision (lithotomy).

1. *Dilatation of the Urethra.*—The female urethra is well known to be capable of great dilatation, but few practitioners are aware either of the extent to which it may be dilated, or of the conditions on which that dilatation can be effected without laceration or subsequent incontinence of urine, or any other injury. In regard to the dilatability of this canal, there is ample evidence that it will often permit a good-sized calculus to pass through it, and numerous examples are adduced, by surgical writers, in which calculi of immense size have been spontaneously voided through the meatus urinarius, either suddenly and without pain, or after more or less time and suffering. Heister mentions several well-authenticated instances of this kind. Middleton also has related a case where a stone weighing four ounces was expelled in a fit of coughing, after lodging in the passage a week. Collett

speaks of another instance, where a stone about as large as a goose's egg, after lying in the meatus urinarius seven or eight days, and causing retention of urine, was voided in a paroxysm of pain. (See Cooper's *Surgical Dictionary*, art. "Lithotomy.") Dr. Molineux records a case (*Philosophical Transactions*) in which a woman voided a stone of which the long circumference was between seven and eight inches, the shortest circumference (in the thickest part) five inches and three quarters. I have myself extracted a stone through the dilated meatus three inches and a half in circumference; and in the case already quoted, in which Mr. Thomas extracted an ear-pick from the bladder, he says, "The left forefinger was most easily introduced, and, I believe, had the case required it, both thumb and finger would have passed into the bladder without the smallest difficulty." It is clear, therefore, that there is no absolute or mechanical necessity for incising the canal in order to allow ordinary calculi to pass. Still objections have been brought against the practice of dilatation; namely,—1. That it frequently takes a long time and gives great pain to dilate the urethra effectually. 2. That laceration is liable to occur. 3. That incontinence of urine has sometimes followed. To these objections it may be replied, that—1. The tediousness of the operation, and the pain it produces, are objections, the force of which has been dissipated by the introduction of anæsthetics into operative surgery; and in such an operation chloroform has a double claim upon our notice; for it not only prevents all pain, but tediousness likewise. So long as the patient is conscious, the process of dilatation is rendered difficult and tedious by the contraction of the sphincter fibres of the meatus; but under chloroform these fibres are relaxed, and the dilatation can be accomplished easily and quickly. 2. The second objection is disposed of in the same way. Laceration can only occur, in the walls of this loosely arranged structure, in consequence of the rigidity of the muscular fibre; relax this rigidity by chloroform, and the danger of laceration no longer exists. 3. Incontinence of urine does not occur after dilatation under chloroform. And I think this may be thus explained: when the dilatation has

been a tedious and painful process, it has at length been accomplished (physiologically) by exhausting the irritability of the fibres, and thus rendering them powerless for the time; or (mechanically) their structure may have given way under tension; or both these circumstances may have occurred; and in either case, subsequent imperfect contraction, and consequent incontinence, are perfectly explicable. Whereas under chloroform there is no wasting or bearing-down of the local nervous irritability, nor, as the rigidity of the canal is destroyed, is there any danger of laceration; there is, therefore, no probable cause for the subsequent production of incontinence. I state these things advisedly, and after considerable experience, having had frequent occasion to dilate the female urethra, not only in cases of stone in the bladder, but in operating for vesico-vaginal fistula.

2. *Lithotomy and Lithotrity.*—Lithotomy in females is much more easy of execution, and less dangerous to life, than the same operation in the male subject. It may be done in various ways, but until recently the plan was to divide the urethra and neck of the bladder, and introduce a pair of forceps. The objection to this operation is that incontinence of urine is apt permanently to follow. The late Mr. Hey, of Leeds, cut two female patients for the stone, both of whom were afterwards unable to retain their urine. A modern method is to incise the anterior margin of the meatus, and then gradually dilate the remaining portion of the urethra until the finger can be passed into the bladder. But even this plan is often followed by a greater or less degree of incontinence of urine.

Sir William Fergusson, Mr. Coulson, and other modern surgeons, advise, when the stone is large, that the anterior portion of the meatus should be divided, and the remaining portion dilated. In this way Sir William has extracted a stone three inches in circumference. Mr. Coulson, however, in his admirable and practical work on *Lithotomy and Lithotrity* (p. 261), rather recommends lithotrity when the stone is very large.

Lithotomy in the female, as it was formerly performed, is an

operation which should be utterly discarded from practice. Sir Astley Cooper says (*Lectures*, p. 368) :—" The extraction by dilatation is greatly to be preferred, not only because there is much less danger in it, but because it does not leave behind it the melancholy consequences of lithotomy in the female. I mean the loss of the retention of urine. A woman who undergoes the operation for stone, generally loses for ever after the power of retaining her urine. Her condition, therefore, is most deplorable. The constant discharge of urine and the constant excoriation of the parts render her offensive to all around her; her health is broken, and she is completely cut off from all society." Dr. Blundell, my highly respected preceptor at Guy's Hospital, and before him Dr. Haighton, strongly recommended the removal of calculi from the female bladder by dilatation of the urethra. Nothing more need be added to justify me in urging my brethren in all cases to avoid incision of the meatus. Dilatation under chloroform is both safe and easy, and will generally allow the stone to be removed entire; or, if it be very large, it may easily be broken down by lithotrity.

At page 166 of this work will be found a case in which I extracted a stone from the female bladder by dilating the urethra under chloroform. The case is interesting in many points. The calculus had been the cause of a difficult labour three years before, and by its pressure a vesico-vaginal fistula had been produced. Although the stone was three inches and a half in circumference, it was extracted without much difficulty, and with a very slight laceration of the anterior portion of the urethra, which healed, and the patient recovered, without any difficulty in retaining the urine, which had for three years previously been discharged through the vagina.

The largeness of a calculus alone can justify other measures than dilatation of the urethra for its extraction, and when this reason for such further means is furnished, we have now an operation recommended and acted on by Dr. Marion Sims, of New York, U.S., whereby the necessity of cutting the urethra is obviated. It consists in making an incision through the vagina, low enough down to avoid the peritoneum, and about

an inch in length, into the bladder, upon a staff previously introduced through the urethra. This done, the stone is seized and extracted by the forceps, just as in the common operation of lithotomy in the male. The calculus being removed, the edges of the wound are brought together by metallic sutures, as in the operation for vesico-vaginal fistula, and the same after-treatment pursued. The advantage offered by this plan is, that, by leaving the urethra intact, the incontinence of urine so common after the usual operation is avoided. The operation, besides, has the approval of Bozeman, more especially for women who have born children; and it is also approved by Mr. Erichsen, Mr. J. R. Lane, and others.

The following case will illustrate the mode of procedure here recommended:—

Case.—*Stone in the Bladder: Eight years' duration: Operation: Cure.*—Miss L. D., æt. 44. Admitted into the "London Surgical Home" September 19th, 1863. Eight years ago she first suffered from sudden stoppage of the urinary flow, with pain at the close of micturition, and numbness in the thighs and legs. The urine was then of an intensely red colour, and contained a sediment. For the last two years she has been much worse, and within sixteen months small white particles of stone have been passed sometimes with the urine, sometimes after micturition; and there has also been a very copious white sediment, and frequently bloody urine. She has in addition suffered from very great bearing-down, or forcing pain. On examination by sound, a stone was readily found, and a large one was diagnosed.

Oct. 15th. Under the influence of chloroform, the patient being placed in the lithotomy position, I first introduced a curved speculum (Bozeman's), by which a clear view of the roof of the vagina was obtained. I then passed a curved staff grooved on its convex aspect into the bladder, and while firmly held in the middle line, I made an incision upon it of two and a half or three inches, beginning about an inch in front of the os uteri, and terminating at the urethra—just short of it. An attempt to extract the stone with both large and small forceps did not succeed, and I accordingly enlarged the wound towards the uterus. Then with some difficulty I succeeded in removing the stone by means of a scoop. The wound was closed by seven silver-wire sutures.

The stone weighed 2 oz. 5 drachms, and was as large as a hen's egg. In colour it was whitish or greyish-white; it was porous in structure, and in composition phosphatic.

The case was treated, subsequent to the operation, as vesico-vaginal fistula; the sutures were removed on the 7th day, the wound being perfectly closed, and the catheter was left out two days after. The patient was discharged cured on the 12th of November.

Mr. J. R. Lane (the *Lancet*, vol. i. 1863) and Dr. Aveling, of Sheffield (*Transactions of the Obstetrical Society of London*,

vol. v.), have written elaborate papers on lithotomy in the female. Both writers enter at some length into the history of the operation.

In a case which came under the care of Mr. Lane, he operated in the following manner :—" The patient being placed in the lithotomy position, Bozeman's speculum was introduced into the vagina, and held so as to expose its anterior wall, and a straight grooved staff was passed into the bladder by the urethra. An incision was then made into the groove of the staff, commencing just behind the neck of the bladder, and extending backwards in the median line, for about an inch and three quarters, to within a short distance, in fact, of the attachment of the vagina to the cervix uteri. Through this incision the stone, which was nearly two inches in length, was readily extracted. The edges of the wound were then brought into apposition by twelve silver-wire sutures." The greater part of the incisions united by first intention, but a small portion of the edges sloughed, leaving a fistulous opening, through which the urine made its way into the vagina. The opening was closed by two wire sutures, and healed; but in a fortnight the new tissue gave way. Caustic having failed to secure junction of the edges, Mr. Lane pared them, and again applied sutures, this time with complete success.

From a review of the whole subject, Mr. Lane recommends, (1) that dilatation of the urethra should only be employed for the removal of stones of a very limited size, on account of the serious risk of subsequent incurable incontinence of urine; (2) that incisions in the *downward* direction should be discarded altogether; but that incision *upwards* may be practised with but little danger to life, and little risk of incontinence of urine. It is not, however, adapted for the removal of stones of any considerable magnitude, neither is it well suited for children. He believes that free incision is preferable to any combination of incision and dilatation; (3) that the vesico-vaginal incision, with immediate closure of the wound by suture, is admirably adapted for the removal of stones in the case of adult women, in whom the vagina is of average capacity; that it is the only safe and available method for the

removal of stones of large size; and that it is attended with a diminution of immediate risk, and no risk at all of *permanent* incontinence of urine; (4) that the lateral operation of Dr. Buchanan is founded upon sound anatomical and surgical principles, and is probably the best operation that can be practised in children; it is also well adapted for young and unmarried women, in whom the small size of the vagina would contraindicate the vesico-vaginal method: in these latter cases the choice would therefore lie between the lateral operation and the incision upwards of the urethra; (5) that there are scarcely any conceivable circumstances which would render the high operation above the pubes justifiable; (6) that the "vestibular" operation of Lisfranc possesses no merit of its own to compensate for its manifest disadvantages.

I quote Mr. Lane's description of Dr. Buchanan's lateral operation:—

"It is, as nearly as the different structure of the parts will permit, the exact counterpart of the lateral operation in the male. It may be performed in the following manner:—A straight grooved staff having been introduced into the bladder, an incision is to be made on the inner surface of the left nympha, commencing half an inch above the meatus urinarius, and passing obliquely downwards and outwards, parallel with the rami of the pubes and ischium. This incision should be carried deeply into the space between the rami on the outside and the vagina on the inside, care being taken not to wound the vagina, which should be protected and pushed inwards, towards the median line, by the left forefinger introduced into the wound. With the same finger the staff should be felt for deeply in the wound, and the knife should be made to penetrate the groove at a point corresponding, as nearly as can be judged, to the vesical termination of the urethra. It should then be passed onwards into the bladder, its cutting edge being turned obliquely downwards and outwards towards the left side, just as in lateral lithotomy in the male. The incision may be enlarged, should it be thought necessary, as the knife is withdrawn, by a further division of the tissues in the same oblique direction. The ordinary lithotomy forceps

can then be introduced into the wound for the extraction of the stone."

Dr. Aveling records, in the paper referred to, a successful case of vaginal lithotomy. He suggests a mode of fastening the sutures by a coil of wire, which he designates a "coil-clamp." This clamp is made by twisting No. 28 wire closely round a moderately large pin, each coil touching the other, the ends being cut off close. The coil when used is slipped over the ends of the adjusted suture, and kept in position by a perforated shot. Dr. Aveling claims for this clamp the following advantages:—It facilitates the adaptation and removal of the sutures, diminishes the chance of irritation of the structures by knots and contortions in contact with the vaginal walls, and permits the use of thicker wire.

CHAPTER XI.

OPERATIONS ON THE EXTERNAL SEXUAL ORGANS.

Under this head I propose to treat of the operations for—(A) Imperforate Hymen; (B) Encysted Tumours of the Labia; (C) Irritation and Hypertrophy of the Clitoris; and (D) Vascular Tumours in the Meatus Urinarius.

A.—Imperforate Hymen.

In its natural state the virginal hymen closes the vagina imperfectly, generally occupying the inferior portion of the ostium vaginæ in the form of a semilunar membrane, leaving an aperture in the upper portion from the size of a quill to that of a thimble, for the transmission of the menstrual fluid. But it occasionally happens that the membrane is congenitally entire or imperforate. This may not be discovered until puberty, when the female will suffer severely every month by the accumulation of the menstrual secretion within the vagina, producing ultimately a bulging-out of the occluding membrane in the form of a pelvic tumour, and causing severe pain and other serious symptoms. The uterus as well as the vagina, and even the Fallopian tubes, become, in course of time, distended with the menstrual fluid, and at length an operation is urgently called for. The method of relieving this condition has been to divide the hymen by a crucial incision, and after the escape of the black, treacle-like and fœtid fluid, to syringe the vagina and uterus well out with warm water, afterwards applying a bandage round the abdomen.

This appears a very simple and easy proceeding. But many young women have lost their lives by the operation from subsequent peritonitis; and the subject is one which is worthy of careful investigation.

The fatality of the operation has been ascribed, by Dr. Blundell, to the epidemic influence of puerperal fever, when raging in the neighbourhood. His opinion is worthy of great respect; I therefore quote his words. He says: "It seems that where puerperal fever is epidemic, women in whom the hymen has been divided in this manner, are liable to inflammation of the peritoneum afterwards, in the same way as they are liable to similar inflammation after they have been recently delivered. Cases of this kind, two in number, if my memory serve, have been mentioned by Denman; and a few years ago, at the London Hospital, a case occurred, for a reference to which I am indebted to Mr. Mitchell, of Kennington. In this case, the accumulation of the catamenia amounted to two gallons or more. The obstruction was divided, inflammation of the peritoneum ensued, but the patient was saved by vigorous antiphlogistic remedies. As this is the case, if I had a patient under my care, I should dissuade her from submitting to the operation till the epidemic disposition to puerperal fever had subsided, even though she waited for three or four years; for, without pretending to assert that abdominal inflammation from this cause is equally dangerous with the genuine fever of puerperal women, I think it not impossible that it might cost her her life. Why the discharge of the accumulated catamenia should, like parturition, give rise to peritonitis, I do not pretend to explain; but the fact is curious. Is there any analogy between the lochia and the catamenia; and is this the cause of these similar effects? Perhaps some great pathological truth lies concealed here." (Blundell's *Midwifery*, p. 689.)

Without for one moment questioning the propriety of deferring this, or any other operation upon the pelvic or abdominal organs, whenever and wherever puerperal fever is epidemic, I have a strong impression that fatal peritonitis has succeeded this operation when there was no such influence to account for

it. At all events, many such cases are recorded without any reference being made to the existence of an epidemic of puerperal fever.

Treatment.—When the surgeon is consulted in the case of a young female before the age of puberty, on account of an occlusion of the vagina, it will generally be found that the united parts may be separated by the thumb of each hand being applied, and some little force used, the patient being placed in the lithotomy position. Cutting is rarely required in children. A piece of oiled lint should be introduced to prevent the reunion of the separated parts, after they have been thus torn asunder. If the obstruction is of a longer standing, and the tissues are thickened and indurated, then the question to be considered is, how is it to be divided? Every author who has written on the subject recommends a crucial or stellate incision. This leaves the divided portions of the hymen to retract and remain on each side of the vaginal orifice; and when the operation is performed before puberty, or a few years afterwards, these relics of the thickened hymen may create no irritation of consequence. Not so, however, when the patient has passed her twenty-fifth or thirtieth year; the divided portions do not then shrivel or so pucker up as to create no inconvenience.

Being strongly convinced that these two methods of dividing the hymen—viz., by the crucial and stellate incision—are not as satisfactory as an operation by which the whole of the abnormal structure is at once removed, I recommend that the hymen be excised by a circular incision at the point of its junction with the labia.

The following cases will illustrate this mode of operating:—

Case I.—*Imperforate hymen in an unmarried lady: Painful menstruation: Operation: Cure.*—Miss B., æt. 29, consulted me January 3rd, 1853, suffering from painful menstruation since puberty, and at every epoch so severely, that her health was seriously impaired. She had, in fact, become a confirmed invalid. She stated that the pain was accompanied with a sense of bursting, as if something must give way "at the mouth of the bladder." Considering it necessary that a vaginal examination should be made, I introduced my finger between the labia, and immediately found a firm resisting band, which prevented its further progress. I then proceeded

to make a visual examination, when I discovered a perfect closure of the vaginal orifice, but an enlarged meatus urinarius. She stated, upon further questioning her, that the menstrual discharge came from the mouth of the urethra ; and on passing a probe into the lower part of the meatus, I found that it slipped into a tortuous canal below the meatus (the size of the probe) running up into the vagina. It was from this canal, evidently, that the menstrual fluid escaped. It was now clear that the hymen was congenitally imperforate and thickened. I recommended that it should be removed. Having prepared her for the operation a few days previously, I placed her in the position for lithotomy, under the influence of chloroform, and then proceeded to dissect out the hymen by a semicircular incision on each side, so as completely and cleanly to remove the whole structure. No hæmorrhage of any consequence took place. The parts were dressed with lint soaked in oil ; this dressing was repeated from day to day, and in one fortnight all the parts were quite healed, and at the following menstrual period she suffered no pain or inconvenience, and has continued well ever since.

Case II.—*Imperforate hymen in a married lady, obstructing connubial intercourse : Operation : Cure.*—Mrs. G., æt. 35, married eighteen months, was requested to see me by Sir C. Locock, February, 1854, who had ascertained from the patient that she had been married some eighteen months, but that her husband could have no proper connexion with her ; that it was not his fault ; that she had been in good health ; and menstruation regular, although it commenced late in life. On examination, he found the vagina a cul-de-sac not more than a short inch, the urethra very capacious, and the patient described the menstrual discharge as coming through that orifice. The uterus could be distinctly felt per rectum, and appeared to be quite normal. Sir C. Locock advised her to return to town again when the catamenia were flowing, in order to ascertain whether the discharge actually issued from the urethral orifice, and then to stop in town for the purpose of having some operation performed.

On the 28th of February I had an opportunity of examining the patient, and after a very careful investigation, I discovered, about a third of an inch behind the meatus, a small projecting piece of mucous membrane like a cow-pox pustule on the third day, and from this I saw some leucorrhœal discharge ooze out. Still I could not pass the smallest probe through this little projection. I then carefully introduced the little finger of my left hand into the bladder, and clearly ascertained that there was no communication with the uterus ; indeed I could plainly feel this organ through the coats of the bladder as well as through the rectum. I examined again and again, and could find nothing but a thick fibroid hymen completely obstructing the vaginal orifice, extremely unyielding. At last, seeing some more leucorrhœal discharge ooze out, and hearing from the patient that she occasionally had a considerable quantity of that secretion, I again tried, and ultimately succeeded in insinuating, a very small probe through a valvular opening into the vagina, when the instrument readily passed two inches upwards. I therefore advised her to stay in town till her husband's arrival, and proposed, subject to the approval of Sir C. Locock, that she should undergo the operation for removal of the hymen. She remained accordingly.

