

A treatise of midwifery, comprehending the management of female complaints and the treatment of children in early infancy ... for the use of female and other practitioners, and private families / by Alexander Hamilton.

Contributors

Hamilton, Alexander, 1739-1802.

Publication/Creation

Edinburgh : C. Elliot, 1785.

Persistent URL

<https://wellcomecollection.org/works/jpktmhzb>

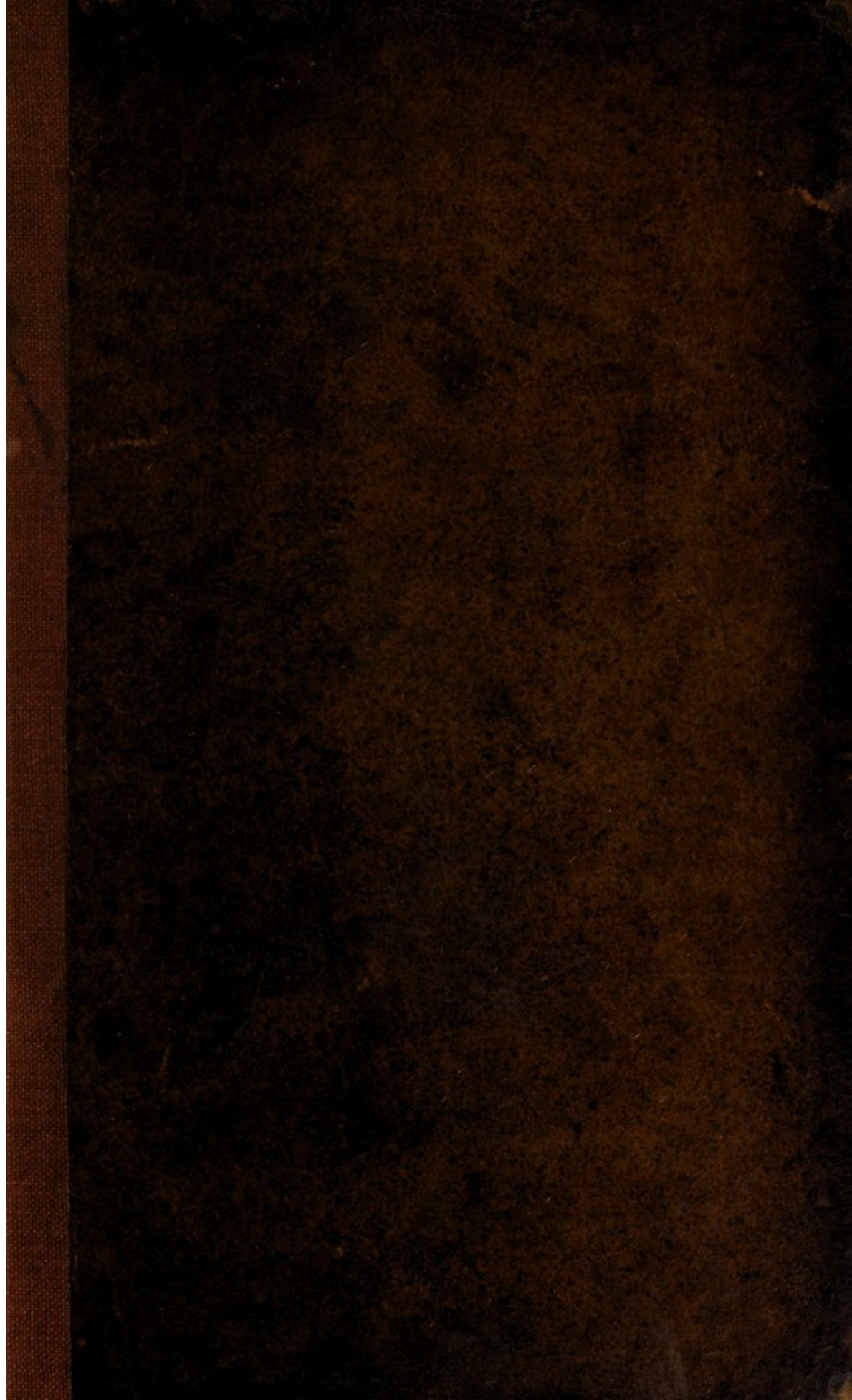
License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



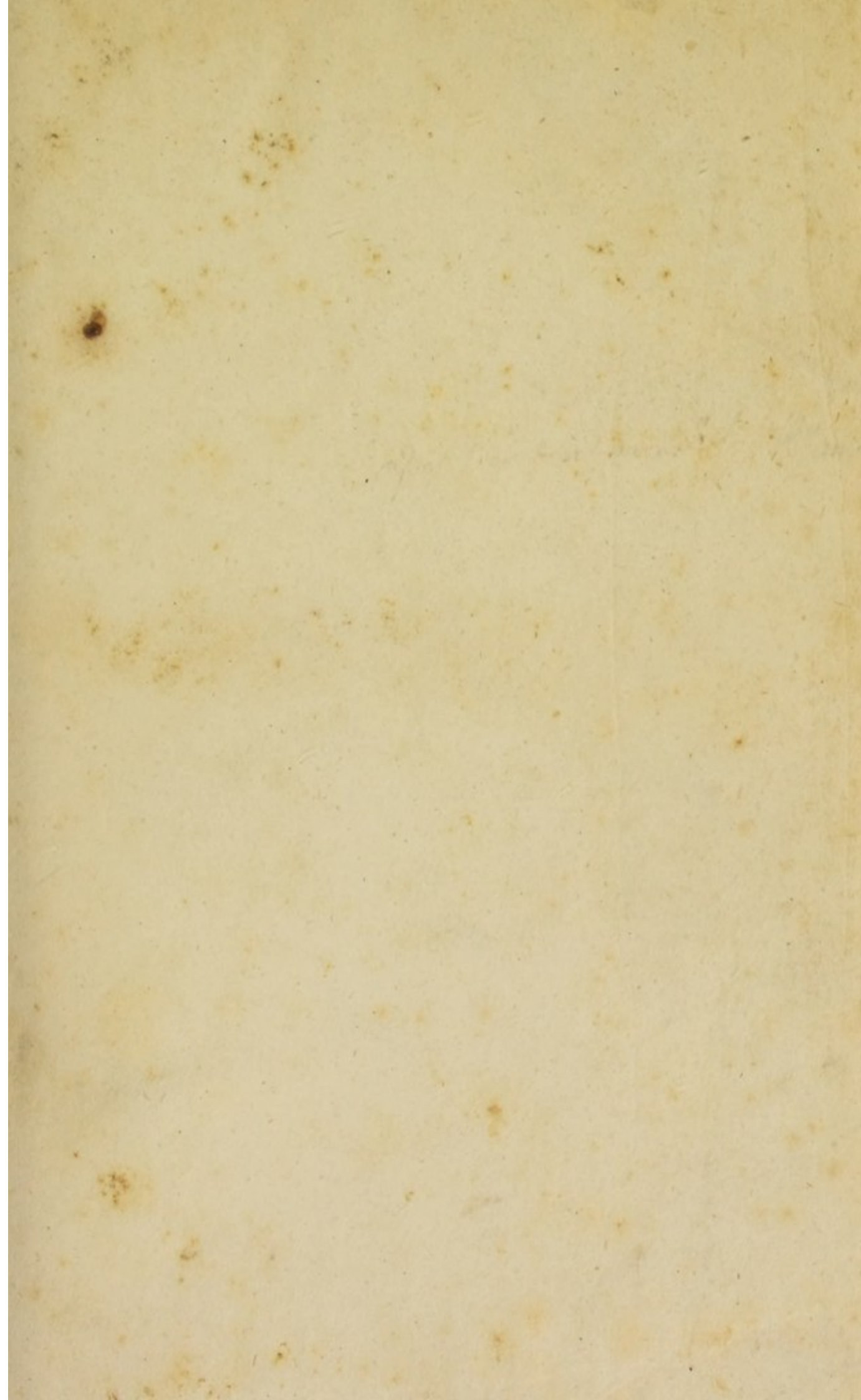
Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