Operation.—March 4th, 1854, the patient was placed in the lithotomy position, and chloroform having been administered, with the assistance of Sir C. Locock and Mr. Nunn, I carefully dissected away the entire hymen, and removed it in one piece. It was nearly a quarter of an inch thick in some places, and was found lined within and without by a mucous mem-

brane, with a strong fibroid tissue intervening. A spacious and healthy vagina was then discovered, and a normal os uteri could be felt by the finger. A small speculum was easily introduced, and immediately on its removal the vagina was plugged with lint soaked in oil. The patient was placed in bed, and opiates were given. No hæmorrhage of any consequence ensued. The urine was drawn off by catheter every four hours, and perfect quiet was enjoined. On the sixth day the bowels were opened by enema. The patient recovered without any unfavourable symptoms, and on the eighteenth returned home, having previously menstruated normally. I afterwards heard that she was delivered of a full-grown child nine months after her return home.

This mode of operating has been objected to on the ground that constriction of the vagina will occur in consequence of the circular incision being immediately around the constrictor vaginæ. The objection would hold good if no attention were paid to the after-dressing; but if the plan be steadily followed which I have recommended,—namely, plugging the orifice daily, after the first seventy-two hours, with lint soaked in oil, —it will be impossible that any constriction can take place. In these two cases, as in several others which have come under my notice, certainly no constriction has followed the operation.

B.—Encysted Tumour of the Labia.

These tumours are met with of various sizes, but they are generally circumscribed. Some authors assert that they are always semi-transparent; but this I believe to be a mistake, as I have not found them invariably so. If they are superficial, then they are semi-transparent, but when deep-seated, they are covered on the outside by skin with more or less of cellular tissue beneath, and are therefore opaque.

Symptoms.—These are few in number, and, in the smaller and superficial kinds, slightly marked; but when the tumours attain a great size, or are attended by inflammatory action, then of course the symptoms are more prominent. The patient may complain of a certain degree of uneasiness and weight, aggravated by locomotion, by defæcation, micturition, or, if married, by sexual intercourse. Some authors assert that the skin covering these tumours is rarely changed in colour; but my experience does not warrant this statement, as I have

found the skin sometimes of a bluish, occasionally of a reddish-brown colour. When opened, they are found to contain fluids of different character in different cases, sometimes of a glairy nature, sometimes of a dark appearance, at other times of a puriform character.

Occasionally the contents are more or less solid.

These tumours may be caused by a fall or a blow on the soft parts, a long time antecedent to the formation of the cyst.

Diagnosis.—The slow growth of the tumour, and in most cases the absence of pain, will distinguish this disease from simple phlegmon of the labia, and its encysted character from warty tumours.

Treatment.—There are several modes of treatment recommended:—

1. Simple incision, and evacuation of the contents. 2. Insertion of a seton through the tumour, so as to produce suppuration. 3. Dissecting out the tumour, care being taken that the entire cyst be removed. 4. Injections of iodine. 5. The actual cautery.

1. The first of these methods—namely, simple incision—may be practised with occasional success where the tumour is very superficial and semi-transparent.

2. The plan of treatment by seton I have never tried, nor do I think it one to be recommended.

3. The third kind of treatment—namely, dissecting out the entire cyst—is the mode which I greatly prefer, care being taken with the after-dressing to insure a healthy granulating surface at every spot. This may be accomplished either by dressings of dry lint, or by a cerate made of turpentine and resin cerate, equal parts, or by touching the surfaces with nitrate of silver.

4. The next best method is injecting iodine; but as I have always found the last-named plan successful, I have never had recourse to injection.

5. The late Mr. Liston used the actual cautery, and it may be found hereafter very useful in some cases.

I shall only relate one case, out of many in my case-books, in which the third kind of treatment succeeded.

CASE.—*Encysted tumour of the labia in an unmarried lady: Operation: Cure.*—M. H., æt. 26, consulted me, complaining of great pain in the lower part of her back, pain down the inner part of the thigh, and pain in the left labium, extending back to the rectum: she stated that nine or ten weeks ago she suffered from acute pain at that spot; that ever since that period she has had considerable uneasiness there, and that now she feels a swelling. Upon examination, I found an encysted tumour of the left labium, between the vagina and the tuberosity of the ischium, running up towards its ramus, about the size of a small pullet's egg. Feb. 28th. I ordered a dose of castor-oil at bedtime, and, on March 1st, proceeded to operate. The patient being placed under the influence of chloroform, and put in the position for lithotomy, and all hair being shaved off the labium, an assistant passed his finger into the vagina, and pressing the tumour forwards, an incision of an inch and a half was carefully made through the skin and sub-cellular tissue, down to the cyst, which presented a bluish aspect. Having dissected away, as much as possible, the surrounding tissues, which were closely adherent, I punctured the cyst for the purpose of saving the fluid, and then seizing it with a pair of vulsellum forceps, I dissected it out, dividing two or three arteries, which bled freely at first, but were stopped by pressure, plugged the space, which was about an inch and a half deep, with lint soaked in oil, and applied two interrupted sutures to the upper part of the wound, leaving the rest open. Ordered her to take opium, and that she should suck ice freely. Cold-water dressing to be applied constantly.

She was very sick for the first twenty-four hours, but this evidently arose from the chloroform. On the third day I applied the black wash to the wound, varying the dressing by sometimes applying dry lint, and at others touching the granulating surfaces with caustic, and then using dry lint. After six weeks of uninterrupted attention, the parts healed well and soundly, and she left town for the country to recruit her strength.

C.—IRRITATION AND HYPERTROPHY OF THE CLITORIS.

Enlargement of the clitoris, sometimes accompanied by a degree of induration approaching that of cartilage, at others by a relaxed flabby state of its tissues, and always attended by abnormal irritability, is a condition of more frequent occurrence, I believe, than the majority of medical men suspect, and is for the most part brought on by self-abuse. The deplorable effects of this baneful habit, both on the physical and mental health, have been less considered in the case of females than of males, and yet they are of equal gravity, and probably as prevalent. The radical cure of the habit is, however, fortunately in our hands. Long-continued irritation of the clitoris figures among the causes of sterility,

for, besides its constitutional effects, the habit acts locally on the functions of the womb, either in the same way, we may presume, as does excessive venery, or by inducing displacement of the organ.

The necessity for the excision or amputation of the clitoris, when much enlarged, has been recognized by surgeons generally; but I would go further and say, that this operation should be resorted to in all cases where that organ is found in an abnormal state, and where constitutional symptoms are traceable to its irritation.

The opinion here expressed has received an abundant confirmation since the publication of the last edition of this work. My further observations have been published at length in a recent treatise, "*On the Curability of Certain Forms of Insanity, Epilepsy, Catalepsy, and Hysteria in Females*" (1866). In this treatise I think that it is shown conclusively that the diseases named are, in many instances, determined or exaggerated by voluntary irritation of the clitoris; and that in these cases by amputation of the abnormally excited organ the disease may be cured.

The influence of delection in giving rise to mental and convulsive affections of both sexes has long been known, and various moral and physical methods have been recommended to break the bad habit. Among the latter, cauterization of the clitoris in the female, and vesication of the glans penis, or circumcision, in the male, are chiefly recommended; more rarely excision of the clitoris in the female has been practised.

A long experience of cases in which self-induced irritation of the clitoris was an exciting or aggravating cause of disease, convinced me that cauterization, actual or potential, could not be depended upon as a remedial agent; and that where it might apparently lead to a good result this was but transitory. Further, in many of these cases the application of caustics, necessarily renewed at intervals, was a source of positive harm. The interference of the surgeon pandered to the morbid appetite of the patient. I was thus led to the more frequent use of excision, and in this course I was confirmed by recent advances in physiological research. The observations of Brown-Sequard and Handfield

Jones made it certain that a greater importance must be attached to local sources of irritation, especially about the genital organs, in the causation of nervous and convulsive diseases, than had hitherto been done. What before had been but vaguely present to my mind now became clear, and so far as the opinions of these writers referred to peripheral excitement of the pudic nerve, I determined to subject them to a systematic surgical test. This I have done, and the results are given in detail in the book, already referred to, on the curability of certain forms of nervous and convulsive diseases. Of the happy results of the practice I have no doubt, and the cases I have published will, I think, convince the reader, that several forms of the most painful and distressing diseases of females may be effectually cured by excision of the clitoris.

The operation has, however, been subjected to much adverse criticism, to which it is requisite that I should briefly refer.

First of all, with a forgetfulness of physiology, scarcely credible in these days, the opponents of the operation have declared that "it unsexes a woman." The objection is as old as the operation itself, and the phrase in which it has been urged a more free translation from Aëtius, who thus expressed it, "*hinc vero sæpe sterilitas exoritur.*" Putting aside all theory, the fact that several of my patients have become pregnant after the operation is a complete reply to this objection. (See Cases 3, 9, 11, 19, 48, in my work on the subject.) In the face of the most indisputable evidence that the clitoris is not an essential part of the generative system, the expression "mutilation of the person," so freely employed, may be passed over as possessing no meaning other than that in which it would be applicable to numerous recognized surgical proceedings.

The author of a recent work on Diseases of Women confesses that, "If the habit could be overcome, if the mind could be restored to its purity by any mutilation of the person, one would feel no penalty could be too great to pay for such a boon." Yet he goes on to add, "The seat of sexual feeling is, however, by no means confined to the clitoris." If this be the case, wherein consists the author's objection

to the practice, or the peculiar force of his words "mutilation of the person"?

But it has been further alleged, that the operation is unnecessary; that the habit, be it vice or disease, can be met by moral treatment. Indeed, the reviewer of my book, in the *Lancet*, suggests trying to persuade an hysterical patient into the belief that her ailments are imaginary, and that to effect a cure it is only necessary to induce her to "exert her will," "to make an effort."

Now, I ask, who is there of any experience who has not met with cases of masturbation—in the male or female—in which no amount of moral reasoning has sufficed to put a stop to the habit? I myself have met with cases in which months and years of restraint—moral and physical—by medical and other advice, nay, with the utmost endeavours of the patients themselves, have not sufficed to overcome the habit. Are we, then, to forbid that "surgery shall come to the rescue, and cure what morals should have prevented?"—but, let me add, are so often impotent to stop. I am not ignorant of the value of rousing the patient to efforts at self-control; indeed I have seen many recoveries by the patient's own firm will; but the cases in which moral effort suffices are not those in which I have recourse to the operation.

A still more visionary objection has been propounded in the theory that a recognition of the frequency of self-abuse might suggest its practice to the pure-minded. Such a notion can only be entertained by those who are determined to shirk the question as one for impartial and scientific investigation. Those who employ it may fitly consort with the bigots who refuse the boon of chloroform in labour, on the ground that Providence intended women to bring forth in sorrow.

More reasonable doubts have been expressed respecting those cases of epilepsy in which clitoridectomy has been performed, but in which the bromide of potassium has been employed as part of the treatment. In any individual case this objection would have considerable force; but I have met with many cases in which large doses of this drug had been taken for months without the slightest benefit, nay, even

with progressive increase of the disease, and in which the operation has been followed by marked beneficial results; and in the majority of the most successful of my cases bromide of potassium has not been used. In that numerous class of cases comprised under the terms hysteria and spinal irritation, the operation is almost invariably successful, while the bromide of potassium seldom affords the slightest relief.

To return to our subject:—The general disorder of the health which arises from self-induced irritation of the clitoris requires to be particularly noted, as well as certain characteristic appearances of the genital organs.

The period when such disorder attacks the patient is about the age of puberty, and from that time up to almost every age the following train of symptoms may be observed, some being more or less marked than others in the various cases.

The patient becomes restless and excited, or melancholy and retiring; listless and indifferent to the social influences of domestic life. She will be fanciful in her food, sometimes express even a distaste for it, and apparently (as her friends will say) live upon nothing. She will always be ailing, and complaining of different affections. At first, perhaps, dyspepsia and sickness will be observed; then pain in the head and down the spine; pain, more or less constant, in the lower part of the back, or on either side in the lumbar region. There will be wasting of the face and muscles generally; the skin sometimes dry and harsh, at other times cold and clammy. The pupil will be occasionally firmly contracted, but generally much dilated. This latter symptom, together with a hard cord-like pulse, and a constantly moist palm, are, my son informs me, considered by Mr. Moore, Colonial Surgeon of South Australia, pathognomonic of this condition. There will be quivering of the eyelids, and an inability to look one straight in the face. On inquiring further, disturbance or irregularity in the uterine functions is found, there being either complete cessation of the catamenia, or too frequent periods, generally attended with pain; constant leucorrhœa also commonly existing.

To these symptoms in the single female will be added, in

the married, distaste for marital intercourse, and very frequently either sterility or a tendency to abort in the early months of pregnancy.

These physical evidences of derangement, if left unchecked, gradually lead to more serious consequences. The patient either becomes a confirmed invalid, always ailing, and confined to bed or a sofa, or, on the other hand, catalepsy, epilepsy, idiocy, or insanity, supervenes. In any case, and more especially when the disease progresses as far as these latter stages, it will almost universally be found that there are serious exacerbations at each menstrual period.

On an examination of the external generative organs, a straight and coarse hirsute growth; a depression in the centre of the perinæum; a peculiar follicular secretion; an alteration of structure of the parts, mucous membrane taking on the character of skin, and muscle having become hypertrophied and generally tending towards a fibrous or cartilaginous degeneration, will all be recognized as characteristic of the habit by the practitioner who has once had his attention drawn to this subject.

Having ascertained the cause and nature of the disease, there are one or two points to be considered before operative measures are decided on.

First, as to age. Although there is no doubt that patients may suffer from peripheral irritation of the pudic nerve from the earliest childhood, I seldom operate or sanction an operation on any patient under ten years of age, which is the earliest date of puberty. In children younger than this, milder treatment with careful watching will usually be found sufficient if it be thoroughly persevered in.

There are again, after puberty, cases which give rise to but slight disturbance, but in which the sufferers are they who love to enlist sympathy from the charitable, and will be ill, or affect to be ill, in spite of any or every treatment.

When I have decided that my patient is a fit subject for surgical treatment, I at once proceed to operate, after the ordinary preliminary measures of a warm bath and clearance of the portal circulation.

The patient having been placed *completely* under the influence of chloroform, the clitoris is freely excised, either by scissors or knife—I always prefer the scissors. The wound is then firmly plugged with graduated compresses of lint, and a pad, well secured by a T bandage.

A grain of opium is introduced per rectum, the patient placed in bed, and most carefully watched by a nurse, to prevent hæmorrhage by any disturbance of the dressing. The neglect of this precaution will be frequently followed by alarming hæmorrhage, and consequent injurious results.

The diet must be unstimulating, and consist of milk, farinaceous food, fish, and occasionally chicken; all alcoholic or fermented liquors being strictly prohibited. The strictest quiet must be enjoined, and the attention of relatives, if possible, avoided, so that the moral influence of the medical attendant and nurse may be uninterruptedly maintained.

A month is generally required for perfect healing of the wound, at the end of which time it is difficult for the uninformed, or non-medical, to discover any trace of an operation.

The rapid improvement of the patient immediately after removal of the source of irritation is most marked; first in the countenance, and soon afterwards by improved digestion and other evidences of healthy assimilation.

It cannot be too often repeated, that this improvement can only be made permanent, in many cases, by careful watching and moral training, on the part of both patient and friends for several months.

In the large majority of cases, I have administered no medicines, trusting entirely, for recovery, to the removal of the source of irritation. Sometimes, however, we may be materially aided by the use of such medicines as the bromides of potassium and ammonium, belladonna, &c.

The following cases may be cited in illustration. Numerous others will be found in my work on the subject:—

Case I.—*Hysteria: Five years' illness: Operation: Cure in two months.*—D. E., æt. 26, single; admitted into the "London Surgical Home" Oct. 12th, 1859.

History.—She had been a dressmaker in Yorkshire to all the best families around, but for the last five years had been so ill as to render her unable to

do any work, and had been entirely supported by her former customers. When in the neighbourhood of her home, on a professional visit to a lady, I was requested to see, amongst others, this poor *ci-devant* dressmaker. Her physiognomy at once told me the nature of the case ; she was much attenuated, having for a long time been unable to retain any food, always being sick, with great pain, immediately after meals. She had constant acid eructations ; was so weak as to be at times unable to cross the room ; complained of a burning, aching pain, with great weakness at the lower part of the back. Her catamenia were irregular, with much leucorrhœa ; bowels generally costive. She was very melancholy, and expressed a most earnest desire to be cured. I advised her admission to the "Home," and on October 15th I divided the clitoris subcutaneously. This being my first operation, I did not know the consequences of performing the operation in this manner. For two days the hæmorrhage was profuse and uncontrollable. Sleep was procured by opiates. I ordered ʒij of olive-oil to be rubbed into her chest every night, with a view to nutrition of her attenuated frame. A moderately generous diet was given, *but no stimulants.* She was quite well in two months, and has never since had a day's illness. She resumed her occupation as a dressmaker, and recovered nearly all her former customers. 1865.—I have heard almost yearly of this patient, and lately had a letter from the lady to whom I previously referred, saying that my patient is perfectly well and in robust health.

Case II.—*Spinal Irritation and supposed Uterine Displacement : Six years illness : Operation : Cure.*—In 1860 I was requested to see a young lady, æt. 20, of whom I had the following *history :*—For six years she had been confined to a spinal couch, and had also been supposed to suffer from retroversion of the uterus. She had worn a spinal apparatus, attached to which was a steel spring, pressing on sacrum and pubis, and intended "to support the perinæum, and keep the uterus in position." Had been treated with caustics and other therapeutic agents for uterine disease. I found the uterus normal in position and healthy in appearance ; but on further questioning and examination, I diagnosed peripheral irritation of the pudic nerve. My opinion was strongly contested, as I was told that the young lady was very religious ; but as I explained, her illness was to be attributed solely to a physical condition, and was not at all necessarily immoral, I was then met with the objection that, in the event of marriage, my operation might interfere with marital happiness and prevent procreation. I explained how, physiologically, these objections were untenable, but was then unable to adduce actual cases in contradiction of them.

Ultimately I performed my operation in the usual manner. For want of proper attention on the part of the nurse, the dressing was three times displaced ; but, nevertheless, at the end of a month this lady was well enough to walk three miles.

Up to this date she has remained quite well.

Case III.—*Nine years' illness : Epileptiform attack : Three years' duration : Operation : Cure.*—G. M., single ; admitted into the "London Surgical Home" December 18th, 1860.

History.—For the last nine years has suffered greatly and regularly during the menstrual periods. Has been much worse for the last three years, during which time has, at each menstrual period, been frequently taken in a fit, dropping down suddenly and fainting right off ; this state lasting for two or three hours. Being in service, this has caused her much trouble, as none of her employers would keep her. For the last six months has suffered severe

pain over right ovary, increased by exercise or pressure, and at the menstrual period. Believing that the dysmenorrhœa and fits both arose from the same cause, on January 3rd the clitoris was cut down to the base. After this operation she never had a fit, and all untoward symptoms left her except the dysmenorrhœa ; she was therefore re-admitted May 27th, 1861, and there being some narrowing of the cervix, it was incised with the hysterotome. June 21st, catamenia came on without pain, and continued to do so regularly. In July she was well enough to return to service.

April, 1865. Her mother called at my house to say that this patient had been married some months, and was shortly expecting her confinement. She had remained quite well since the operation.

Case IV.—*Epileptiform Fits and general Hysteria : Four years' duration : Operation : Cure.*—Mrs. F., æt. 44 ; admitted to the "London Surgical Home" April 23rd, 1864.

History.—Married sixteen years, but her husband has been abroad for the past seven years. Had inflammation of the womb four years ago, and since that time has continually suffered from bearing-down pains. Frequent desire to micturate. Pain in the loins and spine, sleepless nights, loss of appetite, and other hysterical symptoms. Has slight "epileptic fits" two or three times a week, more frequently at catamenial periods, which are regular in appearance and not profuse. Has no premonition of fits ; is but partially conscious ; at first struggles, then becomes rather rigid, and on recovery is always exhausted. Patient is most anxious to be cured of her attacks, of the cause of which she is fully conscious.

April 25th. Clitoris excised, under chloroform. April 26th. Had a good night, better than for years. April 30th. Progressing most favourably. Patient expresses great gratitude for the relief she has obtained. She left the "Home" a month later, looking and feeling quite well ; the last note in the case-book being "a very grateful patient."

Case V.—*Cataleptic fits ; Six years' duration : Operation : Cure.*—Miss ——, æt. 38, single ; admitted into the "London Surgical Home" August 10th, 1865.

History.—Was tolerably well until two years and a half ago, but since that time has suffered more or less from menorrhagia, with severe pain in back. Has also severe smarting pain in the bowels, and has frequently lost a considerable quantity of blood *per anum*. Has always been subject to hysterical attacks, but for the last six years has had fits of a much more serious character. They have increased in severity, duration, and frequency, and it is on account of them that she seeks relief. Almost immediately after admission, this patient had a fit, and she was kept a fortnight under observation, that the nature of the attacks might be thoroughly investigated.

She would have a fit sometimes twice a day ; but on an average about every other day, either early in the morning or late in the evening. She was most generally attacked when walking about the room, sometimes when sitting ; but she was never observed to have one when asleep. She would at the commencement of an attack cease walking, or doing whatever she was employed in ; her face would become very pale and set ; the eyelids, at first quivering, would be fixed ; the eyes wide open and looking upwards, the pupils very dilated. Her mouth would be rigidly shut, and during the attack it was impossible by any means to open it. Her arms would fall straight by her side, and be immovable ; the hands unclenched, and fingers extended. If standing, she would be quite upright, and require no support. If sitting, she would always stand up when a fit was coming on. If lying, she would be

extended straight on her back. The fit would last for two or three hours, and on a few occasions for as many as six hours. The experiment was frequently made of moving her arms when in the cataleptic state, and on such occasions the limb would remain in the position in which it was placed till the end of the attack. She was always perfectly unconscious, and no kind of stimulant was of the slightest use in restoring her during the paroxysm—time alone was of avail. The attack was sudden, but the recovery to consciousness was but gradual; she would appear as if awoke from a deep sleep, and would be very exhausted, but express no desire for food, wine, or other stimulants. As soon as she recovered, she would sleep for many hours, and awake quite well, but still weak. August 14th. The clitoris was excised, and a painful fissure of the rectum divided. She never had a fit after the operation. Menstruation came on, on the 28th, in moderate flow. October 5th. This patient has improved wonderfully since operation, and now looks extremely well. The wound is quite healed. She takes walks daily, and has had no fits, and is to be discharged as cured. In November she called at the "Home" to say that she was quite well, and had never had the slightest return of her former illness; she menstruates regularly and normally. February, 1866. She remains well.

CASE VI.—*Epileptic Fits: Twelve years' duration: Operation: Cure.*—S. F., æt. 41, single; admitted into the "London Surgical Home" Dec. 16th, 1861.

History.—Was always ailing and hysterical for many years. Catamenia appeared early, and always rather profuse. For the last twelve years has suffered from epileptic fits; recurring frequently every week or fortnight, and lately as often as every day. Has constant headaches; is losing memory and all power of concentrating her ideas. Has no premonition of seizure; falls down; is unconscious; has frequently bitten her tongue, and "froths" at the mouth. Says she has had several attacks of hæmatemesis. She was a dressmaker, and had so frequently, on her way to or from business, fallen in the streets, that she had been carried into almost every hospital in London, and a large number of open surgeries.

On examination, there was found every indication of irritation about the vulva, and also a small polypus of the os uteri, which latter was large and patulous.

Dec. 19th. Excised the clitoris; polypus uteri also removed.

The recovery of this patient was rapid and uninterrupted. After the operation, she never had a fit, and hardly a headache. She was discharged Jan. 20th, 1862, perfectly well, and with greatly increased mental power. At the present time (1866) she still remains perfectly well, and she lately appeared in the operating-room of the London Surgical Home, to satisfy gentlemen present of the permanency of her cure.

CASE VII.—*Epileptic fits: Many years' duration: Operation: Cure.*—N. L. M., æt. 21; admitted into the "London Surgical Home" May 9th, 1863.

History.—Married four years, and had two children; the labours have been bad, and followed by severe hæmorrhage. Had aborted at six weeks, a fortnight previous to admission, and had lost a large quantity of blood. First suffered from epileptic fits at puberty; had several before marriage, and has had four or five since marriage; but has never had a fit when pregnant. Not very regular in menstruation, which is accompanied with severe pain. Has constant pain on right side of head, in back, loins, &c. Great pain in micturating and on defecation. She is always totally unconscious during the fits, and they are followed by extreme prostration. Is of melancholy aspect, exces-

sively anæmic, and somewhat chlorotic; even the mucous membranes (of mouth especially) are blanched. The cause of her fits being diagnosed, the usual operation was performed May 14th.

May 18th. Progressing excellently. May 20th. There was great irritability of the bladder, which, however, was immediately relieved by an alkaline and henbane mixture. May 31st. Has not had any return of her bad symptoms until to-day, when, on being removed to a strange ward, she had a fit, not of violent character, and followed by a heavy drowsiness. June 2nd. Is quite herself again. July 4th. Has left quite well in every respect, and when heard of many months later, remained well.

Remarks.—The fit following on change of this patient from one ward to another, where there were strangers, shows how important it is for a permanent cure, that visitors and relatives should not be allowed to excite and agitate a patient suffering from these attacks, after an operation is performed, and when the mind is hardly restored to its natural balance.

Case VIII.—*Epilepsy, with Dementia: One year's duration: Operation: Cure.*—A. H., æt. 17; admitted into the London Surgical Home June 28th, 1865.

History.—Catamenia first appeared three years ago. They have continued regular to the present time. About twelve months since it was observed, whenever sent on an errand from home, that she would wander about in an absent manner, and return home having forgotten about any message which had been given her. About this time fits were first developed; they increased in frequency and intensity, and she now has them daily, and one or more of less violent character nearly every night in her sleep. When seized, she falls, struggles violently, foams at the mouth, often bites her tongue, and is totally unconscious to all around her. After a fit she sinks into a deep sleep, which lasts for two hours. Has no recollection on awaking of what has taken place. Acknowledges to frequent injurious habits, but is unconscious of their being the cause of her illness. Is vague in all her ideas and conversation, and has almost entirely lost her memory.

Both history and personal examination plainly showed what was the cause of her attacks. On July 7th, the clitoris was completely excised. She had no return of the fits; and on the 23rd the following report appears in the case-book:—"Left her bed to-day. Is greatly changed; quite rational in all her movements; converses freely and quietly, remembers passing events from day to day, and it is indeed almost impossible to recognize in her the half-idiotic, almost demented girl who entered the 'Home' less than a month ago." She remained in the "Home" some time longer for observation. Fits never returned: her mind improved daily, and she was discharged as perfectly cured.

Case IX.—*Acute Hysterical Mania: Four months' duration: Operation: Cure.*—Miss ——, æt. 23, was sent to me by Mr. Radcliffe, stating that she had been brought over from Ireland as an insane patient, and that everything had been settled for her admission to some asylum, when he was induced to consult me on the last day before her entering one. He stated that the paroxysms always came on at half-past five or six every evening. I replied, if the attacks depended on peripheral irritation, that an operation would at once prevent recurrence of the attacks. She was accordingly admitted into the "London Surgical Home" Feb. 6th, 1864.

When admitted, said she had taken no food for three days, and asked for a cup of tea, which was given her. Enema was also administered. 3·45 p.m. Was seized with a fit, throwing her arms up over her head, and then appearing as if comatose. In about twenty minutes revived; the lips began to

quiver, and she gradually became conscious, saying, "I want a knife—I want blood!" She asked for the matron's hand, that she might bite it off. [The fit coming on earlier on this day was doubtless due to excitement consequent on her removal.] 5 p.m. Mr. Baker Brown saw her; as soon as he came near her, she seized his shoulder with great violence; was wild, and would not answer questions; but gradually became soothed, and allowed an examination.

Externally, the abdomen showed signs of a child having been born, and the mammæ had certainly contained milk. The clitoris was enlarged and hard; the nymphæ long and flabby; the mucous membrane roughened and discoloured. Per vaginam, the uterus was found to be retroverted; there was also a fissure of the rectum.

Operation, 5.30 p.m. Was very violent under the first attempts to administer chloroform. She was long in being brought under its influence, but when once thoroughly anæsthetized, bore it exceedingly well. The clitoris was excised, the elongated nymphæ removed, and the fissure of the rectum divided. The wounds were dressed in the usual manner, and the patient, having had two grains of opium administered, was ordered to be constantly watched. In twenty minutes awoke from the chloroform. Was calm, and slept at intervals during the night. Feb. 7th, 10 a.m. Visited by Mr. B. Brown. Present—Mr. I. B. Brown, junior, House Surgeon, and Matron. Pulse quick but steady; tongue brown and furred; breath offensive; gums spongy; pupil natural; countenance rather flushed; skin moist and warm.

The following answers were given to questions asked of her by Mr. Brown, seventeen hours after operation, and are in her own words; much, however, of the information was volunteered without questions:—"Last March, instead of sliding down a slope, I jumped. This caused displacement of my womb. I suffered great agonies. I was fomented with hot water. I thought it was my back that was hurt. Since then I have been subject to fainting and weakness. I suffer great irritation about my private parts—cannot keep my hands away. The irritation is worse at night. I am obliged to relieve the irritation by rubbing—sometimes for two or three minutes at a time. There is always a discharge. I feel very depressed afterwards. At times I have lost my brain, and felt as if I did not care for living. I would like to have my hands untied: I will be very quiet. Have been separated from my relatives for three years. I shan't tell you how long I have been married—(a pause). I am very rude—I beg your pardon. I have been married three years. I had a baby two years ago: it was not born at the full time—I think five months. I don't know whether it was alive. I left home with my friend when I was sixteen (?). It is two years since I left him. I am now twenty-three.

"After the accident, suffered great pain." Mr. Brown here looked at her gums, and she immediately said, "Oh, yes; I had mercury given me by Surgeon ——, in Dublin; he said it was my spine. He did not examine my womb. Dr.—— examined it, and said there was great displacement. I have been better for treatment at times. My brain has been affected. I have fought very much. I have wanted a child's blood. I have had it sometimes by sucking the wounds of a child. When in a fit, I don't know what is going on around, or what is being said, but I recognize people's voices. I am not regular. Was kept in bed last September for six weeks for flooding; was so for ten days after I was put in bed. Was the same in Paris last year. I was studying in Paris to fit myself for a governess."

The following are extracts from a letter voluntarily sent to Mr. Brown by a lady with whom the patient lived for many months, and left only three weeks previous to admission. Having stated that for some time she was hysterical, and becoming daily more excitable, the letter says:—

"On the 13th of September last, she for the first time seemed delirious when going to bed. This was mentioned next morning to Surgeon ——, who declared it to be nervous irritability of the spine. . . . On the 27th, Dr. —— was called in, and at once gave his opinion that there was ailment of the womb. He then ordered small blisters on the lower part of the stomach, which in less than ten hours relieved her, and removed the mania. She had not any reason for *many* days previous, and was sinking. . . . On the 3rd of October, Dr. —— fixed an instrument to support the womb; and, except during the time when the intensity of pain caused it, there was no delirium; for a few days she got claret, which seemed to excite her greatly, so it was discontinued; but on the 13th of October I was desired to give her port wine in abundance. She was excessively weak, and mania so dreadful, that she made several attempts to injure herself and me. She got as many as eight large glasses of best port on some days; strong beef-tea, chicken soup, and all the nourishment possible. It was not only suggested, but it was advised to remove her to a lunatic asylum; however, feeling that certainly nine-tenths of her time she was perfectly sane, and could know well where she was and with whom, I did not like the idea of placing so young a creature in an asylum. I kept her here, and watched her day and night; she never was left alone for one moment for three months. . . . I ought to mention that the order for abundance of wine, &c., was from the opinion that 'want of blood to the brain' caused the mania; and that the intense inflammation of all internal organs was relieved by blisters on the lower part of the stomach, and by mercury."

February 8th. Lint removed from rectum, and wounds dressed. Is calm and rational; passed a quiet day. February 10th. Very restless; obliged to restrain hands and legs. February 11th. Better; says her head feels heavy; countenance cheerful; manner quiet and rational. February 12th. Very excited and irritable; constantly managing to free her hands; will allow no one near her.—2 p.m. Is quite maniacal; has managed to irritate the wounds, and also the mammæ. To have one grain of opium in pill, and ten grains of bromide of ammonium three times a day. February 13th, 6 a.m. Hands again free; repeat opium. Slept afterwards till 4 p.m., when she awoke calm and rational.—9 p.m. Slept again. February 14th. Very restless, and at times violent. Bandages removed and jacket substituted. February 15th. Much better; rational, and conversing cheerfully. February 16th. Improving. February 17th. At her urgent request, hands were freed, but shortly after she became excited. February 19th. More sensible; had to-day symptoms of a severe bilious attack, which upset her for some days. February 24th. Much better; allowed to see her sister—the first time since the operation. March 1st. Much improved; has written to her sister, and amused herself knitting and reading during the day. March 2nd. Allowed to dress; seemed to enjoy the change, and is very cheerful. March 4th. Visited by her sister; has been quietly cheerful all day. Is certainly improving wonderfully. March 20th. Took a walk, and enjoyed it. March 25th. Spent the day away from the "Home" with her sister; returning looking quite well, and all the better for the change. April 2nd. Discharged quite cured. This patient remained perfectly well, and I hear has since been legally married.

For the accuracy of this interesting case I can refer to Mr. Radcliffe.

D.—Vascular Tumour in the Meatus Urinarius.

Few diseases of trifling magnitude occasion more distress than a vascular excrescence, varying in size from a large pin's head to that of a horse-bean, which is sometimes found growing from the female urethra. The exquisite sensibility shows it to be as well supplied with nerves as with blood-vessels. The tumour sometimes arises from the projection which generally exists around the orifice of the meatus, but it frequently grows from the internal surface. The tenderness of the parts is so great as not to allow of sexual intercourse, and it may thus become indirectly a cause of sterility. There is sometimes a mucous discharge; and Mr. Coulson observed, in a paper read before the Medical Society of London, that inflammation may extend from the meatus to the bladder, occasioning cystorrhœa. I have seen several cases since my attention was first drawn to this fact by Mr. Coulson.

The disease is common to both single and married women. Sir C. M. Clark and Dr. Blundell describe it as confined to females under the middle age, and generally to young women. But I have myself seen it in a woman of sixty; and Morgagni, who was the first to describe the disease, says, "Examining the body of an old woman, about the year 1751, I met with a small triangular excrescence within the external orifice of the urethra, but it was not prominent."

Diagnosis.—An exquisite degree of sensibility of the part being the leading symptom of the disease, the patient complains of excessive pain in micturition, in coitu, and, indeed, from the slightest pressure upon it. It may reasonably be suspected that such a tumour exists, when the acuteness of sensation is confined to the meatus, and does not extend to the vagina or the vulva. Still, as the symptoms much resemble those of circumscribed inflammation of the vulva, it is evident that correct information can only be obtained by careful examination. Upon separating the labia and nymphæ, the nature of the complaint will generally become obvious. A small tumour, of a florid scarlet colour, resembling arterial blood, is observed

on, or just within, the orifice of the meatus. It easily bleeds on rough handling. It is exquisitely tender, and its surface is somewhat granulated. It appears to grow, by a loose attachment, from the surface of the urethra. Upon turning it a little on one side, its insertion, sometimes into the tubercle above the meatus, sometimes into the lip of the meatus, can generally be observed. Occasionally there are more than one of these excrescences, and they may extend along the urethra towards the bladder. They sometimes produce great constitutional disturbance, dyspepsia, and nervousness.

Treatment.—Ligatures, though recommended on high authority, are useless, as they cannot be made to include the whole of the diseased mass, nor can they be tied, with any degree of force, so as to strangulate it, without exciting inflammation; as, in order to a effect cure, some portion of the mucous membrane should be included. Excision is speedily followed by a renewed growth, unless it be accompanied by caustic applications. The best practice is to excise the tumour with a pair of scissors, or a small well-pointed knife, taking care to remove not only the excrescence itself but also that small portion of mucous membrane from which it grows, a fine pair of forceps being used to take hold of it. To the wound thus made, nitric acid should be applied on a piece of stick pointed like a pencil, the parts around being filled with lint previously soaked in a strong solution of nitrate of potash, or carbonate of soda. Or nitrate of mercury may be applied in the room of nitric acid, and a piece of lint dipped in cold water applied over the part immediately afterwards. In this way I have cured many cases, and one recently in which a plurality of excrescences required three or four excisions of small portions of the mucous membrane at different times; a preferable plan to excising the whole at once.

My friend, the late Mr. Brigham, of Lymm, informs me that, during the twenty years he held the appointment of surgeon to the Lock Hospital at Manchester, he had frequent opportunities of seeing these peculiar tumours, and he found, after trying many modes of treatment, that the most certain and quickest plan was just to touch their extremity with the actual cautery,

and that it seldom required more than one application. I have never tried this method, being content with the success which has always attended the one previously recommended.

I have contented myself with the record of four cases, considering this number ample by way of illustration, although I might have added many others.

Case I.—M. A. C., aged 45, married; had fifteen children. Admitted into the "London Surgical Home" October 19th, 1858. About nineteen years ago, after one of her confinements, first found heat and difficulty in passing her water, and about a month ago was unable to pass it at all for a long time. The dysury and pain have continued ever since. On examination, I found a large vascular tumour situated on the right nympha, close to the meatus urinarius. October 22nd. I removed the tumour, and applied nitric acid to the wound. Nov. 7th. Left quite cured.

Case II.—Mrs. S., admitted into the "London Surgical Home" January 5th, 1860. About two years ago she first experienced a sensation, when lying down, which she described, "as if something had jumped out of its place on the left side of her body; but when she stood up, it disappeared." It did not cause her any inconvenience till about a year ago, since which time the tumour has increased very much in size, especially in the last three months. It has lately prevented her lying long on one side, or in fact in any one position, as she says it causes a feeling of great tightness. On examination, I found a vascular tumour, about the size of a big pea, close to the meatus urinarius. Jan. 19th. I removed the tumour, and applied nitric acid. Feb. 2nd. She left quite cured.