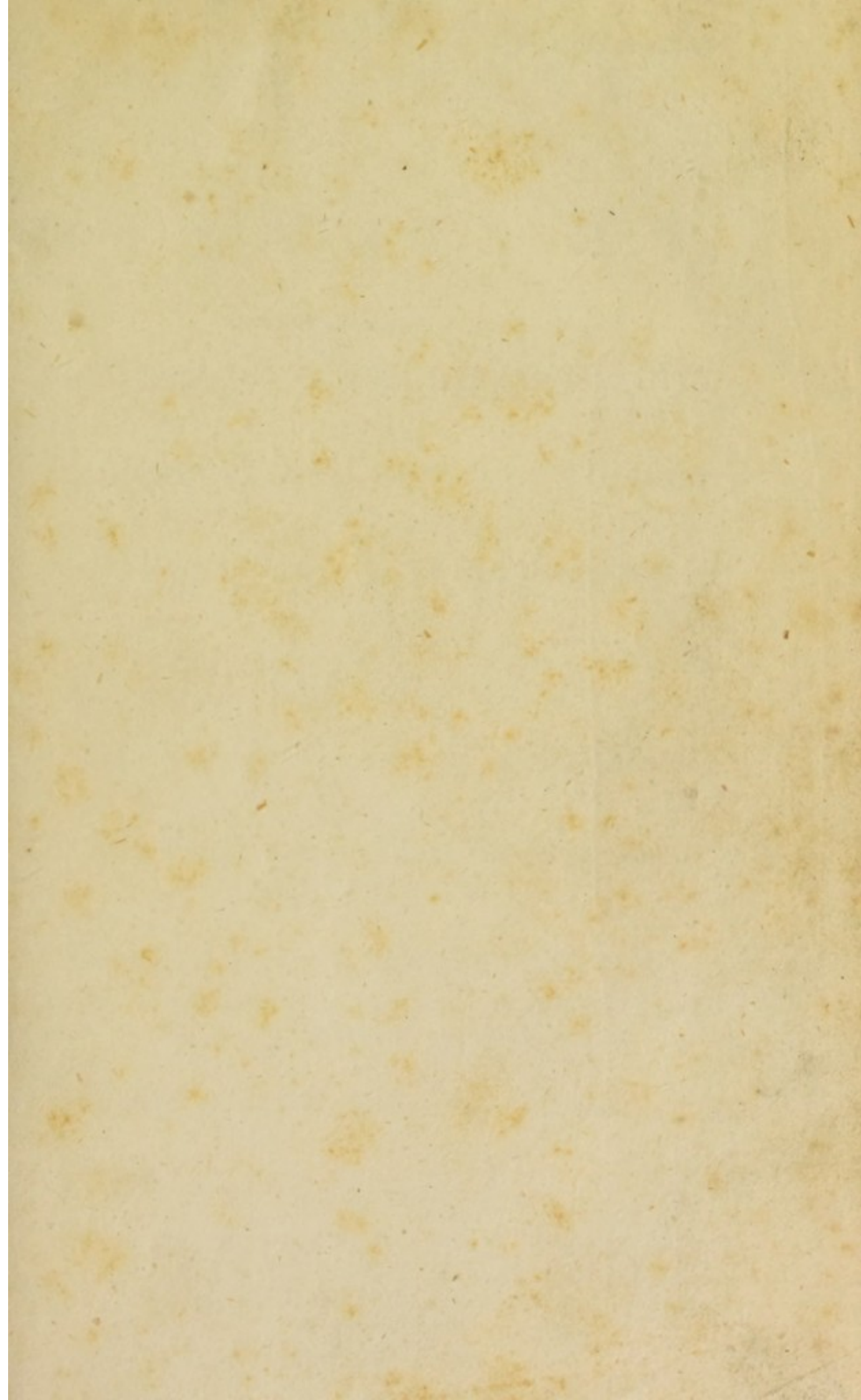
27,431/B


J. xxv Ham

Miss A. von
Portsm⁶









Digitized by the Internet Archive
in 2016 with funding from
Wellcome Library

<https://archive.org/details/b28776422>

T R E A T I S E
O F
M I D W I F E R Y ;

COMPREHENDING THE
MANAGEMENT OF FEMALE COMPLAINTS,
AND THE
TREATMENT OF CHILDREN IN EARLY INFANCY.

TO WHICH ARE ADDED,
PRESCRIPTIONS FOR WOMEN AND CHILDREN;
AND
DIRECTIONS for preparing a Variety of FOOD and DRINKS,
adapted to the Circumstances of LYING-IN WOMEN.

DIVESTED OF TECHNICAL TERMS AND ABSTRUSE THEORIES,

FOR THE
Use of FEMALE and other PRACTITIONERS, and
PRIVATE FAMILIES.

By ALEXANDER HAMILTON, M. D.

Professor of Midwifery in the UNIVERSITY of EDINBURGH, and
Member of the ROYAL COLLEGE of SURGEONS.

SECOND EDITION, CORRECTED AND ENLARGED.

E D I N B U R G H :

Printed for CHARLES ELLIOT, EDINBURGH;
G. G. J. and J. ROBINSON, LONDON;
and W. GILBERT, DUBLIN.

M,DCC,LXXXV.



ADVERTISEMENT.

THIS Work has in the present edition been considerably enlarged and improved. At the same time it has been printed in a more compressed form, in order to reduce the price, and thereby facilitate its introduction into Private Families, to whom it will be found no less useful than to Practitioners.