Case III.—Charlotte L., æt. 28, admitted into the "London Surgical Home" January 18th, 1860. She has enjoyed good health until five years ago, when she began to experience pain of a violent character on passing water, and soon discovered a red-looking tumour on her urethra. There has never been any hæmorrhage from it. She has been operated on twice by surgeons for its removal, but it has always returned. On examination, a large red vascular tumour was visible on the meatus urinarius. Jan. 19th. The patient being under chloroform, I completely removed the tumour by excision, and then cauterized the wound with nitric acid, first applying lint saturated with carbonate of soda to the vagina around. Jan. 30th. I again applied nitric acid. Feb. 8th. She left the "Home," the tumour having quite disappeared.

Case IV.—Mrs. M., March 12th, 1860. For the last twenty-seven years has suffered from smarting and tingling about the vulva, pain in making water, great inconvenience when walking, and a sensation of fullness about the part after she had been a short time in the upright position. On examination, there was found a large vascular tumour at the meatus urinarius. March 15th. I removed the tumour, and aplied nitric acid to the wound. The parts gradually healed, and on April 2nd she left the "Home" cured. She could walk some distance without the slightest inconvenience.

CHAPTER XII.

DISEASES OF THE RECTUM, PRODUCING, AND RESULTING FROM, UTERINE DISORDER.

I. Diseases of the Rectum producing Uterine Disorder.

Any one with but a rudimentary knowledge of anatomy can easily understand how intimately affections of the rectum are connected with disturbances of the genito-urinary organs.

In this chapter I propose to treat, in greater detail than in previous editions, of those diseases of the rectum, which, although not peculiar to the female, give rise to totally different symptoms, and are far more difficult to diagnose, than in the male. This difference is owing to the position of the parts. In the male, the rectum and bladder are so connected that disease is easily detected in one or the other without reference to more distant organs. In the female, however, the symptoms are frequently referable to more sensitive parts, the uterus and vagina. Even on questioning the patient, no mention will often be made of pain in the rectum; but, on examination, we shall find a fissure, or a small pile, producing the most distressing uterine symptoms, which by a slight operation are quickly removed.

By far the most common disease of the rectum is fissure, and its results are so serious and varied, that I shall dwell at some length upon it.

Fissure of the Rectum is a subject little understood even by those who have written surgical works; and except by men who have made it a special study, it is astonishing how little is known.

In my experience, fissures of the rectum are of three distinct kinds:—

1. A simple superficial ulceration just within the verge of the anus.
2. A deeper ulceration in the same position, which goes through the mucous membrane and into the muscular fibres of the external sphincter.
3. The true fissure, or crack, not discoverable by external examination, as it is situated at least an inch from the anus.

Accompanying the two latter forms of fissure of the rectum will frequently—indeed, almost invariably—be found polypi, varying in size and consistence according to the depth and duration of the disease.

How these polypi are formed, I am not fully satisfied. I formerly thought that they caused the fissure. Latterly I have inclined to the belief that they are caused by the fissure. With each contraction of the sphincter a small portion of the mucous membrane of the bowel is nipped by the fissure; gradually it becomes more pediculated, and at last acquires all the character of a mucous polypus. Complicated with the third kind of fissure, there are often found large fibroid polypi, which are formed independently of the fissure. The recognition of mucous polypi is of immense practical importance. Once formed, they act like issue-peas, and no operative or other treatment for the fissure will be successful unless the polypi be removed.

In all rectal examinations, the finger is the best speculum. The sore point once touched produces so distinct a sensation to the fingers of the surgeon, that after he has once acquired the *tactus eruditus*, he will seldom fail to detect the presence of a fissure whenever it exists, whether it be of the 1st, 2nd, or 3rd kind.

The effects produced by each kind of fissure are different.

In the first there is a small ulceration, hardly to be seen by the eye or anal speculum, but most readily found by the finger.

It is on this—the first—form that I wish more particularly to dwell, because serious consequences result from so simple a cause, and the affections complained of being the consequence of reflex action to distant organs, the true cause is frequently overlooked.

One of the most prominent symptoms of fissure of the rectum, as laid down in books, is pain during and after defæcation.

In the kind of fissure which we are now considering this symptom is often entirely absent. The bladder is affected, giving rise to frequent desire to micturate, painful micturition, and incontinence of urine. In the uterus there is caused dysmenorrhœa of a most distressing character, and cases have frequently come under my care, where sounds and specula had been introduced, and all treatment had been directed to this condition, which was immediately relieved by a slight operation on the rectum.

As I set forth in a special chapter (Chap. XIV.), I believe that a frequent cause of Vaginismus is this small superficial fissure of the anus.

Another peculiar symptom is a distinctly localized and almost constant pain about six or eight inches up the bowel. (See Case II.)

In these cases, also, there will frequently be found great irritation about the anus and vulva. The constant efforts at relief by friction is in my mind one of the ways in which self-abuse is induced.

In the second kind of fissure, not only is the lesion easily discovered on examination, but the effects are direct and local.

Here we get painful defæcation, often with hæmorrhage after each relief; pain in the back, lasting for hours afterwards, and other sensations more or less acute, all easily referable to their true origin. Uterine and vesical disorder will, nevertheless, be frequently present both in this and the third kind. In this class will generally be found one or more mucous polypi.

In the third kind, the symptoms are also referred to the

bowel; they are more acute, but not otherwise different from those arising from the second kind, and the constitutional results are more marked.

As the symptoms and effects, so the *treatment* of the various forms of fissure must be modified.

In the first kind, simply bringing a straight blunt-pointed bistoury lightly through the ulceration and contiguous skin, without the anus, for about an inch, will be sufficient. The method of introducing and withdrawing the knife, as laid down by the late Mr. Copeland, is the one I adopt and recommend.

In the second kind, a deep bold cut—deeper than the fissure—through the fibres of the muscle, and extending for an inch or two through the skin of the anus, is necessary. Neglect of the latter precaution will often render the operation futile, and necessitate its repetition, as will be the case if the mucous polypi be not removed at the time of division of the fissure.

In the third kind, a deep cut, similar to, but much longer than the last, is required. The same precautions with reference to the polypi must be observed.

The after-treatment of each case is the same. A simple dressing of oiled lint, retained for forty-eight hours, will prevent any fear of union by first intention; but if the bowel be afterwards interfered with, a healthy granulation is prevented. The foregoing has been my invariable practice for the last thirty years, and I owe the knowledge of it to the teaching of my esteemed friend, the late Mr. Copeland.

Of the different kinds of fissure the following cases are examples :—

Case I.—*Superficial ulceration of bowel: Dysmenorrhœa: Painful cohabitation: Operation: Cure.*—My neighbour, Mr. Malton, of Stanhope Place, three or four years ago requested me to see a lady, married, and with a family. She had long suffered from severe dysmenorrhœa and unusually prolonged menstrual flow, extreme pain in cohabitation and an absence of sexual sensation on intercourse. Had had repeated advice from different medical men; but had derived no benefit, and was quite ill, both bodily and mentally.

On examination, the os uteri was found perfectly healthy to the touch, and on passing the sound, the canal was also discovered to be quite normal in calibre, and free from flexions. On passing my finger into the rectum, which she told me had never before been examined, I immediately detected a superficial ulcer just within the anus. I at once diagnosed this as the origin of all her

sufferings, and advised division of the fissure. This opinion, from its novelty, startled the patient, and she went to one of our most deservedly eminent obstetric physicians for additional advice. He expressed the utmost scepticism of my diagnosis and advice, but observed, "As it can do no harm, let it be tried!" Upon this the patient, with the entire sanction of Mr. Malton, submitted to the operation, which was performed in the usual manner. A fortnight afterwards she menstruated without pain, in normal quantity. A fortnight later, I left her perfectly well. I hear of her frequently from Mr. Malton, who informs me that she has had no return of her former discomforts, and is in perfect health.

Case II.—*Superficial fissures of anus: Constant pain in right iliac fossa: Operation: Cure.*—A lady from Hull consulted me, about eight years ago, for a pain which she constantly suffered in the right iliac fossa. She could always distinctly localize her pain; and indicated it as about the commencement of the rectum. Her physicians had all attributed her suffering to the uterus and ovaries, and she had undergone various treatments, all directed to these organs. The general constitutional disturbance had completely broken down her health, and from having been one of the leaders of gaiety in the country, she was now a confirmed invalid, unable to take exercise or enjoy life.

Upon examination, there was no evidence of mischief in either ovaries or uterus; but upon examining the rectum, which had never been examined previously, I discovered two very slight ulcerations just within the anus. For these I performed the usual operation. At the end of a month she was able to walk about shopping, and she left town completely restored to health. I frequently hear of her as able to enjoy society, and as having resumed horse and other active exercise. Such cases could be multiplied almost fifty-fold.

Case III.—*Fissure of the rectum, producing uterine symptoms and constitutional disorder.*—L. P., æt. 25, single; admitted into the "London Surgical Home" Dec. 22nd, 1858. She complained that she had suffered for a long time from heat and pain in the womb, with pains in the back, and a general feeling of uneasiness in her bowels. She looked ill and worn, and was suffering much from dyspepsia. Leeches had been applied to the uterus, and she had been treated for dyspepsia, and for the uneasiness in her bowels, but without deriving the least benefit. On examining the uterus, no disease could be found; menstruation was regular; there was slight leucorrhœa. On inquiry, if she had more pain at the time of, or after, an action of the bowels, she replied, "Yes, always; that then she had a sharp shooting pain darting through the womb, and that she was obliged to lie down, because the pain and uneasiness were so great in her bowels; in fact, that she dreaded going to the water-closet." On passing my finger into the rectum, she complained of acute pain, and I found a deep fissure just within the sphincter, and opposite to it a small pendulous polypoid body, the pea-like end of which dropped into the fissure.

A dose of castor oil was ordered early in the morning on the following day, and after it had acted freely, the rectum was well washed out with warm-water enemas; the fissure was then divided by Copeland's blunt-pointed straight bistoury, the polypus tied, and the rectum plugged with lint soaked in sweet oil. Two grains of opium were given, and generous diet ordered.

Dec. 25th. The bowels were opened by a castor-oil enema; afterwards the nurse applied sweet oil on her finger to the whole cut surface, and repeated it once daily. June 6th, 1859. Discharged quite cured. I have heard of the patient since as continuing perfectly well.

Remarks.—A very large number of fissures of the rectum are produced by these little polypoid bodies, as they will be found in almost every case if carefully sought for. It will be observed that the dressing of lint and oil was never repeated. This has been my invariable practice for the last thirty years, having been taught the great practical fact by my esteemed friend, the late Mr. Copeland, that it is never necessary to interfere with the parts by the painful process of reintroducing the lint, since if care be taken that the first dressing be left in for forty-eight hours, there is, after that time, no fear of union by first intention, but that, on the contrary, a healthy granulating process is set up, which continues to the end.

Case IV.—*Fissure of the rectum, with hæmorrhoids: Uterine derangement: Cure.*—Emma C., æt. 42, married, mother of eight children; admitted into the "London Surgical Home" on the 11th of June, 1859. She complained of having suffered for a long time from pain and bearing-down of the womb, and also from piles, since her first pregnancy, twenty-two years ago. Finding that there was no disease of the womb to account for her suffering, I inquired if she suffered much pain on defæcation, and she replied, "Yes; that when her bowels acted she had great pain; and that as they were generally in a torpid state, she was constantly obliged to take aperients." On examination of the rectum, some old external piles were found covered by skin, and within the sphincter some internal piles; at the root of one of them a deep fissure was felt, and opposite to it a large polypoid body.

June 16th. External piles cut off, internal piles tied, fissure divided, and polypoid body twisted off at its root. The after-treatment the same as in the previous case.

July 16th. Discharged cured.

Case V.—*Fissure of the rectum with uterine derangement: Cure.*—E. F., æt. 30, married, mother of two children; admitted into the "London Surgical Home" on the 8th of December, 1859. She has been suffering for the last four years from pain in the womb, sensations of bearing-down, pain in the back, general lassitude and inability to perform her domestic duties. She had been in a London hospital for a month, and was dismissed because she was supposed to have no disease—in fact, shamming illness. On examination, the uterus was found healthy; but the rectum proved to be in the same condition as in Case I.

Assisted by my colleague, Dr. Hall Davis, I divided the fissure, and followed the usual after-treatment. In a fortnight she was out walking, in a month she left the "Home," and I have since heard of her as being in perfect health, and performing actively her domestic duties.

Case VI.—*Polypus of the rectum: Supposed uterine disease and great constitutional derangement: Cure.*—Mrs. R., æt. 59, mother of three children. Catamenia ceased three years ago, after an attack of variola; ever since that time she has been suffering from supposed uterine affection, and gone through the usual treatment for congestion and enlargement of the womb. Her bowels have been seldom relieved except by medicine; she has been subject to piles, which sometimes bleed; has also had great irritability of stomach, requiring spoon diet for some time. The uterus was found perfectly healthy, and in its normal position. On examining the anus, the sphincter was found to be so firmly constricted as hardly to admit the finger. Immediately within its orifice was found a bleeding pile. On passing the finger two inches up the rectum, a large polypus, the size

of a French bean, was discovered, with a thin pedicle of about an inch long.

January 26th, 1860. The pedicle was tied with twine, and the polypus cut off. The internal pile was tied, and the constricted sphincter freely divided on each side of the anus. Oiled lint was then introduced within the rectum, and an opiate given. March 21st. Discharged perfectly cured.

Remarks.—This was a case of great interest in a practical point of view, the patient having laboured under a supposed affection of the uterus, and having become emaciated from the constant irritability of the stomach. The rectum had never been examined, and, consequently, the polypus, which was the real exciting cause of her illness, had never been discovered. The improvement in her general health, and the increase of flesh after the operation, were most marked before she left the "Home."

CASE VII.—*Fissure of the rectum: Hæmorrhoids: Severe uterine symptoms treated ineffectually: Operation on rectum: Cure.*—M. R., æt. 35, married, was admitted into the "London Surgical Home" on March 14th, 1860. For several years she had suffered intense pain about the uterus and rectum; and for the last three years has had caustic applied to the uterus twice a week, but without the slightest alleviation of her sufferings. She had been in the habit of taking three or four grains of opium in the course of a day, and her general health seemed completely broken down. On examination, an old fissure of the rectum was easily found, situated behind two large piles.

March 22nd. The fissure divided and the piles removed. 24th. The bowels relieved with less pain than she had had for many years past. April 4th. Discharged quite cured.

Remarks.—It will be observed that when the bowels were relieved, only two days after the operation, she had a marked cessation of pain. This is invariably the case, and is a most cheering fact to both the surgeon and the patient.

CASE VIII.—*Fissure of the rectum: Hæmorrhoids: Treated for uterine disease in vain: Operation on rectum: Cure.*—H. A., æt. 43, single, a lady from the country, had been suffering for some years from supposed uterine affection, and had had leeches and caustic applied to the uterus, but still derived no benefit. On examining *per vaginam*, I could find no disease or anything that required treatment. Menstruation was regular. On inquiring if she felt any pain on defæcation, she replied, "Yes, frequently; sometimes acutely." On passing my finger within the sphincter, I found a painful fissure, opposite to it a small polypoid body, and two internal hæmorrhoids. I advised that she should stay in town; and, after two or three aperient doses, that she should undergo the usual operation. This was done, and in ten days she was up, feeling quite well, and in a fortnight left town without an ache or pain in uterus or rectum. Two years have elapsed since, and she has continued perfectly well. She has frequently expressed her surprise that she had never been so thoroughly examined before when seeking medical advice.

CASE IX.—*Fissure of the rectum: Ineffectual treatment for uterine symptoms: Operation on rectum: Cure.*—P. C., a lady from the country, married, without children, had been for many years suffering from what she considered uterine disease, accompanied by painful menstruation, which was supposed to arise from constriction of the os and cervix uteri. Leeches, sponge tents, and uterine dilators, were from time to time persevered in. Still she kept getting thinner and weaker; and from having been accustomed

to ride on horseback, and to take much out-of-door exercise, she was unable to do either, constantly reclining on her sofa, and being, in fact, a confirmed invalid. On inquiring if she suffered pain on defæcation, she replied, "Yes, so much so, that she always dreaded any action of the bowels, and was obliged to take strong aperients; that then the pain extended a long way up the bowels, and left a long, wearying, aching sensation, which always made her feel sick and faint for some hours afterwards." On examination, I found the same condition of rectum as in the last case; but the fissure was deep, and evidently of long standing, and the sphincter itself was so firmly constricted as to admit with difficulty the point of my finger. I confidently promised a speedy cure if she submitted to the necessary operation. This she did on the 2nd of the month; and on the 4th her bowels were relieved by a castor-oil enema, and an enormous quantity of fæculent matter removed. On the third day the bowels were also moved after a small dose of castor-oil. The patient then, to her intense delight, found that she experienced none of her former suffering. Since then she has steadily and gradually progressed in health and strength. Her face, which had been thick and muddy, is now clear and bright, indicating all the signs of returning health.

Case X.—*Fissure of the rectum: Supposed disease of the uterus: Cure.*—A. M. O., æt. 42; admitted into the "London Surgical Home" June 12th, 1860. Has been married twenty-six years, and has had eleven children and ten miscarriages. The last child was born two years ago: ever since she has been ill; has suffered much from heat, pain, and bearing-down of womb. For the last six or seven months has been obliged to take large doses of medicine before her bowels would act; and when they did so, the motions gave great pain. She has been treated for inflammation of the womb, but has never had the rectum examined.

Examination.—The womb was found quite healthy; in the rectum were two fissures, into each of which dropped a small polypoid body. June 21st. I removed the polypoid bodies, divided the fissures, and plugged the rectum with oiled lint. 23rd. Oiled lint removed, and simple oil applied by the finger to the cut surfaces. 24th. A dose of castor-oil relieved the bowels, which acted with far more ease than for a long time previously. She was ordered to take a dose of castor-oil every other morning, which was always followed by a comfortable evacuation without any pain. July 11th. Parts nearly healed; caustic applied to a small piece of excessive granulation. 28th. Discharged perfectly cured.

Remarks.—This was another case where the disease was attributed to the uterus, but where, as the result proved, the real cause of her suffering arose from the rectum.

Case XI.—*Fissure of the rectum inducing uterine disorder and general constitutional disturbance: Cure.*—M. A. H., æt. 21, married, no children; admitted into the "London Surgical Home" July 30th, 1860. About two years ago suffered from severe continued pain in the left side of the abdomen, extending down the left leg; great pain on passing her motions, and occasional pain on micturition. Catamenia regular. Was for several months in one of the Metropolitan Hospitals, where she was treated with tonics and purgatives, but her rectum was not examined. She was afterwards treated as a consumptive patient at the Brompton Hospital.

On examination, I found a fissure of the rectum, a large external pile, and a small polypoid body dropping into the fissure. August 2nd. I divided the fissure, excised the polypoid body, cut off the external pile, and plugged the rectum with oiled lint. 4th. Bowels opened by castor-oil without any

pain, a circumstance unknown to her for two years. She rapidly gained flesh and colour, and on August 20th left the "Home" quite well.

This patient was re-admitted on December 10th, with another small fissure at a totally different spot in the rectum, and a number of small polypoid bodies, all growing near one another. 13th. Fissure divided and polypoid bodies cut off, and the surface whence they sprang ligatured. February, 1861. She is now quite well.

Case XII.—*Fissure of the rectum: Supposed disease of the uterus: Cure.*—M. A., æt. 32, married; admitted into the "London Surgical Home" August 6th, 1860.

About two years ago was very ill, the abdomen becoming enlarged; the catamenia irregular, profuse, and lasting for a long time.

She consulted two medical men at different times, who treated her for the flooding and flatulence, but never examined her either *per vaginam* or *per rectum*.

Her bowels have been much constipated, and she has suffered much pain on passing her motions. On her admission she complained of a sensation of a swelling in the abdomen, which moved from side to side; great pain in the limbs, and "a tired feeling."

On examination, the uterus was found perfectly healthy. There was a fold of external piles round the rectum, and several internal piles; also a fissure of the rectum, with a polypoid body dropping into it.

Treatment.—August 9th. The patient being under chloroform, I cut off the external piles, tied the internal, cut off the polypoid body, and divided the fissure. The rectum was then plugged with oiled lint. 11th. Lint removed. 12th. Had ℥ss. of castor-oil, which opened her bowels without any pain.

She soon after this left the "Home" quite cured, and I have since heard of her as being quite well.

Case XIII.—*Fissure and polypus of the rectum: Cure.*—A. W., æt. 38, married; admitted into the "London Surgical Home" August 6th, 1860.

About nine months before, she was ill with intermittent fever, which left her very weak. When she got better, she felt an irritating pain in her rectum, with difficulty and pain in passing her motions; she had also great pain in her back and loins. Two months ago she attended as an out-patient at one of the Metropolitan Hospitals, and was there treated for hæmorrhoids, but without much relief.

On examination, a very bad fissure, with a polypoid body dropping into it, and two external piles, were discovered. She was put for a few days on tonic treatment, and, on August 9th, I cut off the external piles and the polypoid body, and divided the fissure, the patient not being under chloroform. The rectum was then plugged with oiled lint. 11th. Oiled lint removed. 12th. Had a dose of castor-oil, which opened her bowels freely and without any pain, which she had not been free from for eighteen months. 25th. Left quite cured.

Case XIV.—*Fissure of the rectum: Supposed prolapsus uteri: Hypertrophy of clitoris: Cure.*—R. O., æt. 41; unmarried, admitted into the "London Surgical Home" October 17th, 1860. Twenty years ago had a fall and injured her womb; an abscess formed, and discharged for some time. She has suffered from great pain in passing her motions and urine. Eighteen months ago, could not pass her water for six months, and used to

have the catheter introduced. She has worn pessaries for five or six years to support the uterus, and been confined to bed for seventeen years.

On examination, the uterus was found perfectly healthy ; but there was a fissure of the rectum, and the clitoris was hypertrophied and felt like a piece of cartilage.

November 2nd. Divided the fissure, and also the clitoris, midway between the glans and crura. This was so hard, that it was with difficulty divided ; but when cut it bled freely. The rectum was then plugged with oiled lint. 4th. Lint removed. 5th. Bowels opened by castor-oil, more comfortably than they have been for years. February, 1861. Continues well.

Remarks.—This case was one of great interest, as it was evident the patient's sufferings (which she very much magnified) arose from two causes : first, the fissure of the rectum, which not only gave pain on defæcation, but also produced difficulty of micturition, a very common result of fissure or fistula of the rectum ; secondly, from irritation of the clitoris, which was kept up by self-abuse until the organ had almost lost its normal character.

Case XV.—*Fissure of the rectum : Supposed disease of the uterus : Cure.*—M. F., æt. 30, married ; admitted into the "London Surgical Home" November 1st, 1860. Eight years and a half ago was confined of her first child. Since then she has had constant pains in passing her motions, and lately blood has also passed at the same time. She has for some time had great pain and bearing-down in her womb, and has been treated by many medical men for disease of that organ.

On examination, the uterus was found perfectly healthy ; but in the rectum a fissure and two small polypi were discovered.

November 3rd. Divided the fissure, removed the polypoid bodies, and plugged the rectum with oiled lint. 5th. Lint removed. Had ℥ss. of castor-oil, which opened her bowels with more ease than had been experienced for nine years. 12th. She now has daily evacuations without the slightest pain, and expresses herself as being free from all her former inconvenience.

Case XVI.—*Fissure and polypus of the rectum, simulating uterine disease : Dysmenorrhœa : Cure.*—Mrs. L., æt. 35 ; has been married five years, but had no children. Has been treated by several well-known medical men for uterine disease, but without benefit. Has been also told that her sufferings were partly due to her highly hysterical state, and that she should exert herself much more than she did. However, the rectum had never been examined, although she complained of pain at stool, obliging her to rest some time afterwards. She, moreover, suffered much from dysmenorrhœa and general constitutional irritation. Upon examination, I found a superficial fissure just within the anus, painful to the touch, besides two small polypi and a portion of prolapsing mucous membrane and loose skin on one side the aperture. I divided the fissure, tied the prolapsed mucous membrane, cut off the polypoid bodies and the elongated piece of skin beside the anus, and followed the same after-treatment. She steadily progressed after the operation, and at the end of a month was about and well, quite cured of her previous distressing ailments, including the dysmenorrhœa.

Case XVII.—*Fissure of the rectum simulating uterine disorder : Cure.*—M. S., æt. 58, married ; admitted into the "London Surgical Home" Nov. 27th, 1860. Has been married forty-one years, and has had fourteen children. About nine years ago the "change of life" came on, and since then she has suffered from pain in back, loins, and womb, constipation and passing of bloody motions. She has lost her appetite, and has for a long

time been unable to get about with comfort. Has been treated for disease of the womb for several years, but has never had her rectum examined.

On examination, the uterus was found perfectly healthy, but there was an old fissure of the rectum, just close to the insertion of the sphincter ani into the coccyx. There was not as usual a polypoid body, nor any hæmorrhoids.

November 29th. I divided the fissure and plugged the rectum with oiled lint. December 1st. Oiled lint removed. On the 2nd and 4th the bowels were opened by castor-oil, when she remarked that "she had not had such a comfortable motion for a long time, she did not know how long." 13th. She has lost all pain, eats heartily, and is gaining flesh and strength daily. Discharged cured.

Hæmorrhoids. — The affection which produces uterine disorder, next in frequency after fissure, is *hæmorrhoids.* Whether the fissures are or are not caused by polypi, it is a fact that fissures are not an uncommon complication of hæmorrhoids, and must in such cases be always divided. (See Cases IV., VII., and VIII.)

Hæmorrhoids are of two kinds, external and internal. In treating them, the golden rule must be observed, "Cut skin, tie mucous membrane." If, in tying an internal pile, the surgeon is not careful to entirely isolate it (by cutting round its edge) from the skin, the patient will suffer needless and intense agony. I have for a long time considered it unnecessary to leave the whole of the ligatured pile to slough away. Therefore, having tied it, I cut off the greater part of the tied portion. By this means the ligature comes away quicker, and there is much less dead material lying in the bowel. In some cases the plan of removal by clamp and actual cautery, as recommended by Mr. Henry Lee and Mr. Henry Smith, will be found to answer admirably.

Stricture of the Rectum.—This lesion may be dependent on a retroversion or retroflexion of the uterus, and is then easily diagnosed and relieved by an operation on the organ at fault, as shown in the next section.

When it arises from fibrous deposit and thickening of the coats of the rectum, the diagnosis is more difficult.

The disease with which it is most likely to be confounded is scirrhus: there are many points of similarity, but many also sufficient to enable the surgeon to distinguish the maladies from each other.

First, as to similarity. There will be extreme difficulty and severe pain in defæcation, the pain extending up the back and round the loins, and lasting for many hours after an evacuation of the bowel. The motions will be contracted and wormlike, and require repeated enemata to remove them. There will be wasting of the body and an expression of pain on the countenance of the patient. There is also frequently a muco-purulent or sanious discharge from the bowel.

The points of difference are :—

1. The history, which, in the case of stricture, will generally be that of an abscess of the bowel, and possibly of fistula, many years or months previously: the stricture being found to have followed these affections. Besides this, there will be the absence of family taint and the other evidences of cancer, such as an enlargement of the glands and deposits in other parts of the body.

2. The pain, although of a wearing character, is not the lancinating acute pain of scirrhus.

3. The cachexia is not that of suffering, and the face, though haggard and wasted, is not drawn with agony as in the severer affliction.

4. The discharge is not offensive like that of cancer.

The treatment I adopt in these cases is first incision of any old sinus or track of an abscess, and then a most free division, on both sides of the stricture, with a Simpson's hysterotome. The bowel is plugged with oiled lint, and bougies daily introduced and retained for several weeks afterwards.

The following are two cases which will well serve to illustrate my practice :—

Case XVIII.—*Stricture of rectum: Supposed scirrhus: Operation: Cure.*—Some twelve years ago I was requested by Dr. Frazer, of Oakley Square, to see a lady who for twenty years had suffered from a severe stricture of the rectum. She had been under Aston Key, Liston, and other surgeons, and finding no relief in England, had also been under treatment in Paris. She was confined to her bed, took large doses of morphia to relieve her pain, and never had an action of the bowel, except after repeated enemata. When I first saw her, I had, as might be expected, considerable diffidence in forming a favourable diagnosis, after so many eminent men had seen the case, and all had thought it to be one of scirrhus. However, feeling confident that it was a stricture from long-continued chronic inflammation, I recommended free division on both sides, completely through all the indurated part. The

stricture was situated about three inches from the anus, and extended about the same distance further up the bowel. With the patient's consent, I adopted the practice I had recommended, and it was followed by complete success; care being taken to keep the rectum dilated by the daily introduction of bougies.

The lady is to this day quite well.

Case XIX.—*Stricture of the rectum: Two years' duration: Operation: Cure.*—Margaret J., æt. 62, married; admitted into the "London Surgical Home" October 30th, 1865.

History.—Has had eight children, the youngest of whom is now 34 years of age. Was very well until eight years ago, when she had a fistula in ano, for which she underwent two cutting operations. Soon after the appearance of the fistula she began to suffer from dragging pains at the navel and groins, and frequent attacks of vomiting. For the last two years has been much troubled with costiveness. The act of defæcation has been difficult and extremely painful. Her fæces have resembled in shape and size those of a rabbit.

On examination, the calibre of the rectum is much contracted; one finger can be passed up by using a little force. There is, although thickening, not much induration around the stricture. The strictured portion of the bowel is ulcerated and secretes a profuse purulent discharge.

The perinæum has been partially ruptured, and the uterus is very low down in the vagina.

Operation, November 9th. — Having had a consultation on the case, at which the general opinion was against that of its being scirrhus, I introduced a hysterotome into the rectum, and freely divided the stricture in three or four directions. A full-sized rectum bougie was introduced and tied in. The operation was not followed by undue hæmorrhage. The patient was kept under the influence of opium, and the bougies introduced daily, and retained in the bowel for several hours.

December 22nd. She left the "Home" quite cured, and having a daily evacuation of the bowels of normal character and without pain.

Prolapsus of the Rectum.—Sometimes the rectum comes down in the form of an enormous tumour. This lesion happens generally in women who have borne many children, or in those who have advanced to great age, and are consequently of lax fibre, or from pressure of the uterus in retroversion, as in Case XXIII.

Constipation is also a common cause.

The treatment to be adopted is that of reducing the prolapsed tumour, by removing portions from time to time, or otherwise contracting it. In some cases I have found removal by actual cautery, as recommended by Mr. Henry Smith, most successful. In others, making concentric rings with nitric acid applied with a stick, and so inducing contraction by cicatrization, is preferable, especially in the aged. The applications should be made about every four days.

Such a case recently occurred in my practice. The patient was a lady æt. 75. In about five weeks she was entirely cured of a prolapse, which at my first visit was nearly as large as an adult fist, and had lasted for several years.

The prolapse having been cured, there is frequently a *dilated sphincter*, which, from long-continued expansion, has lost its contractile power. This condition of things may be also observed after operations for fistula, and in cases where there has been no prolapse of the bowel, as in young children, where we also frequently observe a similar loss of power over the bladder.

The treatment in these cases is to dissect a complete circle—not less than half an inch in width—from the skin immediately at the verge of the anus. As the raw surface heals, it contracts, and the sphincter power is thoroughly restored. I append the following cases :—

Case XX.—*Prolapsus ani: Uterine disorder: Cure.*—A lady, æt. 50, single, came under my care in 1862. She had long been under treatment for various ailments, which I soon discovered arose from habits of self-excitation. The anus had been frequently interfered with ; there was great tendency for the bowel to prolapse, and the sphincter power was almost lost. Having excised the clitoris, I performed the operation I have just recommended upon the bowel. She made an excellent recovery, and is still well.

Case XXI.—*Prolapsus ani: Uterine derangement: Cure.*—E. H., æt. 42, married ; had been married eleven years, and had no children ; had long suffered from bearing-down of the womb, and at each menstrual epoch there was very deficient excretion. Her health was generally impaired ; she had long been treated for uterine derangement, but had never allowed an examination. On consulting me, I immediately inquired if she suffered from piles, or bearing-down of the bowel; and on her replying that she had suffered from prolapsus of the bowel for several years, preventing her from riding on horseback or sitting long in one position, I inquired further, whether, at the menstrual epoch, there was any bleeding from the protruding bowel. She replied that she lost a great deal of blood at those periods, and that the parts were more painful and sensitive then than at other times. This patient never had an evacuation from the bowel, except from medicine, which she took every night. I directed her to remain in the horizontal posture, either on her side or on her abdomen ; attended to her general health, administering steel and quinine, and using the cold douche to the uterus. Under this treatment she rapidly improved ; and on finding that after two months there was a freer menstrual discharge, I applied ligatures to the prolapsus of the bowel. The disease was permanently cured, the patient was restored to good health, and in the course of a few months became pregnant for the first time in her life ; and I delivered her of a healthy child at the full period of gestation.

Remarks.—These cases point out the importance of investigating both the

uterus and rectum in such conditions of the female; for it will be observed that, instead of the rectum being investigated, in the two preceding cases recorded, the uterus alone had been treated, and the result was highly unsatisfactory.

I could adduce very many cases, which have come under my observation, of a similar kind, where patients have been treated for months and years for uterine disease, but no attention having been paid to the condition of the bowel, no good has accrued. I shall in a subsequent chapter endeavour to show that the cause of sterility in many females will be found to arise from these conditions of the rectum, in connexion with those of the uterus. I need not, therefore, enlarge upon the importance of thoroughly investigating all such cases.

II.—Diseases of the Rectum, resulting from certain Conditions of the Uterus.

A. *From Retroversion, Retroflexion, Anteversion, &c.*—The substance of this section is in the main a transcript of the paper which I had the honour of reading before the Medical Society of London, in 1854.

It is a fact, generally admitted, that diseases of the rectum are more common in women than in men. Of this a partial explanation may be found in the more sedentary habits of the former, but in my opinion it should much more frequently be referred to a uterine origin. The sundry altered conditions to which the uterus is subject—such as enlargement, displacement, deranged circulation—act mechanically and otherwise upon the rectum, and produce in it various lesions.

These, so to speak, secondary disorders of uterine origin seem to me not to have been sufficiently recognized and insisted on; and hence, I believe, have resulted the too frequent failures in the treatment of diseases of the rectum in females, which most practitioners have to lament. The influence of the enlarged uterus during pregnancy, in developing disorders of the rectum, has indeed attracted general attention; but that of other enlargements and of displacements has never, so far as I am aware, been put prominently forward. Yet, if the uterine origin of the disease be not suspected, we may treat a woman affected secondarily with constipation, piles, intestinal irritation of a dysenteric character, or otherall ied disorders, by measures directed to the *bowel* as the primary seat of the

disease, and she will derive no benefit from any of them; for the uterine and intestinal affections are related to each other as cause and effect: and it can be only on a recognition of this relation that we can apply remedies with any certainty, or look with any confidence for a favourable issue.

Displacement forwards or backwards, or enlargement of the uterus, from whatever cause—whether pregnancy, hypertrophy, inflammatory engorgement, distension by fluid or by hydatids, fibrous tumours, or scirrhus, or any other disease—alike tends injuriously to affect the rectum.

As displacement may occur without enlargement of the uterus, it may operate singly in inducing rectal disease; but more often the two conditions concur, and it is then chiefly that the mischief is so considerable. The evils, too, will be greater when, with retroversion, engorgement of the body of the uterus, and with anteversion, congestion of its neck, go together. On the other hand, enlargement, without deviation of the womb forwards or backwards, acts singly in provoking disease of the rectum, oftener than either of these displacements does when found alone.

The conditions of the uterus under consideration act on the rectum injuriously in two ways: first, by mechanical pressure; and, secondly, by inducing vascular disturbance in its tissues. An enlarged uterus drags on its lateral ligaments, elongates them, subsides lower down in the pelvis, and so comes to press on the lower bowel, interfering with its muscular action and the circulation through its blood-vessels, and irritating its mucous lining. At the same time any hyperæmic state of the uterine vessels causes an increased fulness of the hæmorrhoidal vessels, and a determination of blood to them. Thus, by reflecting on the anatomy of the parts, it will easily be understood why and how diseases of the rectum, such as hæmorrhoids, prolapsus, fissure, stricture, fistula, as well as disordered functions of the bowel, such as constipation, dysenteric irritation, &c., do sometimes result directly, either from the mechanical pressure of an enlarged uterus, or simply from the derangement of the hæmorrhoidal circulation dependent upon uterine disease.

By retroflexion and retroversion, the fundus uteri is thrown backwards against the rectum, and will consequently exercise an amount of compression on that viscus, according to its degree, to the bulk of the uterus and the capacity of the pelvis. Retroversion is occasionally so complete that the fundus uteri occupies the posterior peritoneal cul-de-sac, and even descends below the level of the cervix. Now, as deviation of the uterus posteriorly is no unfrequent consequence of distended bladder —a common occurrence in females, owing to their natural reserve, and the restraint imposed by our social habits ; and as its ulterior effects on the rectum must be expected, one reason for the greater prevalence of diseases of the rectum among them is made apparent.

In anteversion and anteflexion, the fundus falls forwards against the bladder, and thus the cervix uteri will impinge against the rectum, more or less, according to the extent of the deviation, the size of the womb, especially of its neck, the capacity of the pelvis, and the degree of fulness of the bladder, which in these displacements has its outlet more or less obstructed.

A reference to Plates XII., XIII., XIV., XV., will best explain the mechanical interference exerted by these several mal-positions of the uterus, and likewise the normal relations of the pelvic viscera. It is obvious that in the treatment of the various affections of the rectum so arising, unless the attention of the practitioner is directed to their uterine origin, no permanent benefit can possibly result. Therefore, when any of these affections occur in females, it is necessary to inquire into the condition of the uterus, which will often at once explain the cause and indicate the treatment.

The hæmorrhoidal veins suffer more from pressure than the arteries, because the coats of a vein are thin and capable of great distension, and not resilient; whereas the artery is smaller, firm, elastic, and very resilient, and the *vis à tergo* being greater, the circulation of the blood is less liable to interruption. Therefore, as might be expected, the evils of pressure are greater in the veins than in the arteries. Hence we find that the blood stagnates, and occasionally coagulates

in the veins, and forms a semi-solid tumour, whilst the cellular tissue around becomes thickened, and the mucous membrane covering them excessively vascular and sensitive. I allude here to internal hæmorrhoids of a varicose nature.