*Of C. ELLIOT and the other Booksellers may be had, Price 6s.
bound, or with Dr SMELLIE'S 40 Plates and Explanations 12s.
bound,*

O U T L I N E S
OF THE
THEORY AND PRACTICE
OF
M I D W I F E R Y,

By ALEXANDER HAMILTON, M. D.
Professor of Midwifery in the University of Edinburgh, &c. &c.

For the Use of MALE PRACTITIONERS.

The Work for FEMALE PRACTITIONERS may be had
with the Plates also, price 11s. bound.

LIKEWISE

DR SMELLIE'S THEORY AND PRACTICE OF MID-
WIFERY, with Cases, and the whole Plates and Ex-
planations, in 3 vols large 12mo, price 12s. bound.

C O N T E N T S.

P R E F A C E - - - xvii

P A R T ' I.

*Of the UTERINE SYSTEM, and the Alterations
and Diseases to which it is subject.*

C H A P. I.

Anatomical Descriptions, &c.

	Page
SECT. I. <i>General division of the human body</i>	18
SECT. II. <i>Of the parts of generation and par- turation in particular</i>	22
§ 1. <i>Of the pelvis</i>	ib.
I. <i>The parts of the pelvis separately</i>	ib.
II. <i>Shape and dimensions of the pelvis or basin</i>	26
III. <i>Distorted or narrow pelvis</i>	29
IV. <i>Structure and figure of the child's head</i>	31
V. <i>General remarks</i>	34
§ 2. <i>Description of the soft parts of generation</i>	36
I. <i>External parts</i>	ib.
II. <i>Internal parts</i>	40
§ 3. <i>Theory of generation</i>	44
A 3	§ 4.

	Page
§ 4. <i>Of the menses or courses</i>	45
I. <i>Irregularities</i>	46
II. <i>Flooding</i>	54
III. <i>Management when the menses are about to cease</i>	56
§ 5. <i>Diseases of the genital parts</i>	62
1. <i>Of the labia</i>	ib.
2. <i>Clitoris and nymphæ</i>	63
3. <i>Urethra and neck of the bladder</i>	ib.
4. <i>Os externum</i>	64
5. <i>Vagina</i>	65
6. <i>Of the fluor albus or whites</i>	66
7. <i>Of the prolapsus or falling down of the womb</i>	68
8. <i>——— of the vagina</i>	69
9. <i>Of polypous tumours</i>	70
10. <i>Sterility or barrenness</i>	71
11. <i>False pregnancy</i>	72
12. <i>Moles and false conception</i>	73

C H A P. II.

<i>Pregnancy</i>	75
I. <i>Growth or progress of the fœtus</i>	ib.
II. <i>Contents of the gravid uterus, or description of the several parts of the ovum</i>	78
III. <i>Position of the child in the womb</i>	82
IV. <i>Changes the womb suffers by pregnancy</i>	ib.
	V.

	Page
V. <i>Superfætation</i> - -	87
VI. <i>Extra-uterine conception</i> -	88
VII. <i>Monsters</i> - -	ib.

C H A P. III.

<i>Diseases of Pregnancy</i> - -	89
----------------------------------	----

SECT. I. *Complaints occurring in the early stages of pregnancy* - - -

1. <i>Sickness and vomiting</i> -	90
2. <i>Heart-burn</i> - -	91
3. <i>Diarrhœa or looseness</i> -	92
4. <i>Unnatural cravings</i> -	93
5. <i>Swelling and pain in the breasts</i>	ib.
6. <i>Fainting, nervous fits, drowsiness, &c.</i>	95

SECT. II. *Complaints occurring in the advanced months of pregnancy* -

<i>Difficulty and suppression of urine, with retroversion of the womb</i> -	96
<i>Costiveness</i> - -	ib.
<i>Piles</i> - - -	101
<i>Swelling of the legs, thighs, and labia</i>	ib.
<i>Pains in the back and loins</i>	103
<i>Convulsions</i> - -	ib.
<i>Cramps in the legs, thighs, or belly</i>	104
<i>Colic</i> - - -	105
<i>Cough and breathlessness</i> -	ib.
<i>Difficulty or incontinence of urine</i>	106

	Page
SECT. III. <i>Flooding and abortion</i> -	108
I. <i>Flooding</i> - -	109
II. <i>Abortion</i> - -	116
<i>Treatment in cases of miscarriage</i>	119
<i>Rules and cautions for the conduct</i> <i>of pregnant women</i> -	124

P A R T II.

<i>Of LABOURS</i> - - -	126
-------------------------	-----

C H A P. I.

<i>Natural Labour</i> - - -	127
<i>Management of the first stage</i>	131
<i>Second stage</i> - -	134
<i>Third stage or birth of the placenta</i>	138
§ 1. <i>General management of the after-</i> <i>birth</i> - - -	<i>ib.</i>
§ 2. <i>Management of the placenta in case</i> <i>of flooding</i> - -	141
§ 3. <i>When the cord is broken or pu-</i> <i>trid</i> - - -	142
§ 4. <i>When retained by the contraction of</i> <i>the womb</i> - -	<i>ib.</i>
§ 5. <i>Uncommon adhesion of the cake</i>	143

C H A P. II.

<i>Of Laborious Labours</i>	-	-	145
SECT. I. <i>Lingering labours</i>	-		146
§ 1. <i>Treatment when occasioned by complaints in the mother</i>	-		<i>ib.</i>
I. <i>General complaints</i>	-		147
1. <i>Colic</i>	-	-	<i>ib.</i>
2. <i>Sickness and vomiting</i>	-		148
3. <i>Flooding</i>	-	-	<i>ib.</i>
4. <i>Cramps</i>	-	-	149
5. <i>Lowness and faintness</i>	-		150
6. <i>Convulsions</i>	-	-	<i>ib.</i>
7. <i>Fever from fulness</i>	-		151
8. <i>Hætic or consumptive habit</i>			152
9. <i>Passions of the mind</i>	-		<i>ib.</i>
10. <i>Improper treatment</i>	-		153
II. <i>Local complaints</i>	-		<i>ib.</i>
1. <i>Narrowness of the bones</i>	-		<i>ib.</i>
2. <i>Thickness and rigidity of the os uteri</i>	-	-	156
3. <i>Dryness and constriction of the vagina</i>	-	-	157
4. <i>A diseased state of the parts</i>			<i>ib.</i>
5. <i>Swelling, inflammation, or ulceration of the vagina</i>	-		<i>ib.</i>
6. <i>Pro-</i>			

	Page
6. <i>Prolapsus of the uterus, and vagina</i> - -	158
7. <i>Prolapsus of the gut</i> -	159
8. <i>Stone in the urethra</i> -	ib.
9. <i>Hardened excrement in the gut</i>	ib.
§ 2. <i>Treatment, when depending on the child</i> - -	159
I. <i>The bulk of the head</i> -	160
II. <i>Unfavourable position of ditto</i>	161
1. <i>When the crown presents</i> -	162
2. <i>In face-cases</i> -	163
§ 3. <i>Treatment, when occasioned by the placenta, &c.</i> - -	164
1st, <i>Rigidity of the membranes</i>	ib.
2dly, <i>The waters too copious, or too sparing</i> - -	165
3dly, <i>The cord too short, or too long</i>	166
— <i>prolapsed before the head of the child</i> -	167
4thly, <i>Improper attachment of the placenta over the orifice of the womb</i>	168
SECT. II. <i>Of difficult or strictly laborious labours</i> - -	168
<i>Use of the forceps</i> - -	169
<i>Scissars, crotchet, and blunt hook</i> -	170

Page

C H A P. III.

<i>Preternatural Labours</i>	-	-	170
<i>Divided into four classes</i>	-	-	172

C L A S S I.

<i>Method of delivery when the feet, knees, or breech present</i>	-	-	173
Case 1. <i>When both feet present</i>	-	-	ib.
2. <i>When one foot presents</i>	-	-	179
3. <i>When the knees present</i>	-	-	180
4. <i>When the feet with the breech presented</i>	-	-	ib.
5. <i>Breech cases</i>	-	-	ib.

C L A S S II.

<i>Method of delivery when the child lies cross</i>		183
<i>Rules for turning the child</i>	-	184
Case 1. <i>Arm</i>	} <i>presenting</i>	190
2. <i>Shoulder</i>		191
3. <i>Side</i>		192
4. <i>Back</i>		ib.
5. <i>Belly</i>		ib.

C L A S S III.

<i>The arm presenting along with the head</i>	193
---	-----

CLASS

CLASS IV.

<i>Method of delivery when the membranes are whole, or soon after their rupture</i>	195
<i>Method of delivery in flooding cases</i>	195
<i>Method when the cord presents</i> -	200
<i>Plurality of children</i> - -	202
<i>Rules for delivery in cases of twins, triplets, &c.</i> - - -	205

PART III.

<i>The MANAGEMENT of WOMEN after DELIVERY, and the TREATMENT of CHILD-BED DISEASES</i> - -	209
--	-----

CHAP. I.

<i>Simple Management after Delivery where no particular Complaint exists</i> -	211
§ 1. <i>Regulation of the body</i> -	ib.
§ 2. <i>Regulation of the mind</i> -	218

CHAP. II.

<i>Accidents and diseases incident to the childbed state</i> - - -	221
--	-----

SECT. I. <i>Accidents in consequence of delivery</i>	ib.
--	-----

1. <i>Swellings of the external parts</i>	ib.
---	-----

2. <i>Lacc-</i>	
-----------------	--

	Page
2. <i>Laceration of the perineum</i> -	221
3. <i>Inflammation, abscess, or gangrene of the genital parts</i> - -	222
4. <i>Ruptured vagina</i> - -	224
5. <i>Laceration of the orifice, neck, or body of the womb</i> - -	<i>ib.</i>
6. <i>Inversion of the womb</i> -	225
S E C T. II. <i>Diseases incident to the childbed state</i> - - -	
§ 1. <i>Faintings</i> - -	227
§ 2. <i>Flooding</i> - -	228
§ 3. <i>After-pains</i> - -	231
§ 4. <i>Inflammation of the womb</i> -	233
§ 5. <i>Irregularities of the lochia</i> -	237
1. <i>Lochia redundant or excessive</i>	239
2. <i>Deficient or obstructed lochia</i>	240
§ 6. <i>Determination of milk to the breasts, and its consequences</i> -	242
§ 7. <i>Sore nipples</i> - -	247
§ 8. <i>Fevers of lying-in women</i> -	251
I. <i>The weed</i> - -	253
II. <i>Miliary fever</i> - -	257
III. <i>Childbed fever</i> -	261

P A R T IV.

MANAGEMENT of NEW-BORN INFANTS 266

C H A P. I.

<i>General Management</i>	-	-	267
<i>Necessity of attending to cleanliness</i>		-	<i>ib.</i>
<i>Clothing</i>	-	-	269
<i>Purging</i>	-	-	270
<i>Nutrition</i>	-	-	271
<i>Air and exercise</i>		-	276

C H A P. II.

Disorders incident to new-born Children 278§ I. *Accidents occurring at birth or soon after* *ib.*I. *Malconformations ; as*

*Obstructions of the common passages,
Tongue-tying, inverted tongue,* 280

II. *Injuries from birth ; as,*

1. *Swelling and alteration of the
shape of the head, and their
consequences* - 281

2. *Swellings of the face when it
presents* - *ib.*

3. *Inflammation and swelling when
the breech presents* - *ib.*

4. *Fractures and dislocations* 282

III. *External disorders ; as,*

*Ulceration or protrusion of
the navel* - 282

Ul-

	Page
<i>Ruptures</i> -	283
<i>Swelling of the breasts</i>	284
<i>Sore eyes</i> -	285
<i>Runnings behind the ears</i>	ib.
<i>Excoriations of the neck, groin, &c.</i> -	ib.
§ 2. <i>Actual or internal disorders</i> -	286
<i>The red gum</i> - -	ib.
<i>Yellow gum</i> - -	287
<i>Sickness, vomiting, and colic</i> -	ib.
<i>Thrush</i> - -	289
<i>Teething</i> - -	294

P A R T V.

QUALIFICATIONS of MIDWIVES, with
PRESCRIPTIONS for WOMEN and CHILDREN.

<i>Qualifications of midwives</i> - -	300
<i>Forms of medicine</i> - -	303
I. <i>For promoting the menses</i> -	ib.
II. <i>To obviate pain in sparing menstruation.</i> - -	304
III. <i>To restrain flooding</i> - -	ib.
IV. <i>For diminishing the discharge of the fluor albus</i> - -	306
V. <i>Most convenient form of exhibiting lax- ative medicines.</i> - -	307
VI. <i>Forms of internal remedies for variety of purposes</i> - -	309
VII.	

	Page
VII. <i>Forms of Glysters</i> - -	311
<i>Directions for preparing variety of food and drink, adapted to the situations and circumstances of lying-in women.</i>	
I. <i>Of drink</i> - - -	313
II. <i>Of food</i> - - -	315
<i>Forms of medicine for new-born children</i>	323
I. <i>For purging an infant newly born</i>	ib.
II. <i>To correct acidities in the stomach and intestines</i> - -	324
III. <i>Vomits</i> - - -	325
IV. <i>For colic, attended with the green scour</i> - - -	ib.
V. <i>For colic, with dry gripes</i> -	326
VI. <i>For looseness, particularly about the period of teething.</i> - -	327

P R E F A C E.