The following cases will illustrate the preceding remarks :—

Case XXII. — *Hæmorrhoids : Congestion of the uterus : Cure.* — L. C., æt. 31, unmarried ; had suffered for several years from three or four large piles, which, she stated, protruded in the act of walking, and also created great uneasiness in the sitting posture. Every three or four weeks she lost a considerable quantity of blood from them. Her bowels were seldom opened more than once in three or four days, and then only from taking some aperient. After each act of defæcation, she had always increased inconvenience and pain. She suffered much from indigestion, headache, and general lassitude. I first inquired as to the menstrual function, and found that, although she was generally regular every four weeks, the quantity was very small, and the discharge seldom continued more than one day, and that at this time she generally lost a considerable quantity of blood from the hæmorrhoids. On making a digital examination *per vaginam*, I found the uterus enlarged and painful to touch, and lower in the vagina than normal. I directed that three leeches should be applied to the os uteri, and that the bleeding should be encouraged by a hip-bath immediately on their removal ; that the bowels should be freely opened by a saline aperient, and that this treatment should be pursued once a week. She was further directed to take twice a day the sixteenth part of a grain of the bichloride of mercury, and her diet was ordered to be simple, nutritious, and unstimulating. The result of these measures was that, at the next menstrual epoch, there was a more copious uterine discharge, and an absence of bleeding from the hæmorrhoidal vessels. The same treatment was continued for another month, and resulted in an improvement in menstruation, both in quantity and in the duration of its flow ; the uterus had much decreased, being nearly of its normal size, and not painful to touch. I now considered it advisable to remove the hæmorrhoids, which I did by passing a ligature of twine around the base of each. I then placed the patient in bed, giving her a grain of opium every four or six hours, for the purpose not only of affording relief from pain, but also of constipating the bowels till the ligatures should come away, which they did in five or six days. The case progressed satisfactorily, and the patient returned to the country perfectly recovered.

This case presents some striking practical facts, which will serve to illustrate my preliminary remarks.

1. The bleeding from the hæmorrhoids at the menstrual epoch. It is a fact that hæmorrhoids are always more troublesome at the time of menstruation, because more blood is circulating through the blood-vessels of the rectum as well as of the uterus ; and if there be any obstruction in the uterine vessels to prevent the menstrual flux, then the hæmorrhoids often bleed freely. 2. The enlarged and inflamed uterus, with the decrease of the menstrual flux. 3. The great relief afforded by the antiphlogistic treatment. 4. In ligaturing the hæmorrhoids I prefer *twine*. Its advantages over silk are very marked :—first, in procuring a quicker separation of the tumour ; and, secondly, in causing less pain to the patient. It will also be observed, that I preferred the ligature to the scissors in the removal of these tumours, acting upon the golden rule laid down by my old and esteemed friend,

Mr. Copeland, in all operations upon the rectum, "*to cut skin, and tie mucous membrane.*" I am also indebted to the same gentleman for the practical hint to prefer the use of the vegetable product—twine—to that of the animal product—silk.

I think it is not too much to assert, that had I at first devoted my attention to the hæmorrhoids in this case, I should not have succeeded in restoring my patient to health.

CASE XXIII.—*Prolapsus ani: Retroversion of uterus: Cure.*—H. A., æt. 28, unmarried, upper nurse in a lady's family; had suffered for twelve months with a prolapse of the bowel. She stated that this prolapsus was always much increased by carrying the infant, or by raising any weight; and also worse after defæcation; that every three or four weeks she had bleeding from the protruding parts; that she had been regular as to time in menstruation, but very deficient as to quantity, and that the discharge was of a dirty-brown colour. She had been under a course of medicine for nine months, but had derived no benefit.

On passing my finger up the rectum, while she was standing on the floor and leaning forward on the side of the bed, I felt a round tumour, the size of an orange, pressing on the rectum just below the promontory of the sacrum, moveable on pressure towards the vagina. This, on examination *per vaginam*, I found to be an enlarged uterus retroverted, and thus mechanically acting upon the rectum. This prevented free circulation of blood through the bowel, and thus not only produced piles, but also congestion of the mucous membrane and prolapsus.

Treatment.—I first directed my attention to the condition of the uterus; applied leeches; enjoined rest in the recumbent posture; gave saline aperients; ordered simple and unstimulating regimen, and the bichloride of mercury with tincture of bark twice a day. The result of this treatment, at the next menstrual epoch, was a considerable improvement in the character of the discharge; the same treatment was continued another month with increased benefit.

On December 16th, I prepared her for the necessary operation, by giving her a dose of castor-oil at night, and an enema of warm water on the following morning. Having placed her under chloroform, my assistant separating the nates, I passed an armed needle, with a double ligature of well-waxed twine, through the prolapsus, and tied it in two separate portions; and then, having well smeared the surfaces with oil, I returned them within the sphincter, which firmly contracted, leaving the two ends of the ligatures without. Gave two grains of opium, and ordered one grain every four hours. 17th. Had some sickness during the night, and vomited, after which she slept well. There is no pain about the anus. To continue opium every six hours. 18th. Has had a good night. Some pain in the rectum for a short time, leaving no permanent discomfort. Diet: broth, light pudding, and milk. 20th. The ligatures came away, and the bowels were relieved by castor-oil. 22nd. Complained of a sharp cutting pain after the last dejection. 23rd. Examined, and found an ulceration or fissure within the sphincter, and an inflamed external pile. 26th. I placed her under chloroform, and first cut off the external pile, and then divided the fissure in the manner directed by Mr. Copeland, and which I shall more fully describe in Case XXIV. I then examined more carefully, and found, exactly opposite the fissure, a small wart-like substance, with a long slender pedicle. This fell within the fissure—which, it may be, it had produced—and kept up a constant state of irritation. Having removed this by the scissors, I applied a piece of lint dipped in oil to the incised surfaces, and gave grs. ij. of opium. 27th. Is free from pain;

pulse quiet, and no fever. Removed the lint, and did not again apply it. From this time she progressed favourably, and in one fortnight was quite well. During the next two years she had no return of the disease, but continued in the same situation, performing well all its duties.

Remarks.—This case again illustrates the truth of my preliminary remarks, as showing the predisposing cause of the prolapsus, viz., the condition of the uterus, which gave rise to mechanical pressure on the rectum, and the increased flow of blood to the bowel at the menstrual epoch, on account of the deficient discharge from the uterus.

Case XXIV.—*Fissure of the rectum: Retroversion and fibrous tumour of uterus: Cure.*—E. P., æt. 29, unmarried, of pale complexion, and of anxious countenance, consulted me, complaining of headache, great depression of spirits, lassitude, and want of appetite. She had not menstruated for three months, and complained of a heavy bearing-down pain in the womb, particularly on standing, or when lying on her back. She suffered from constipation, never having relief from the bowels except after taking medicine. She always dreaded the act of defæcation, because she suffered such excruciating pain a few minutes afterwards. She described the pain at the time of defæcation as like sand passing over a raw surface, and the pain which supervened upon the action of the bowel was of a deep, cutting nature, almost intolerable.

On passing my finger within the rectum, I immediately discovered an irritable ulcer, in the centre of which was a narrow elongated fissure, terminating just within the orifice of the anus. On withdrawing my finger, I found on it a streak of blood corresponding with the length of the fissure. On the opposite side of the bowel was a pendulous tumour about the size of a small pea, with a long thin pedicle. On examination *per vaginam*, I found a fibrous tumour growing from the superior lip of the os uteri, extending up the cervix about an inch, whilst the os and cervix uteri, enlarged by this body, were tilted back upon the rectum, and thereby interfered with its functions. I ordered leeches to be applied twice a week to the os uteri, prescribed tinct. ferri sesqui-chloridi, and warm hip-baths. The catamenia returned at the end of a fortnight, and continued for some days, although scantily. I then removed the tumour from the os by excision, and as soon as she had recovered from the effects of the operation, which she did in a month, proceeded to the treatment of the fissure in the following manner. Placing the patient on her side, on the edge of the bed, with her knees flexed on the abdomen, I passed the forefinger of my left hand up to the ulcer, and directed along it, with my right hand, a straight probe-pointed bistoury, beyond the very extremity of the fissure; then turning the cutting edge towards the sore, and securing the handle of the instrument with the thumb of my left hand, I withdrew my finger and the instrument at the same time, thus dividing the ulcerated surface as well as the fibres of the sphincter muscle. The result was, as will generally be the case, perfectly satisfactory, the patient being at the end of three months from the commencement of the treatment restored to health.

Remarks. — I am indebted to my friend Mr. Copeland for both the knowledge of this disease and the simple method of treatment, which is almost invariably successful; at least, out of upwards of 200 cases which I have myself treated in twenty years, I have not seen it fail once. Another practical fact is connected with the pathology of these diseases. My own impression is, that the pedunculated tumour above described falling down upon a highly vascular mucous surface, produces, in the first instance, irritation; secondly, ulceration; and thirdly, fissure of the lining membrane

of the bowel, each contraction of the sphincter after defæcation increasing or aggravating the ulceration. My reasons for believing this are, that I seldom find this condition of the rectum without finding one or more of these peculiar bodies, which I need not say should always be removed at the time of operation. It is very easy to detect this disease by digital examination. If the surgeon is consulted at the commencement of the disease, he will simply find an irritable ulcerated surface; but if consulted at a later stage, he will find the fissure, which resembles very much the crack often found in the lip of the mouth, or in the palm of the hand in case of psoriasis; still, in whichever of these two conditions he finds the patient, the treatment pursued should be the same. I will also add, that it is always advisable to give opium just after the operation, so as to prevent the bowels from acting for some days.

Case XXV.—*Constipation: Prolapse of uterus: Cure.*—Mrs. T., æt. 38, mother of six children; complained of persistent constipation, except when she was taking steel medicines; that she suffered pain after each action of the bowels; that much mucus came away with and after the dejections; that she had pain in the back, great bearing-down both of the bowel and womb, with profuse leucorrhœal discharge, and that she had lost much flesh. I found her face anxious, and of a dark, dusky hue. She suffered also from dyspepsia, headache, and general lassitude. I requested permission to examine the uterus, believing the cause of constipation arose therefrom; but for a long time this lady resisted the proposal; however, I was at last permitted to make an examination, and found, as I expected, an enlarged and prolapsed uterus, within two inches of the outlet of the vagina. On using the speculum the os was seen to be inflamed, enlarged, and ulcerated. On examination per rectum, I found, three inches up, a solid, heavy body (which was evidently the fundus of the uterus) pressing on the bowel, so as to prevent any fæculent matter passing in a solid state; the lining membrane was covered with much slimy mucus. She stated that she was always suffering pain in the bowel, as well as in the womb; that the pain in the rectum was of an *aching, wearying* character, making her feel faint and sick; that the sensation of the womb was like a heavy weight, feeling as if it would escape when walking. I applied caustic to the os, ordered the cold douche night and morning, with directions to recline on the stomach for several hours, to wear constantly during the day one of my perinæal bandages, to take internally steel, and zinc combined with extract of conium at bedtime, and to have the bowels relieved by an enema of warm water every other night. Whenever she was lying on her stomach, she was quite free from pain. After two months' treatment, this patient perfectly recovered; and, by this simple precaution of relieving the bowels by an injection just before going to bed, she has continued well up to the present time.

Remarks.—I think that any treatment, applied simply to the bowel, for relief of the constipation, would in this case have failed, unless the exciting cause had been discovered in the morbid condition of the uterus. It is well worth notice that she was perfectly free from pain both in the bowel and the womb when reclining on the stomach. Another practical fact, deserving observation in constipation as well as in all the other affections of the rectum, is, that by relieving the bowel at night, immediately before retiring to rest, the greatest relief is afforded; and it is the best way to prevent a return of disease, because the natural determination of blood to the bowel, at the time of defæcation, as well as the congestion of the mucous

membrane, and the relaxation of the muscles, are all relieved by the recumbent posture followed by sleep.

Case XXVI.—*Fistula in ano: Hypertrophy and retroversion of uterus: Cure.*—E. C., lady's maid, æt. 32, married, consulted me, complaining of feeling generally ill, of pain on her right side in the hepatic region, of indigestion, headache, and general lassitude. She had an anxious countenance, a dusky-brown complexion, depression of spirits, a tendency to melancholy, and felt scarcely able to perform the duties of her situation. The following is an account of her past history:—She had been married nine years; she suffered greatly from the first commencement of sexual intercourse, having had from that period pain in the womb of a dull, aching kind, which increased more or less for twelve months. At the end of this time, she experienced a heavy bearing-down pain, which particularly affected the rectum. She had lived apart from her husband six or twelve months at a time, because of suffering so much pain, not only at the time of connexion, but for some weeks afterwards. Before marriage, she had been healthy, active, and in robust health; but this gradually failed since marriage. In the third year of her wedded life she began to experience difficulty in defæcation, as if something prevented the bowel acting; and was obliged to take some aperient medicine two or three times a week to insure relief. This difficulty was soon followed by an aching, wearying pain in the bowel itself when she was walking or sitting; then she became subject to troublesome internal hæmorrhoids, which were always more painful, and occasionally bled a little, at the menstrual epoch; menstruation itself being regular as to time, but scanty in quantity. After some time, she suffered from a throbbing, deep-seated pain in the bowel, which terminated in a fistulous opening; and then, for the first time, applied to a surgeon, who operated for the fistula. During the next three or four years she underwent two or three more operations on the bowel, the precise nature of which she could not explain; but although relieved at the time by each operation, still the relief was not permanent, constipation and difficulty of defæcation continuing.

Examination.—On examining the anus, I discovered a fistulous opening extending an inch up the bowel; and on passing my finger up the rectum itself, found the uterus pressing heavily upon it. On examination *per vaginam*, I felt an enlarged hypertrophied uterus, tilted back so as to press the rectum flat upon the sacrum.

Treatment.—I treated the uterine affection on the principles already described, with the same marked result. I then performed the usual operation for fistula, and, after the parts were healed, directed her to evacuate the bowels at night instead of the morning. The result of the whole treatment was most satisfactory; the patient recovered her former good health and spirits; and, when she lately called upon me, I did not recognize her, she having become so stout and looking so cheerful and happy.

Remarks.—Perhaps no case could more clearly illustrate my preliminary observations than this. Here was disease of the rectum of several years' standing, distressing the patient, and rendering life hardly endurable, considering the duties she had to perform; and although the collateral disorders appearing from time to time were carefully treated and relieved—some of them indeed by operations—still, the exciting cause not having been discovered, no permanent benefit accrued; whereas, no sooner had the uterus been relieved, than she was perfectly cured by the last operation as described, and has continued well ever since.

I could easily multiply these illustrations by quoting cases from my note-book, and show that stricture, irritation of a dysenteric character, &c., constantly arise, either from mechanical pressure of the uterus, or from suppression, partial or entire, of the menstrual discharge.

B. *From other Conditions of the Uterus and its Appendages.*—In the preceding observations I have chiefly directed attention to the maladies of the rectum dependent on a tilting or bending of the uterus forwards or backwards, or on the subsidence of that viscus from enlargement. But it will be at once perceived that other conditions of the uterus than those named may cause it to interfere mechanically with the functions of the lower bowel. Among such may especially be noticed fibrous tumours or polypi developed within the uterus, which will not only drag it from its normal position, and cause its enlargement, but also themselves act as mechanical causes of disease to the neighbouring viscera. What fibrous tumours developed within may do, those from the exterior of the uterus may do likewise, or even more completely; and equally injurious with the foregoing are the true pelvic tumours, particularly those originating in the recto-vaginal cul-de-sac.

Another cause of suffering in the rectum depends on the presence of ovarian tumours, chiefly when in their early stage, and still contained within the pelvis. This effect of cysts of the ovary is particularly noticed in my work on "Ovarian Dropsy."

Uterine and pelvic tumours give rise, just as does the pressure of a displaced uterus, to false stricture of the rectum, sometimes to fissure and fistula, and oftener to piles. It is needless, however, to enter into descriptions of how each morbid condition exerts its injurious defects; it will be sufficient for my purpose to have called attention to the frequent mutual dependence of uterine and rectal disease; and to have shown the necessity of bearing this in mind, when we are called upon to treat females for any disease of the lower bowel, especially when the lesion proves intractable.

When this relation is once discovered, the course of treatment will be obvious; whilst every means aimed at any local symptom will be entirely vain, so long as the *fons et origo mali* remain untouched.

As the rectum behind, so the bladder in front is obnoxious to injury from its relations with the uterus. The disordered micturition in pregnancy is well known; that met with in displacements of the uterus, and in the case of tumours attached to that organ and its appendages, has been generally treated of in the chapters on prolapse of the vagina and uterus, and on fibrous tumours of the womb.

CHAPTER XIII.

CERTAIN SURGICAL LESIONS CONNECTED WITH STERILITY IN THE FEMALE.

A GENERAL dissertation on the causes and treatment of sterility in the female would be out of place in this work, but the frequent dependence and association of that condition with certain lesions of the pelvic viscera, removable by surgical means, renders requisite a brief review of these latter. Since the publication of the last edition, medical literature has been enriched by several treatises on this subject, and in this country especially by Dr. Marion Sims's work.*

Some of the causes giving rise to sterility are congenital and structural; others are the result of disorders of the generative organs—of the uterus and the vagina; whilst others, again, are referrible to sympathy with disease in contiguous viscera; lastly, there are some connected with the state of the general health, the constitution, and the state of the nervous system. The whole may be arranged in the following groups:—

1. Absence of the uterus and ovaries.
2. Disease of the ovaries.
3. Atrophy of uterus and ovaries.
4. Diseases of uterus and of Fallopian tubes.
   - *a*. Hypertrophy.
   - *b*. Inflammation.
   - *c*. Fibrous tumour.
   - *d*. Cancer.
   - *e*. Polypus.
   - *f*. Neuralgia.
   - *g*. Ulceration.

* "Clinical Notes on Uterine Surgery.—With special reference to the management of the Sterile Condition." London: Hardwicke. 1866.

5. Diseases of vagina.
    a. Cancer.
    b. Inflammation.
    c. Leucorrhœa.
        A. With acid secretion.
        B. With alkaline secretion.
6. Imperforate hymen.
7. Contracted os vaginæ.
8. Contracted os or cervix uteri, from
        A. Constriction.
        B. Inflammation of mucous membrane.
        C. Caustic applications.
9. Dysmenorrhœa.
        A. Spasmodic.
        B. Mechanical.
10. Amenorrhœa.
11. Menorrhagia.
        A. Anæmic.
        B. Plethoric.
12. Diseases of rectum.
        A. Hæmorrhoids (bleeding).
        B. Fistula.
        C. Fissure.
        D. Prolapsus ani.
        E. Scirrhus.
        F. Ascarides.
13. Vascular tumour of meatus urinarius.
14. Excessive sexual intercourse.
15. Constant irritation of the clitoris.
16. Secondary syphilis.

Among other causes enumerated by authors are want of mutual affection and loathing on the part of the woman. Without denying *in toto* the influence of the moral emotions upon the reproductiveness of the female, I am disposed to look upon the two causes just named as very problematical, and as having been suggested to the minds of inquirers

balked by failing to discover the other and real causes of the sterility.

Of the causes admitted in the above table, several are clearly irremovable, and the consequent sterility, therefore, incurable; such are absence or atrophy of the uterus and ovaries; diseases of the ovaries, incurable lesions of the uterus—for instance, cancer and similar morbid conditions of the vagina. Those arranged in the other sections may be divided, according to their character, into mechanical (6, 7, 8, and 9 in part, *i.e.*, mechanical dysmenorrhœa) and local, constitutional and general, and sympathetic and reflex. To the mechanical causes may be added an occasional cause—viz., closure of the Fallopian tubes. The constitutional causes, or those operating through the general health, are amenorrhœa, menorrhagia, excessive sexual intercourse, constant irritation of the clitoris, secondary syphilis, and spasmodic dysmenorrhœa. Sympathetic and reflex causes, originating in disease of other viscera contiguous to the uterus (12, 13, and 4 and 5 in part), include diseases of the rectum and vascular tumour of the meatus urinarius.