AFTER a period of 2000 years, during which physicians have continued, with very little interruption, to transmit their observations to posterity, it may seem strange that any branch of medicine should still remain in uncertainty. Nature is, however, intricate in her operations; and practitioners have not been always qualified for investigating those circumstances which she has chosen to conceal.

Midwifery has participated all the disadvantages which have contributed to retard the progress of medicine, and has also been subject to some peculiar misfortunes. For many ages it was entirely confined to women, who were either ignorant or inattentive.

The elegant and voluptuous *Cleopatra*, who studied Nature, with a view to discover new sources of pleasure, and even to avoid the pains
b of

of death, is reported to have paid considerable attention to this art; but it is easy to perceive that her knowledge must have been confined to the effects of particular remedies. There is still extant a book under her name, though its intrinsic merit affords little reason to believe that it is the genuine production of the Queen of Egypt. It treats of the diseases of women, and is a very trifling and insignificant performance. As this matter is uncertain, it would be unfair to argue, from the ignorance of a woman in the highest station, of a learned and polite nation, that knowledge of this kind could neither be great nor extensive.

We have a better reason to prove that the confinement of midwifery to the hands of women was formerly injurious to the art and to the public; for the principal legislators of Athens, the first city in Greece, prohibited women and slaves from practising any branch of physic.

This prohibition, however, related only to those who were not properly instructed in the art; for when an Athenian woman, impelled by curiosity, or perhaps by the more laudable desire of rescuing her sex from the ignominy they had so long suffered, had studied under Herophilus, the law was repealed by the influence of the Athenian matrons.

In consequence of this attention of the legislators to the terrors of the matrons, it is probable that women were more frequently employed, and more fully instructed in the principles

ciples and practice of the art; but, except from some fragments of the works of Aspasia, quoted by medical authors, we find little reason to suppose that the Grecian midwives excelled in this art.

It would, perhaps, in those times, have been an useless labour to have expostulated with the female sufferers in this complicated inattention to themselves, their husbands, and their helpless offspring; for their timidity and delicacy, which is often the distinguished ornament and defence of the softer sex would have suggested greater terrors than, even that of pain or of death; and when reason had been silenced, the *feelings* would prevail.

The refinements of fashion, however, and the more unreserved connection between the two sexes, weakened this powerful obstacle; so that the arguments derived from this amiable, but mistaken modesty, at last yielded to the love of life, the peculiar tenderness of the mother, and the affection of the wife; and male practitioners were employed to give that assistance for which their improved knowledge, their courage, presence of mind, and frequently their bodily strength, had particularly qualified them. It must, however, be allowed, that they attributed too much to art, and seldom waited for those exertions of Nature, by which, even in the most desperate cases, she often accomplishes her own work; but this distrust of Nature rather proceeded from the imperfection of the art, than from the fault of the artist.

A more perfect state of science was necessary to show what Nature could perform, as well as what she could suffer, and to demonstrate that her boasted perfection is sometimes fallacious.

We are now more fully informed of the several circumstances which justify our interference, or lead us to an exact patient attendance on the efforts of Nature; and the *Art of Midwifery* may at last be said to have acquired as great perfection as the limited state of human attainments will permit.

In this country, as well as in some others, where refinement has had less effect, the practice of female assistants, though diminished, is considerable; and, as science is more generally diffused, the prejudices which delicacy first instilled, have gathered strength from the increased knowledge and consequent success of the midwives.

I have practised this art in the metropolis of Scotland for twenty years, and have taught younger practitioners for more than twelve. In the instruction of women, however, I found numerous obstacles. Verbal instructions were liable either to be misunderstood, or were soon effaced: Books were often confused and uninteresting in their details; abstruse, imperfect, and unintelligible in their principles. Even those which were designed for women are filled with technical terms, and specious though delusive theories; and the later improvements, which are truly valuable, cannot, from the time of their publication, be contained in them. At-

tentive

tentive reading, and constant practice, have enabled the author to comprehend in this treatise the most important rules for delivery; to give the previous instruction in the most plain and familiar manner, divested of every term which cannot be fully and clearly explained, and to arrange the whole in the most natural order.

If, therefore, assistance in childbed be necessary; if that assistance cannot be properly furnished without instruction, or administered by a male practitioner, but in the most necessitous cases, without distressing the patient; the author's time has been employed for the valuable purpose of easing pain, and of removing anxiety.

It may not, perhaps, be presumptuous to express his hopes, that experienced practitioners may find some articles in this performance, though not entirely new, at least stated in a light in which they have not been accustomed to view them. He shall therefore flatter himself, that in this remote way he may be more extensively useful to the softer sex; and that notwithstanding the extreme timidity and delicacy which influence the conduct of ladies in the choice of their female assistants, he may ease child-birth of some of its pangs, and disarm it of its severest terrors. For his intentions, he can fully answer; the result of them is now submitted to the judgment of the public.

If this tract should fall into the hands of intelligent women, who have no connection with midwifery as a profession, and who have fortitude enough to read the distresses to which their

sex may be liable, without any vain groundless apprehensions, they will reflect, that a work of this kind would be incomplete, unless every possible accident had been explained; that the pregnant state, however inconvenient, is generally free from other disorders; and that labour, though painful, is almost always natural, and the event happy. They may learn, that female assistance is often inadequate to the end proposed; and to be cautious to whom they intrust their own lives, which are doubly valuable on account of the relation in which they stand to a worthy husband and tender infants.

EDIN. 1781.

DIFFERENT BRANCHES OF MEDICINE,

Printed for and sold by C. ELLIOT, Edinburgh; and
G. G. J. and J. ROBINSONS, London.

1. **O**RATIO coram Societate Physica, die quo primum ad ædes novas dedicandas convenit, quam habuit Thomas Addis Emmet, M. D. ejus, nec non Societatum Reg. Med. Nat. Hist. et Speculativæ, præses annuus.
2. **FIRST LINES** of the **PRACTICE** of **PHYSIC**, by Dr William Cullen, Professor of the practice of Physic in the University of Edinburgh. Corrected, much enlarged, and now first completed, in 4 vols 8vo; with a large Index. Price 1l 4s. in boards, and 1l. 8s. bound.—Volume IV. may be had separately. Price 6s. in boards.
3. Dr **CULLEN** on the Recovery of Persons Drowned and seemingly dead, 8vo, 1s. sewed.
4. **AN INQUIRY** into the **NATURE** and **CAUSES** of **FEVER**; with a review of the several opinions concerning its Proximate Cause, as advanced by different Authors, and particularly as delivered from the Practical Chair in the University of Edinburgh. Including some Observations on the existence of Putrefaction in the living Body, and the proper method of Cure to be pursued in Fever. By Caleb Dickinson, M. D. Price 3s.
5. **ELEMENTARY LECTURES** ON **CHEMISTRY** and **NATURAL HISTORY**: Containing a Methodical Abridgement of all the Chemical Knowledge acquired to the present Time; with a Comparative View of the Doctrine of Stahl, and of that of several Modern Chemists: The whole forming a Complete Course of those two Sciences. Translated from the French of M. Fourcroy, Doctor of the Faculty of Medicine at Paris, and of the Royal Society of Medicine. By Thomas Elliot. With many Additions, Notes, and Illustrations, by the Translator. In two volumes. Price 12s. in boards.
6. **A SYSTEM** of **SURGERY**, by Benjamin Bell, Member of the Royal College of Surgeons, one of the Surgeons to the Royal Infirmary, and Fellow of the Royal Society of Edinburgh. Illustrated with Copperplates, Vol. I. II. and III. 8vo. 6s. each, boards. This work, when completed, with a former volume on Ulcers, &c. by the same Author, will comprehend a full system of Modern Surgery. The whole to be contained in other two vols 8vo. Vol. IV. and V. will be published as soon as possible.—Any volume sold separately.
7. **A TREATISE** on the **THEORY** and **MANAGEMENT** of **ULCERS**; with a Dissertation on White Swellings of the Joints. To which is prefixed, An Essay on the Chirurgical Treatment of Inflammation and its Consequences. By the same Author. A new edition