Now, several of the lesions concerned in producing sterility have already been described, and their operative treatment pointed out; it would therefore involve useless repetition to reconsider them from the present special point of view. For instance, tumours and hypertrophy of the uterus, imperforate hymen, and vascular tumour of the meatus urinarius, have already received attention as surgical diseases removable by certain operations, which are as applicable whether those lesions induce sterility or not. So, likewise, the mechanical form of dysmenorrhœa, dependent upon permanent or spasmodic stricture of the os and cervix uteri, has had its cure indicated in the history of the operation for constriction of those parts. There remain, therefore, the causes of sterility derived from sympathy with disease of the rectum, and from irritation of the clitoris.

The remarkable and somewhat frequent dependence of uterine disorder upon diseases of the rectum, has been shown in Chapter XII. This will facilitate our comprehension of

that functional disturbance of the reproductive organs marked by sterility, which has rectum disease as its cause. At the time of the publication of the second edition of this work, these sympathetic causes of sterility were not recognized in any accounts of that condition that I have met with, and yet the general law of sympathy, which, particularly between contiguous organs, closely associates both in vascular and nervous supply, might *a priori* have suggested the fact. And how much more powerfully may this law be presumed to operate between the uterus and rectum, particularly upon the special functions of the former and the delicate physiological process of impregnation. Take, for example, diseases of the rectum, such as piles and prolapse, attended by considerable hæmorrhage; the drain of blood caused by them immediately interferes with the uterine function of menstruation, and, by its frequent recurrence, probably also with the due supply of blood to the uterus; then, as a very probable occurrence, the condition of the uterine cavity is such that impregnation is impossible, or if impregnation occur, the developments from the internal surface necessary to the lodgment and growth of the embryo, fail. The supply of blood sent to the pelvis appears insufficient to meet the normal demands of the uterus and the abnormal flux from the rectum.

Or, again, to take diseases of the lower bowel unattended by loss of blood, such as fissure and fistula of the rectum; in these the irritation and the pain, together with the impediments created to the proper action of the bowel and the consequent distension and frequent congestion about it, become conjointly the cause of disturbed uterine function through the medium, primarily, of the nervous system; and this deranged function is often manifested by an irritable and sometimes by a congested uterus, two conditions inimical to impregnation and conception.

Neglect of these mutual relations between the uterus and rectum, and the failure to examine into the state of the latter, often lead to unsuitable and unsuccessful treatment. I have seen many females treated for uterine disorder, or regarded as

sterile from some unseen mysterious causes, who have been, in fact, the subjects of disease of the rectum, the cure of which was alone needed to dissipate the supposition, whether of uterine disease or of barrenness.

The following case may be cited in illustration :—

CASE I.—*Sterility from prolapsus ani: Operation: Cure.*—Mrs. H., æt. 33, married ten years, without family, consulted me on account of prolapse of the bowel at every act of defæcation, accompanied by loss of blood; the general health had greatly suffered. During married life the catamenia had been scanty, thin, and light in colour, but during the menstrual period much blood was lost from the bowel. The affection of the bowel I pointed out was readily curable, and as there was no uterine disease to be detected, that the state of the bowel was the probable cause of her having had no family.

After preparatory regimen and medicine, I proceeded to operate a week after the menstrual epoch. The bowels having been previously freely opened, I applied three separate ligatures to the prolapsed mucous membrane, and returned the tied parts within the sphincter. Opiates were freely given, and continued for a week, so as to keep the bowels confined, and she was placed on generous diet, with wine. This patient progressed most favourably; the bowel was completely relieved, and at the next catamenial period the uterine discharge was much augmented both in quantity and colour. Tonics and good diet were persevered with, and she lived apart from her husband for two months. Soon after this period she became pregnant, advanced to the full time, and was delivered of a fine healthy child.

The influence of self-induced irritation of the clitoris in causing sterility is only beginning to be rightly understood. The subject is touched upon in my recent treatise on the "*Curability of Certain Forms of Insanity, Epilepsy, &c.*" (1866), to which I would refer. The following cases may be quoted :—

CASE II.—*Hysteria: Thirteen years' illness: Sterility: Operation: Cure, and subsequently three pregnancies.*—S. S., æt. 33, married; admitted into the "London Surgical Home" February 23rd, 1861.

History.—Although married several years, has had no children. About a year ago suffered from pain in the right side, which, however, being treated was cured. In April last the pain returned in the back, and at short intervals has recurred. At times the pain is so severe that she is unable to walk. Has for thirteen years suffered from leucorrhœa, globus hystericus, &c.; and has always had distaste for marital intercourse.

Examination confirming me in the diagnosis I had formed of this case, I, on February 28th, excised the clitoris. Her recovery was retarded by an attack of jaundice, but in May she was discharged cured.

In July, 1862, this patient was seen quite well and ruddy, and had long lost all her old symptoms. She had been once pregnant, but miscarried at

three months. In July, 1865, she came to town with her youngest child. She was quite well, and had never been ill since the operation.

Remarks.—This was the first case of this nature under my care, in which the patient, formerly sterile, became pregnant after removal of the cause of her illness.

Case III.—*Hysteria: Five years' illness: Sterility: Operation: Cure: Pregnancy: Two children.*—Mrs. O. came under my care in 1862. She had been ill ever since marriage, five years previously; having distaste for the society of her husband, always laid upon the sofa, and under medical treatment. Evidence of peripheral excitement being manifest, I excised the clitoris. She rapidly lost all the hysterical symptoms which had previously existed; and in about a year came up to town to consult me concerning a tumour, which greatly frightened her, as she feared it was ovarian. I discovered that she was six months pregnant. She was delivered at full time of a healthy child. In 1865 she again called on me to show herself, not only in robust health, but pregnant for the second time.

CHAPTER XIV.

VAGINISMUS.

In December, 1861, Dr. Marion Sims read a paper on this subject before the Obstetrical Society,* and has since reproduced it in his "Clinical Notes on Uterine Surgery."† By the term "vaginismus" he means—and his definition may be generally accepted—an excessive hyperæsthesia of the hymen and vulvar outlet, associated with such involuntary spasmodic contraction of the sphincter vaginæ as to prevent coition. This irritable spasmodic action is produced by the gentlest touch: often the impression of a camel's-hair pencil or fine feather will produce such agony as to cause the patient to shriek out, complaining at the same time that the pain is that of thrusting a sharp knife into the sensitive part. This is worse in some than in others. In a very large majority, the pain and spasm conjoined are so great, as to preclude the possibility of sexual intercourse. In some instances it will be borne occasionally, notwithstanding the intolerable suffering; while in others it will be wholly abandoned, even after the act has been repeatedly and perfectly performed.

The only affection with which vaginismus can be confounded, is "imperforate hymen," or "atresia of the vagina," the true nature of which is easily ascertained by examination. In the latter affection there is not necessarily inordinate pain on being touched. There is only a mechanical impediment to the passage of a probe or the finger into the vagina; while in the former the gentlest touch, as said before, produces excessive suffering, and this is the chief diagnostic.

* "Obstetrical Transactions," 1862, vol. ii. † Hardwicke, 1866.

The cause of this vaginismus Dr. Marion Sims considers to be a thick and voluminous hymen, supersensitive, and abnormally "resistant, as if bound by a fine cord or wire. As soon as touched, there is spasmodic contraction of the mouth of the vagina."

Dr. Sims's treatment is "removal of the hymen, the incision of the vaginal orifice, and subsequent dilatation. The last is useless without the first two, but is essential to easy and perfect success with them." In other words, Dr. Marion Sims takes away from the vagina every atom of contractile power. Strange indeed if connection were not "easy" after such a treatment; but that it would be followed with "perfect success," I may be allowed to doubt, seeing that one of the conditions, considered by Dr. Marion Sims himself as "essential to conception," is thereby made impossible—viz., "that the vagina should be capable of *retaining* the spermatic fluid."

All Dr. Sims's cases—and they are several—are similar in history and symptoms to many I have myself seen; but I differ entirely in his views as to the most frequent cause, and consequently in the treatment. In a large number of cases I have had, there has been a fissure of the bowel; and that cured, the vaginismus has disappeared. In all such cases the history has been very similar to those reported by Dr. Sims. I explain the origin of the vaginismus as follows:—

In almost all cases of fissure of the rectum, constipation is present, because nature, knowing how painful defæcation is, locks up the bowels, and the sphincter ani is abnormally contracted. The tight, in-drawn appearance of the anus in these cases is well known to all who have made any observations on rectum affections. And what do we read in Dr. Marion Sims's remarks on vaginismus?—"Touching the outer surface of the hymen in any portion of its reduplication, produces not only pain, but an involuntary spasm of the sphincter muscle both of the vagina and *anus*. In some instances, *the sphincter ani feels as hard as a ball of ivory;* and one of my patients supposed it to be a tumour that would require exsection." Dr. Sims, however, looks on the constriction of the sphincter

vaginæ as primary, and a similar state of things in the anus as secondary. I reverse his proposition, and consider the latter as the primary symptom, the former as purely a secondary one.

In the same way as in fissure of the bowel, the endeavour to evacuate is by the pressure of the fæces on the distended rectum, attended by reflex pain through the whole lumbar plexus of nerves; so I believe in the distension of the perinæum and vagina in coition, where there is a fissure of the bowel, attended with not only similar pain, but also with a similar endeavour on the part of Nature to ward off the pain by an almost instinctive contraction of the vagina, at the slightest attempt to open or dilate the constrictor vaginæ.

Dr. Marion Sims further bears me out in my belief by his own remarks. For instance, "The most perfect examples of vaginismus that I have seen were uncomplicated with inflammation." Again, to justify his nomenclature, Dr. Marion Sims takes as analogous "Blepharismus or Blepharospasmus;" by which "we mean an involuntary, painful, spasmodic contraction of the orbicularis palpebrarum, with great supersensitiveness, or intolerance of light. By the term laryngismus, we mean a spasmodic contraction of the vocal apparatus producing stridulous inspiration." But will division of the orbicularis palpebrarum cure intolerance of light, or will division of the constrictor of the larynx cure child-crowing? The illustrations are singularly unfortunate, especially in the last-mentioned, which, as Dr. Marshall Hall showed, is to be attributed to some distant source of irritation producing reflex-spasm.

Dr. Marion Sims does not tell us in any of his numerous cases, whether the bowel was examined. From this omission by so minute a narrator it may be fairly construed that an examination was never made. Now to the success of his cases. In the first case, Dr. Sims honestly confessed ignorance, and pursued no treatment; in the second, the patient was removed after two operations of incisions through the vagina, the second "extending deeply through some of the fibres of the sphincter (vaginal) muscle.

But the improvement was so great, that I had no doubt of her ability to fulfil the duties of a wife under some difficulties."

The next three cases, all at one time under observation, "were, after many experiments and disappointments, perfectly cured in the following August." This means that not until the vagina was converted into an unmuscular pouch, did painful contraction cease. Dr. Marion Sims sums up by stating that he has "now operated on thirty-nine cases of vaginismus, and in every instance with perfect success." A large number, truly, and the cure, as far as the removal of pain, I do not doubt. My endeavour is to show a more probable cause of the affection, and more rational treatment; I shall illustrate my views by several cases, and also beg leave to refer my readers to chapters XI. and XII., for cases not very dissimilar arising from a similar cause.

CASE I.—*Vaginismus: Fissure of rectum: Cure.*—Mrs. D., æt. 21, came from Stepney to consult me, April 24th, 1865. She had been two years married, but had never had perfect intercourse with her huband, as she suffered excruciating pain with sickness at the very commencement of coitus. Had never had pleasure. Suffered constant pain in right side, and pain on defæcation. Menstruation regular.

On examination, I found a fissure of the rectum, which, I considered, quite sufficiently accounted for the vaginismus. On the 26th April I incised the fissure. She made a quick recovery, and on December 12th, 1865, called to say she was five months pregnant. She stated to me that on resuming cohabitation, after her recovery from the operation, she had lost all pain in connection, and for the first time experienced the normal feelings of pleasure.

As fissure of the bowel is an extremely common complaint, so I believe it is the most frequent cause of vaginismus; but on the same grounds as those on which I have based this view will it be found that anything which tends to increase abnormally the sensitiveness, whether direct or reflex, of the vagina will produce vaginismus.

Thus, for example, Dr. Fleetwood Churchill has drawn attention to a paper published by MM. Debout and Michon, in which these gentlemen find frequent causes to be "inflammation of the mucous membrane, herpes or eczema of the vulva, and inflammation of the mucous follicles; but the more

frequent are hyperæsthesia of the vulva and mucous membrane, and fissures at the entrance of the vagina."

Dr. Churchill "thinks in the majority of cases the irritation excited is sufficient to destroy for the time all sexual desire as well as gratification, but in some cases it is not so. In some passion was strongly exhibited, but, not being gratified, great distress and nervous irritation ensued."

There I quite agree with Dr. Churchill, and hence arises one of the excitants of masturbation. The patient cannot have natural connection with her husband, whether the vaginismus arise from fissure of the anus, abnormally constricted hymen, or any of the causes mentioned by MM. Debout and Michon. Sexual desire, however, is present, and relief is found by self-excitation; or possibly the friction, frequently first used only to relieve irritation, is afterwards resorted to for the purpose of self-gratification.

This proposition may be reversed in some cases, and the explanation is then as follows:—

A patient having been accustomed to practise masturbation, will, it is well known, have distaste for her husband, and there is such hyperæsthesia of the vulva, produced by her malpractices, that the merest touch of the male will produce vaginismus.

I have seen many such cases, and I here quote one most graphically recorded by Professor Braun, of Vienna,* in whose patient vaginismus was cured by removal of the clitoris.

"A patient, twenty-five years old, unmarried, commenced to menstruate regularly in her thirteenth year, and at the same time became addicted to masturbation, which, notwithstanding frequent coitus, she has ever since continued to practise. In her twenty-second year she miscarried, and since then menstruation has been irregular. Eighteen months ago she had a long illness, occasioned by a fall, which produced loss of consciousness, and was attended with obstinate vomiting and headache. Soon after, in April, 1864, she had an attack of convulsions, affecting especially the muscles of the eyes, mouth, and neck. Similar attacks occurred at intervals of from one to four weeks, extended to the extremities, and were accompanied by loss of consciousness. The sexual excitement had increased since the miscarriage, and still more since the spasms.

"The patient was well nourished, and showed externally nothing abnormal,

* "Half-yearly Abstract of the Medical Sciences," January to July, 1866.

except a deep-seated swelling as large as a hen's egg, and little sensitive in the left inguinal region, and a similar but smaller swelling in the right. On examination of the vulva, the nymphæ were found to be pendulous, their covering cuticular, the præputium clitoridis much developed, the clitoris r adily erectile at a slight touch, and then appearing as a firm, penis-like body, more than an inch in length and as thick as a crow-quill. A gentle touch of the apparently narrow ostium vaginæ produced strong spasmodic contraction of the sphincter and neighbouring muscles, followed by contraction of the abdominal muscles, projection of the uterus downwards against the entering finger, and convulsive movements of the whole pelvis. Through the posterior wall of the vagina a substance as large as a walnut could be felt. There were two small erosions on the vaginal portion of the cervix. Anteflexion of the uterus was diagnosed as a result of the pressure of the abdominal muscles, and as a cause of the hysterical spasms.

"The anteflexion was reduced by a pessary, the uterine cavity cauterized to diminish the discharge, and the clitoris and nymphæ to diminish their sensibility. Injection was administered internally. During the next few days there were several attacks of spasm, and the pessary was removed on account of the sexual excitement. Braun then proceeded to remove the clitoris, and the greater part of the nymphæ, by means of the galvanic cautery. The sensitiveness of the clitoris was very remarkable; for notwithstanding deep narcotism, to and fro movements of the pelvis were produced by seizing it with forceps. The progress of the case was favourable, and the wound healed in six weeks. The excessive sexual excitement and the general spasms had not returned several months after the operation, and intercourse was attended with as much pleasure as at first. There is no mention of the progress of the uterine malady.

"Microscopic examination of the parts removed showed hypertrophy of their normal elements."

The following case came under my observation:—

Case II.—*Vaginismus: Delection: Fissure of the rectum: Cure.*—Mrs. M., æt. 22, married three months, during which time connection with her husband has been impossible, through the intense suffering which the slightest touch of the male organ causes her. She also suffers from dysmenorrhœa.

On examination, the os vaginæ was found very small, and the insertion of the finger caused her extreme pain. The clitoris was large and hard, and there was a deep and very painful fissure of the rectum. She admitted long habits of delection.

January 18th, 1866. Under chloroform the sphincter vaginæ became quite relaxed, and the vagina capacious, and I divided the fissure, and extirpated the clitoris. The usual after-treatment was carried out, and as soon as possible dilatation of the vagina by bougies, beginning with a small-sized rectum bougie, was daily practised, until at the end of a month the largest-sized could be passed readily. On the day on which I discharged her, I passed three different-sized Fergusson specula, and in a week after her return home I learnt that her husband said she was quite well.

I have no doubt that in this case the vaginismus was the immediate result of the fissure, and that the habit of delection (practised long before marriage) was the cause of the fissure.

CHAPTER XV.

ABDOMINAL SECTION.

Since the publication of my second edition, I have found it necessary, in order to do full justice to the subject of ovarian disease, and the radical operation for its removal—ovariotomy,—to write a separate work on this important subject. I therefore omit from this edition the chapter on ovarian dropsy; and in its place shall make a few remarks on other kindred operations, which, from the experience taught by ovariotomy, have lately received considerable attention. In this chapter I propose to consider the following subjects :—

1. Cæsarean section.
2. Removal from the abdomen of extra uterine fœti.
3. Treatment of ruptured uterus, and expulsion of child into abdominal cavity.
4. Excision of uterus and appendages.
5. Removal of external fibro-cystic and fibroid tumours of the uterus.
6. Colotomy.
7. Removal of the spleen and other hypertrophied abdominal organs.

1. *Cæsarean Section.*—This is the oldest operation in abdominal surgery, and according to Dr. Radford there has been no subject connected with medicine which has created more bitterness of feeling and animosity in the minds of those who may be classed as Cæsareanists and anti-Cæsareanists.*

* "Observations on the Cæsarean Section." By Thomas Radford, M.D. Manchester, 1865.

With the knowledge possessed in the present day of abdominal section, it would be a reproach if such an operation, frequently so beneficial, should be declared by general vote to be impracticable; but I much fear that the little care taken in selection of fit cases, and fit times for operation, may bring disrepute upon this *dernier ressort* of midwifery.

The operation of Cæsarean section was proposed for those cases in which it is impossible to bring a live child at full term into the world through the natural passage, either from deformity of the pelvis, from cancerous disease of the uterus and vagina, or from unusual size of the child; the child in all these cases being found to be alive. To quote from an anonymous author, Ὠδινοβοηθος, in the "London Medical Repository," February, 1815: "The possibility of preserving the child should never be out of our minds on these occasions. It is one thing to bring a child into the world with just life enough to cry once or twice, and another to bring it forth with a capability of continuing to live. . . . Is there," he continues, "any chance of having a child born, and capable of living, before the mother has passed through thirty-one weeks of pregnancy? If there be no such chance, is not the very principle upon which this method has been recommended broken through by performing the operation before this period?"