BOOKS published by CHARLES ELLIOT.

- edition, being the third, considerably improved and enlarged, 6s. in boards.
8. EXPERIMENTS ON the RED and QUILL PERUVIAN BARK: with Observations on its History, mode of Operation, and Uses; and on some other Subjects connected with the Phenomena and Doctrines of Vegetable Astringents. Being a Dissertation which gained the first Prize given by the Harveian Society of Edinburgh for the year 1784. By Ralph Irvine. One vol. 8vo. Price 3s.
 10. A SYSTEM of ANATOMY, from Monro, Winslow, Innes, Hewson, and the latest authors.—Arranged, as nearly as the nature of the work would admit, in the order of the Lectures delivered by the Professor of Anatomy in the University of Edinburgh.—In Two Volumes Octavo, illustrated with 16 Copperplates. Price 13s. boards.
 11. The third Edition, corrected, of MEDICAL CASES, selected from the Records of the Public Dispensary at Edinburgh; with Remarks and Observations. By Andrew Duncan, M.D. F.R.S. and A. S. Edin. Physician to the Prince of Wales for Scotland, &c. Price 6s. bound.
 - ☞ A very fine Print of Dr Duncan, painted by Weir, and engraved by Trotter. Price 2s. 6d.
 12. MEDICAL COMMENTARIES for the years 1783-84; exhibiting a concise view of the latest and most important Discoveries in Medicine and Medical Philosophy. Collected and published by Andrew Duncan, M. D. 8vo, 6s. boards.
 13. The WORKS of ALEXANDER MONRO, M. D. F. R. S. Published by his Son ALEXANDER MONRO, M. D. &c. To which is prefixed, the LIFE of the AUTHOR. In one very large volume in quarto, elegantly printed upon a royal paper, and ornamented with a capital Engraving of the Author by Mr Bafire, from a painting by Allan Ramsay, Esq; besides several Copperplates illustrative of the subjects. Price 11. 5s. in boards.
 - ☞ The Doctor's works contain, amongst others, all the best, and by far the greatest number, of articles in the Edinburgh Medical Essays, and several in the Physical and Literary.
 14. A TREATISE ON COMPARATIVE ANATOMY, by Alexander Monro, M. D. F. R. S. &c. &c. Published by his Son, Alexander Monro junior, M. D. A new Edition, with considerable Improvements and Additions by *other hands*, 12mo. Price 2s. in boards.
 15. A TREATISE on the Influence of the Moon in Fevers, by Francis Balfour, M. D. Surgeon in the service of the Hon. East India Company. Calcutta printed 1784, Edinburgh reprinted 1785, by the desire and recommendation of William Cullen, M. D. &c. in 8vo. Price 1s. 6d. Sewed.

M I D W I F E R Y,

FOR THE USE OF

FEMALE PRACTITIONERS.

BY the term MIDWIFERY is understood,
‘The art of assisting women in the birth
‘of children.’ It comprehends also, ‘the
‘management of women both before and after
‘delivery, as well as the treatment of the child
‘in its most early state.’

To determine when, and direct how, to afford the proper assistance, and to obviate many of the inconveniences to which pregnancy and child-labour are exposed, an accurate knowledge of the structure, situation, and functions of those parts chiefly concerned in parturition, and of others intimately connected with them, is essentially necessary.

P A R T I.

OF THE UTERINE SYSTEM, AND THE
ALTERATIONS AND DISEASES TO WHICH IT
IS SUBJECT.

CHAPTER I.

ANATOMICAL DESCRIPTIONS, &c.

SECTION I.

General Division of the Human Body.

THE human body, by anatomists, has been generally divided into the Head, Trunk, and Extremities.

The HEAD contains the brain, which is continued downwards to the extremity of the *sacrum* or rump, forming what is called the Spinal Marrow; very different, however, from the oily fatty substance commonly called Marrow.

From the substance of the brain, and its continuation the marrow, arise all the nerves of the body.

The nerves are divided and dispersed thro' the most minute parts of the body; and by their means, we see, hear, taste, smell, and feel. Some parts, however, have a larger share of this peculiar substance, and consequently are more readily affected by any cause of disease; as the stomach in both sexes, and
the

the womb in women. Many parts also, which possess a large proportion of nerves, sympathise with some other parts that are affected, when those other parts are disordered; as the head and stomach; the stomach and womb; the womb and the breasts.

The TRUNK is divided into the *thorax* or chest, and the *abdomen* or belly.

The *Chest* reaches from the neck to the lowest ribs.

In the chest are contained the principal organs essential to life, hence called Vital; such as the heart and great blood-vessels, the lungs, &c.

The heart receives the blood from the lungs, where it circulates completely before it becomes fit for the purposes of life. From the heart the blood is propelled into the *aorta* or great artery; from thence it is conveyed, by other branches of arteries, and distributed through the whole system. The blood is returned again to the heart by a set of vessels called *veins*. The whole blood is carried to the right side, or auricle of the heart, by a great vein called *Vena Cava*; from the right auricle, it gets into what is called the Ventricle or belly of the heart; from which it is conveyed by an artery, called Pulmonary, to the lungs. The blood circulates through the lungs, where it is exposed to the air inspired by breathing; having circulated completely through the lungs, it is taken up by a vein, called Pulmonary, carried to the left side of the heart, through the left auricle and ventricle; from which getting into

the *aorta*, it circulates through the whole body. The lungs are of a spongy texture, consisting of blood-vessels and air-vessels; and the extremities of the air-vessels are swelled into very small bulbs or globules, which, with the vessels, form the substance of the lungs, and are capable of expanding and contracting. The health of the body depends much on a free circulation thro' the lungs. The blood cannot circulate freely there, unless the lungs be fully inflated with air. Confined air, and want of exercise, favour a contracted state in the lungs, and thus interrupt the circulation through them, and diminish the quantity of that perspiration, or fine vapour, which is constantly thrown out by the breath in expiration; the evacuation of which is very essential to health. The perspiration by the lungs, and by the pores in the surface of the body, is supposed in point of quantity to be nearly equal to all the other evacuations. The interruption in the circulation thro' the lungs, and the diminution or obstruction of perspiration, occasioned from cold, irregularities, and other causes, prove the source of the most fatal diseases, as cough, asthma, spitting of blood, consumption, &c.

The *Abdomen*, or belly, is subdivided into the upper and lower belly. The lower belly is called the *Pelvis*, or basin. In the cavity of the belly are contained, the stomach and intestines, liver, spleen, and particularly those organs designed for digesting and preparing the nourishment.

The

The stomach is the great receptacle of the food; and the intestines may be considered as its continuation, since the canal is continued, without any stoppage or interruption, from the upper part of the throat to the fundament. The intestines are, however, divided into six portions, called, 1st, *Duodenum*; 2dly, *Jejunum*; 3dly, *Ilium*; 4thly, *Cæcum*; 5thly *Colon*; and, 6thly, *Rectum*, or Strait Gut. The three first of these are small guts; the three latter, great guts.

The stomach prepares and digests the food; which afterwards gets into the alimentary tube, or small guts. The digested mass is further changed by the assistance of the bile, or gall, an acrid stimulating fluid contained in the gall-bladder, and the fluid from the *pancreas* or sweetbread. The bile is secreted from the liver; and the gall-bladder is placed in such a manner, that the more the stomach is distended with food, a greater quantity of bile is sent into the small guts.

The nutritive part of the aliment, thus prepared and digested, forms a white milky fluid, called Chyle, which is taken up by a great number of vessels, opening into the guts, called Lacteals, and conveyed by them into the blood. In this manner a supply is furnished proportioned to the waste continually going on by the action of the body and the common discharges.

The lower part of the belly is called the *Pelvis*. The female *Pelvis* is an irregular cavity, surrounded with bone, and covered with soft

parts. It is situated in such a manner, that it connects the upper and lower parts of the body, and makes the common centre of its motions. In this cavity are contained part of the intestines, the bladder of urine, the organs of generation, the nerves and blood-vessels of these parts, and of the lower extremities, &c.

The *Pelvis*, beside many other uses, serves to defend those parts from external injuries; to support the womb, while it is augmented by pregnancy; and to give passage to the child at birth.

SECTION II.

Of the Parts of Generation and Parturition in particular.

§ 1. Of the PELVIS.

TO have an accurate knowledge of the pelvis, it is essentially necessary to consider the different parts of which it consists; first separately, and then in their united state.

I. THE PARTS OF THE PELVIS SEPARATELY.

THE *Pelvis* of a child-bearing woman consists of seven different pieces of bone, viz. two large bones, called *Ossa Innominata*, which form the sides and fore part; and the *Os Sacrum*, or sacred bone, with its extremity called *Coccyx*, or *Os Coccygis*, composed of four small moveable pieces, at the back part.

The

In children and young girls, each *Os innominatum* is separated into three distinct portions of bone, and the names are still retained in the adult state.

The *Os Innominatum* is therefore divided into the *Os Ilium*,

Ifschium,

and

Pubis of each side.

Thus, the whole *Pelvis* is composed of the

<i>Os Ilium</i>	} or {	Haunch-bone	} at the sides.
<i>Ifschium</i>		Seat-bone,	
		Huckle-bone,	
		Hip-bone	
<i>Pubis</i>		Share-bone	— before.
<i>Sacrum</i>	} or {	Sacred-bone	} — behind.
<i>Coccyx</i>		Rump-bone	

The *Os Ilium*, or haunch-bone, is the superior broad bone which makes the lower side of the belly and upper side of the pelvis. It is unequally convex or bumpy on the back part, as most of the bones of the pelvis are, and concave or hollow before. It reaches downwards a little below the sharp ridge on the internal surface of this bone, which makes the brim of the pelvis.

The *Os Ifschium*, or seat-bone, called by some the Hip-bone, or Huckle-bone, is the second portion or division of the *os innominatum*. It is continued from the *ilium* downwards, and makes the lower part of the side of the pelvis.

It is from the distance of the under part of each *os ischium*, that we judge of a narrow pelvis at the bottom.

The *Os Pubis*, or share-bone, is the smallest portion of the *os innominatum*, making the middle fore part of the pelvis. The upper part of this bone is the brim of the *Pelvis*. The joining at the fore part is called the *Symphysis of the Pubes*, and the curved opening below is called the *Arch of the Pubes*.

The *Os Sacrum*, or sacred bone, at the back part of the *Pelvis*, is of the shape of a triangle, having three sides. The broadest side is uppermost; from which it gradually turns narrower, till it terminates in its extremity the *Coccyx*. The *os sacrum* is considerably bent inwards and forwards, is irregular and bumpy on the outside, smooth and hollowed within. Though it hath the appearance of joints like the backbone and loins, it is one complete solid piece of bone.

The *Coccyx*, *Os Coccygis*, or rump-bone, is a small triangular chain of bones, which are connected with the *os sacrum* above, and gradually become narrower, till they end in a small point. It generally consists of four pieces of bone, with cartilages or gristles between them. The first of these portions, from its manner of connection with the *sacrum*, is endowed with a considerable degree of motion, and all the bones have a free play on each other. The motion of the whole is so great, that it makes the difference of nearly an inch at the bottom of the
Pel-

Pelvis, from before backwards, when it is stretched out by the pressure of the child's head in time of labour.

The *ossa innominata* are joined behind to the *os sacrum*, by thick cartilages and strong ligamentous cords. The bones are indented, as it were, into each other, which further strengthens the articulation. This connection, at the back part of the *pelvis*, is called the *sacro-iliac symphysis*.

The *ossa innominata* are joined at the *pubes* before by a thick double cartilage, which is securely strengthened by a very strong ligamentous covering.

The connecting cartilages of the bones of the *pubes* are softer in younger years, and will cut like a gristle; but in advanced life, they gradually harden, and become more solid.

None of these articulations, however, are capable of motion in time of labour, much less of actual separation, or disunion, unless the bones, or their connecting parts, be diseased.

The *Pelvis* is connected, above, with the *vertebræ*, or joints of the loins, which project in such a manner as to intrude over the upper opening of the *pelvis*. The point of contact of these *vertebræ* with the *sacrum*, is called the *great angle of the sacrum*.

The *Pelvis* is connected, below, with the thigh-bones.

Having finished the description of the parts of the *pelvis* separately, we proceed to consider it in its united state.