For my part, I do not see why the operation cannot in most cases be delayed till within a few days, or even up to the full time of the termination of pregnancy. We are only justified in risking the life of the mother, when we are certain, or have a fair hope of certainty, of the life of the child. Otherwise, it will be better to induce abortion by methods less hazardous to the mother. Of course I speak here of cases where it is known, either from the histories of previous confinements, or from actual observation, that there exists an insurmountable impediment to delivery naturally. In many cases, the necessity is not seen until the accoucheur is called in to deliver; for, as Dr. Radford pertinently observes, "Surely the most benighted opponent to the Cæsarean section cannot be so mentally blind, as not to know that young married

women cannot be compelled to submit to vaginal or other examinations, in order that it may be ascertained whether there is sufficient pelvic capacity for a full-grown infant to pass through."

The great chance for a favourable result, in this as in all other abdominal operations, seems to me to be promptitude of procedure when once the operation is decided upon as necessary. The mother is exhausted and the fatal chance of rupture of the uterus rendered more imminent by every hour of delay and every fruitless expulsive pain. In cases where a woman near to her confinement is killed by accident, it need scarcely be said prompt delivery of the child by abdominal section is urgently and imperatively called for. No scruples of friends or relatives should deter the practitioner from doing what is without doubt his duty—namely, a prompt endeavour to save the life of the unborn, and already motherless infant.

From existing statistics it is almost impossible to form an opinion of the value of this operation, for the reason I have stated, that the operation is one frequently done without sufficient consideration—firstly, for the life of the mother, and secondly, for that of the infant.

Of six women under Dr. Radford's care, four died, or 66·67 per cent.; and two were saved, or 33·33 per cent.

Of seventy-seven cases, recorded by Dr. Radford as having occurred in Great Britain and Ireland, thirty-two were English, ten Scotch, and one Irish. Of these seventy-seven, sixty-six, or 85·71 per cent., died; eleven, or 14·28 per cent., were saved. Dr. Radford thinks another case included in the deaths should be in some measure considered as one of recovery. The patient lived seven days, and so long as she was rationally treated, she went on favourably; but after the treatment had been injudiciously changed, she gradually grew worse, and died.

With reference to the lives of the infants, Dr. Radford's tables show that "from the seventy-seven women seventy-eight infants were extracted—one being a case of twins; of which forty-six, or 58·97 per cent., were saved; and thirty-two, or

41·02 per cent., were dead. Nearly all the latter had died before the operation. They would probably have been saved if this had been performed earlier." Dr. Radford, in "an ideal comparative estimate," says, "If it is supposed 1 per cent. be the infantile mortality of natural labour, that consequent on the Cæsarean section may be stated as scarcely 1½ per cent., provided correct principles of practice are adopted."

In a paper read 6th December, 1865, before the Obstetrical Society, by Dr. Greenhalgh, he stated that he had had seven cases of Cæsarean section under his care. "Four had reached the full period of pregnancy, one eight months (footling presentation), upon whom craniotomy was performed, prior to the Cæsarean section; one at six months and a half; while a third had reached the sixth month, and was operated upon immediately after death from diseased heart. Of these seven cases, one mother lived three weeks, the others died; and three children were saved; but in two cases it could not be hoped that the child would be saved." Since this paper was read, Dr. Greenhalgh has had another case, in which the mother has made a good recovery. The child was born alive but died almost immediately; and it is to be regretted that the operation was not longer postponed, so as to give the child a better chance of life.

Keyser's statistics are more favourable to the mother than Dr. Radford's, especially in cases where the operation was performed after the labour had lasted only twenty-four hours, there being here just 33·33 per cent. of recoveries.

The practical questions to be decided before Cæsarean section is resorted to are:—

1st. Is there pelvic space to bring the child into the world? If there is less than two inches, this is impossible, even if craniotomy be resorted to; and Burns's remarks, quoted by Dr. Greenhalgh in his paper, are very applicable:—"It ought not to be forgotten," says Burns, "that it is one thing to extract, and another to extract safely, in extreme deformity. It is possible, after much exertion, to bring away the child; but every one must have seen the mother lost in cases when

the capacity of the pelvis was far from being reduced to a minimum. We ought to be satisfied, not only that we can bring through the child, but that we can do so without so much violence as must, in all probability, kill the mother."

2nd. Is the mother in a state as probably to bear the operation?

3rd. Is the child alive, and likely to live if delivered by abdominal section?

If these questions are satisfactorily answered, the only further maxim to be remembered is to act quickly. He who operates promptly gives a chance not only to the mother, but to the child. Delay is equally dangerous to both.

I do not feel myself called upon to enter into the consideration of the various steps of the operation, but will refer my readers for information on this head to the standard authors on Obstetric Medicine and Surgery, and to Dr. Radford's admirable paper, from which I have so largely quoted.

2 and 3. *Removal of Fœtus from Abdomen: Extra-uterine Fœtation; Rupture of Uterus.*—The success of ovariotomy leads to the reasonable hope that, in cases of extra-uterine fœtation, the removal of the fœtus at the seventh or ninth month of pregnancy would not only be an operation likely to succeed, but would certainly be more humane than that of allowing it to become desiccated and encysted in the abdomen, thereby causing the mother to undergo all the inconveniences of an abdominal tumour for the remainder of her life.

Cypriani, in 1520, has recorded a case in which he extracted a fœtus twenty-one months old from the fallopian tube, with a successful termination to the mother; but I am not aware that any such cases have been published, with recovery of a live infant. I should, however, certainly pursue this treatment if a case were to present itself to me in my own practice.

In cases where the uterus has been ruptured during parturition, and the child has escaped into the abdominal cavity, the operation of abdominal section seems specially called for, and the practice has received the support of Trask, Radford,

and Braxton Hicks. It is plainly far more likely to be successful than the old plan of trying to drag the child back through the rent.

The probability of all these operations proving successful is now great, from the facility with which irritation of the peritoneum can be avoided by closing the wound of the abdomen with silver sutures.

4. *Excision of Uterus and Appendages.*—Dr. Horatio Storer, of Boston, well known as joint-editor, with Dr. Priestley, of "Simpson's Obstetric Memoirs," has lately published, and courteously sent me a copy of, a "History of Successful Removal of the Uterus and both Ovaries by Abdominal Section." The case occurred in his own practice. Accompanying this history is a most careful collection of the various opinions on this formidable operation, and also statistics of every published case. So complete are his remarks and tables, that I may be pardoned for quoting largely from this admirable memoir. In introducing this subject, Dr. Storer says:—

"But few of the capital operations of surgery have been attended by so uniformly a fatal result as has been extirpation of the uterus when in its normal position; seven-eighths of the attempts at removal of the organ under these circumstances, prior to 1863, having resulted in death. . . . Quite a number of attempts at extirpation by abdominal section of the uterus, enlarged by fibrous outgrowths, have of late years been made, some of them successful, so far as concerns removal of the tumour; some of them uncompleted, but a large majority of them rapidly proving fatal.

"It is necessary that this operation should not be confounded with removal of the undisplaced organ by the vagina; nor with its removal when prolapsed; nor with removal of an inverted uterus; nor with amputation of the cervix below the vaginal reflexion; nor with amputation of the cervix above the vaginal reflexion; nor with removal of sessile or pedunculated fibroid projections into the uterine cavity; nor with attempts at enucleation, by approach from below, of interstitial uterine tumours; nor with attempts at removal, by approach

from below, of extra-mural pediculated or non-pediculated uterine growths—which are all of them very different procedures, and have all of them, with the exception of the first, been attended with a much lower degree of mortality. It should not be confounded, moreover, with three other operations which it might seem to more closely resemble, namely—with the removal, by gastrotomy, of pediculated uterine fibroids; nor with the attempt at enucleation, after gastrotomy of interstitial uterine growths, allowing the matrix to remain *in situ;* nor with removal of the organ through an abdominal incision after its attachments have been divided by dissection from the vagina—each of which operations is probably intrinsically more fatal; the latter, indeed, almost necessarily so. Nor"—and here I quite agree with Dr. Storer—" should the operation by simple abdominal section be thought so very different from the ordinary operation for extirpation of an ovary, save as concerns the greater difficulty of its performance, the greater courage it requires in the surgeon, and the greater necessity of careful preparatory and after-treatment."

We learn from Dr. Storer that " the removal of the uterus by abdominal section, for malignant disease, was proposed by Weisberg, in 1787, and again by Gutberlat, in 1814; neither of them, however, seeming to have attempted it in practice.

Dr. Storer finds that " there have hitherto been put upon record but five successful cases of extirpation of the uterus by purely abdominal section; one of them British, by Clay, of Manchester; one of them French, by Koeberlé, of Strasburg; and three American, one of which was by Kimball, of Lowell, and the other two by Burkham, of the same city. They were all five non-malignant tumours." To these successful cases Dr. Storer adds a sixth.

From returns of all the cases Dr. Storer could collect, he found that this operation had been performed twenty-four times,—six times with success, and eighteen times with a fatal result, or with a per-centage of recoveries of one in four, or twenty-five per cent. I shall hereafter relate my case, which I have previously published in the " Obstetrical Transactions,"

1865. Death in that case was caused by slipping of the ligature securing the left broad ligament, and consequent hæmorrhage.

From the great success which has attended my practice of division of the pedicle of ovarian tumours by actual cautery, I am led to hope that this frequent cause of death* in the operations we are now considering will be very considerably diminished, and in any future case I shall certainly divide the uterine attachments by this method.

Of the differential diagnosis of those tumours, for which we should advise this operation from ovarian tumours, I have treated very fully in my work on "Ovarian Dropsy." The steps of the operation, with the exception of the actual cautery, are related in the case now given.

CASE.—*Complete extirpation of the uterus and ovaries, with large fibrous tumours.*—A. R., æt. 49, single, was admitted into the "London Surgical Home" on October 18th, 1864. She was sent to me by Dr. White, of Londonderry, who kindly favoured me with the following history:—"Miss B. has a large tumour of nine years' standing. It commenced on the left side, and when first observed was about the size of a goose's egg. For three or four years it made slow progress, and appeared to be kept in check by treatment. When I first examined it, three and a half years since, it extended across the abdomen, and from ribs to pubes, measuring twelve inches in length by ten in breadth, was movable, generally hard, but in some parts soft, yielding, and lobulated. Catamenia regular. For a considerable time it remained stationary, but during the last twelve months has increased much more rapidly."

When Dr. White placed the patient under my care, the whole abdomen was filled with a large tumour, regular in its outline, very movable, elastic to the touch, and in parts giving somewhat the feeling of obscure fluctuation. It appeared that the growth during the last few months had been very rapid. Last March she fell down from sudden pain caused by the rolling of the tumour, and since then has been seldom free from suffering. She has had two attacks of peritonitis within a short period, each apparently excited by the rolling of the tumour. Latterly also the catamenia have been profuse, and a discharge of blood from the vagina is now excited by very slight causes, even by mental emotion. The general health has within the last couple of months suffered severely, and she is much wasted, especially about the neck and shoulders. The expression of the face is very anxious and worn.

Upon examining the abdomen I found a large tumour, which was very movable; and deeper down another mass, filling the pelvis, and much more lobulated to the touch than the movable mass. Movements of the one portion did not appear to affect the other. The os uteri was drawn high up in the vagina, and was somewhat difficult to reach, from its situation behind

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* Of the eighteen unsuccessful cases recorded by Dr. Storer, five died from hæmorrhage.

the pubes. With difficulty a sound was introduced and passed some distance into the uterine cavity. This uterine mass was very firmly fixed to the pelvis, and interfered considerably with the functions of the rectum and bladder. I punctured the movable portions of the tumour with an exploring needle, but could not obtain any fluid.

Soon after her admission into the "Home" she had a sharp attack of pain in the abdomen, constant sickness, and all other symptoms of peritonitis. This was subdued by local applications of turpentine, linseed-meal poultices, and other appropriate treatment. After this attack the stomach remained very irritable, and the loss of rest at night was very distressing.

After due and careful examination, I and my colleagues arrived at the conclusion that the mass was probably a fibroid tumour of the uterus with a large outgrowth. Its recent very rapid increase was beginning to most materially exhaust the system. The interference with the functions of the rectum and bladder, with the process of digestion, and the irritable exhaustion produced by the loss of sleep, rendered it necessary that, if possible, some active means of relief should be at once adopted, in order to afford the patient even a possibility of recovery.

It is to be observed that she had had a large umbilical hernia, which now contained nothing but fluid.

The whole of the various aspects of the case having been fairly considered, its grave dangers fully weighed, and the patient herself, after consultation with her friends, being urgently desirous of undergoing any operation which might offer even a remote chance of alleviating her constant sufferings, I determined to operate. In this step my colleagues fully concurred. The plan I intended to pursue was to open the abdomen and expose the tumour, and, in case I found it feasible, to remove the large movable portion; then to be guided by the state in which the uterine mass was found as to whether I should remove the entire uterus, with its appendages, or suffer them to remain. From the state of uncertainty which existed concerning the whole mass, I further stipulated that I might, if I considered it necessary, not remove any portion, but merely close the abdominal opening again, thus making simply an exploratory incision.

On November 9th, 1864, I proceeded to operate. The patient was brought well under the influence of chloroform, and then placed upon the table. I made an incision in the middle line of the abdomen, of about four inches in length, and having its lower extremity close to the hernial sac, which protruded through the navel. Gradually cutting the parietes, I opened the abdominal cavity and exposed the tumour. On passing my hand around it, I found that no adhesions were present. I therefore continued my incision on the left side of the umbilicus to within a couple of inches of the pubes. The whole of the movable fibroid mass was thus exposed, and found to be attached to the uterine mass by a short pedicle, about three inches in circumference. I therefore, with careful manipulation, lifted it outside the abdominal cavity. The écraseur was applied around the pedicle, which was very gradually and quietly cut through. Notwithstanding the slowness with which this was done, at the moment of separation there was a gush of blood from the divided surface. It flowed, not apparently from vessels, but from sinuses the size of a finger. This could only be arrested by passing three silver-wire sutures deeply through the sides of the divided surface, and drawing them tightly together. This arrested the hæmorrhage sufficiently to allow a more careful examination of the remaining mass to be made. It was found that the uterus was filled with a fibrous mass, the size of a child's head, and having, growing to its posterior walls, two other independent tumours, each the size of a fist. Further, each ovary was a mass of cystic development, the size of a goose's egg, and intimately adherent to the uterine

fibroid. The broad ligaments were also filled with dropsical effusion. Taking into consideration this state, the size of the uterine fibroid mass, the difficulty which would occur in permanently arresting the bleeding from the divided neck of the first-removed tumour, and the probability of pyæmia ensuing, I determined, with the sanction of my colleagues, to remove the whole mass, with the uterus and ovaries. I therefore separated the left broad ligament, and having pierced it with a long needle, covered with Indian hemp twine, I tied it and divided it. I then treated the right ligament in the same way. I now introduced a catheter into the bladder, to exactly determine its true connection with the mass, so far as I could, out of the pelvis ; and I ascertained the exact position of the os uteri. I then pierced the cervix about an inch above the os, and passing a strong double ligature, tied each half separately, and placed another ligature around the whole. I cut away the mass and removed it. There was no hæmorrhage from this surface.

Bleeding was now observed to be taking place, and upon examination it was found that the ligature which had been passed over the left broad ligament had slipped ; I therefore took up the cut surface with the vulsellum forceps, and tied a fresh ligature around the whole, as I believed. The abdominal cavity was carefully sponged out, and all blood removed. The bleeding had been stayed, and no further hæmorrhage occurring, I proceeded to close the abdominal incision with silver-wire sutures. As the umbilical hernial sac interfered with the equal approximation of the edges, I removed it, and thus was enabled to close the incision perfectly and evenly. The various ligatures were brought through the lower end of the incision ; a bandage was carefully applied, and the patient removed to bed. The operation occupied an hour and a quarter.

Upon examination, the tumour first removed was found to weigh fifteen pounds, and the uterine mass another six and a half pounds. They were composed of true fibroid tissue, and presented nothing peculiar. The ovaries were both a mass of cyst-development, of various sizes and different stages of growth, and were so closely adherent to the uterine mass, that it was most difficult to separate them.

The patient soon rallied from the effects of the chloroform, and became calm and cheerful. The pulse at 9 p.m. was only 80 ; the tongue and skin moist ; and she had a quiet sleep. At 3 a.m. of the 18th, she had a severe attack of vomiting, suddenly became pale and collapsed, and died in half an hour.

The post-mortem, a few hours afterwards, showed us a large mass of coagulated blood in the left iliac fossa, with a quantity of serous fluid in the cavity of the abdomen. A further examination proved that this had escaped from the left broad ligament, from which the ligature had slipped during the operation. It appeared that the second ligature which had been applied, had not included the whole of the divided surface. The uterine mass had been divided in the situation I had intended, viz., about an inch above the os uteri ; and the ligatures there were properly tied. The organs of the body generally presented nothing remarkable.

The fatal result in this case was truly unfortunate, as I have no doubt that, had it not been for the slipping of the ligature on the left broad ligament, the patient would have done well. Should I meet with another case in which this operation is advisable, I shall either divide the broad ligament with the actual cautery, or apply a double ligature by piercing the ligament, and thus render a slip impossible.

5. *Extra-uterine Fibro-cystic and Fibroid Tumours.* — The diagnosis between these tumours and ovarian tumours is fully

treated in my work on "Ovarian Dropsy." As the mode of operation is the same as for ovarian disease, also discussed in detail in the same work, I abstain from more than a reference to these morbid growths here.

6. *Colotomy.*—In treating of abdominal section, I cannot pass without remark the operation of colotomy, or the formation of an artificial anus, either for congenital absence of anus or rectum, or on account of some irremovable obstruction in the lower bowel.

In operations performed at or soon after birth, Mr. Curling prefers inguinal colotomy, as in eighteen out of twenty cases, in which he performed this operation after death, he was able to reach the colon without difficulty. In one of them, the ovary and fallopian tube protruded, but they were readily put aside, and the colon reached. In two instances, owing to an unusual course taken by the descending colon, Mr. Curling was unable to find the bowel.

"In eight of the twenty subjects," writes Mr. Curling, "the colon was readily found and opened in the loin without wounding the peritoneum. In six, the operation was more or less difficult, owing in two to the great depth of the gut; in two to its being empty, and contracted as well as deeply seated; and in two to a large kidney being in the way, and concealing the bowel. Had the subjects been living, I apprehend, the difficulties of the operation would have been increased. In six subjects, lumbar colotomy was impossible without opening the peritoneum, in consequence of the colon being attached by a distinct mesentery, and being loose in the abdomen. . . . Although deviations from the usual disposition of the colon may prevent or mar the success of colotomy in both regions, on the left side, it would appear that this impediment is much more likely to be met with in an operation in the left loin than in one in the groin; and if we add to this the other hindrances above mentioned, the difficulties liable to be encountered in the lumbar operation are certainly much greater and more serious than in the inguinal.

A surgeon of common skill would find the latter an easy operation."*

Mr. Curling, therefore, prefers the inguinal operation for certain cases of congenital imperforation, but in cases of adults, in which colotomy is required to relieve obstruction from disease in the lower bowel, he for other reasons prefers the lumbar operation. The operation of colotomy has been successfully performed by Messrs. Solly, Hancock, and other English and Continental surgeons, besides Mr. Curling.

7. *Removal of Hypertrophied Spleen, &c.*—Neither an hypertrophied spleen nor a movable kidney—for both of which affections abdominal section has been recommended or performed—tends to shorten life; but most assuredly an attempt at their removal will do so. I hold that no man is justified in performing an operation imminent to life, unless the disease which he attempts to remove is itself likely to prove fatal.

* "Medico-Chirurgical Transactions," vol. xliii., 1860, pp. 311, 312.

THE END.

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