II. SHAPE AND DIMENSIONS OF THE PELVIS OR BASIN.

THE pelvis is divided into superior or larger, and inferior or lesser basin. The first of these is part of the belly; the latter only ought to be considered, and called the *true pelvis*. It reaches from the ridge made by the upper parts of the *sacrum* and *pubes*, and inferior projections of the *ossa ilia*, to the lowest parts of all these bones. This ridge, which thus divides the basin into two parts, is called the *brim of the pelvis*, a term frequently used in the art of midwifery.

Three parts of the basin merit the particular attention of practitioners in midwifery.




1st, The superior opening, called the *brim*.

2^{dly}, The inferior opening, termed the *bottom*. And,

3^{dly}, The inclosed space, styled the *cavity*, or capacity.

1. At the brim, the female basin hath more the appearance of an oval, than of a triangle, or circle, to which it has, by some, been resembled.

It hath something of a similar appearance at the *bottom*; but the two ovals, at the *brim* and *bottom*, are placed in opposite directions, as if they crossed each other, thus

; the brim is of this figure ; the bottom of that . This will be best under-

stood by measuring the dimensions of the different

ferent diameters, or distance of the different sides, at the *brim* and *bottom*.

At the *brim*, a well-proportioned pelvis ought to measure nearly an inch more from side to side, than from *pubes* to *sacrum*. On the contrary, at the *bottom*, it should measure nearly an inch more from fore to back part, making an allowance for the stretching of the *coccyx*, than from the extremity of the one *os ischium* to the other.

Thus, at the *brim*, the greatest diameter, or length of the *pelvis*, is from side to side; that is, from the inferior part of the one *os ilium* to the other, where it should measure nearly five inches, or five and one-fourth in the skeleton. The smallest diameter is from fore to back part; that is, from the upper part of the *pubes* to that of the *sacrum*, where it ought to measure a full inch less than the distance from side to side.

2. At the *bottom*, these proportions are nearly reversed; for a well-shaped *pelvis* should measure about five inches, or five one-fourth in the skeleton, from the inferior edge of the *symphysis* of the *pubes* to the extremity of the *sacrum* or *coccyx*, when stretched out; and four inches, or four and one-fourth only, from the under parts of the opposite *ossa ischia*.

3. The *capacity* of the pelvis varies with regard to depth in different parts.

At the back-part, from the upper part of the *sacrum* to the point of the *coccyx* when stretched out, it is nearly three times deeper than at the sides; and twice as deep at the sides as it is before.

fore. For it ought to measure nearly six inches behind, four at the sides, and two only at the *pubes*. Thus, it is of great consequence to remember, that the *pelvis* is shallowest at the *pubes*, and deepest at the *sacrum*.

The particular shape of the *capacity* ought also to be attended to. All the bones are more or less hollowed in their internal surface, to enlarge the space included within them; they slope outwards, both above and below, for the same important purpose: Thus, at the upper part, behind, the *vertebræ*, or joints of the loins, fall backward, making the figure of an arch with the *sacrum*; the *ossa ilia* at the upper sides spread outwards, forming the haunches; at the under sides the *ischia* also spread out; the *sacrum* posteriorly inclines backwards; the *coccyx*, by its motion, recedes; and all the ligaments and soft parts which cover and fill up the empty spaces in the living body, yield to the pressure of the child's head in time of labour, making a concavity, or hollow, in these parts, nearly equal to the hollow of the *sacrum*.

If a pregnant woman, near her term of delivery, be placed in a posture something between sitting and lying, the brim of the *pelvis* will be nearly horizontal; and an imaginary line dropped from a little above the navel would pass through its middle, making its centre. In introducing the hand into the womb, and placing the woman in a posture for delivery, this line of direction should be attended to.

A pelvis of the shape, figure, and dimensions now described, is called *standard*: But if it is deficient in any of these proportions, it is said to be *narrow*, or *faulty*.

III. DISTORTED OR NARROW PELVIS.

THE bones of the *pelvis*, like others, are liable to disease. They are subject to injury from external causes; such as bruises, fractures, &c.

But the common cause of distortion is internal disease. From rickets, or a scrophulous taint, in infancy chiefly, sometimes in grown up years from tedious lingering disease, as rheumatism, slow fevers, and the like, the constitution is impaired, the blood and other fluids are impoverished or vitiated. From these causes the bones, losing their usual hardness and solidity, become soft like a gristle, and, by pressure, bend and grow crooked in various directions. In this state, by the weight of the incumbent body, the joints of the loins are pushed forwards towards the *pubes*, or bent in towards a side, intruding more or less over the brim of the *pelvis*; and in some instances almost totally destroying the opening at the brim, or giving the appearance of a figure of 8, dividing the cavity into two parts.

This species of deformity, by the projection of the joints of the loins over the *sacrum* towards the *pubes*, occurs more frequently than any other. If it should only happen in a slight degree, and the woman is otherwise well proportioned,

portioned, it is with difficulty discovered till she has been a considerable time in labour.

While the bones are in a state of diseased softness, the *ossa ilia*, by the posture of lying, are also bent in, and sometimes approach each other so nearly, that, on touching, two fingers can with difficulty be admitted between them.

The *sacrum* is frequently pushed to one side, or loses its hollow and becomes bumpy. The *coccyx* is likewise pressed to a side, or bent forwards towards the middle of the *pelvis*.

The bones of the *pubes* also suffer from the same causes: the *arch* of the *pubes* is often destroyed; so that, instead of the natural space, the limbs of the *pubes* seem almost to close on each other, and refuse admittance to a finger between them.

Though practitioners will be often at a loss to discover the deformity for some time, when confined to the *brim*, there is little difficulty in readily perceiving it when the distortion affects the *bottom*.

To an attentive observer, there is a striking difference, in the touch, between the natural, healthy, and a diseased or faulty state of these parts. If, instead of the concavity or hollow of the *sacrum*, it feels to the touch convex, or bumpy; if the under parts of the *ischia* approach each other, and interrupt the passage of a finger or two within them; if the *arch of the pubes* varies in its figure from the ordinary state, so that two fingers cannot be placed flat under the *symphysis*; we may be certain that the

pelvis is narrow and distorted, that the labour will be painful and dangerous; and should therefore have early recourse to proper assistance.

Beside a knowledge of the *pelvis*, both separately and in its united state, the structure and figure of the child's head, and its manner of passing through the *pelvis*, are important objects of consideration.

IV. STRUCTURE AND FIGURE OF THE CHILD'S HEAD.

THE head of the child is composed of several pieces of bone, and may be divided into the *cranium* or skull, and *face*. At birth, the bones of the skull are moveable, being connected to each other by means of membranous spaces, called *futures*, which allow the bones a considerable play on each other. The bones of the skull are also smooth and uniform, in comparison of those of the face, which are not only rough and unequal, but immoveable.

1. The *cranium*, or skull, is composed of six pieces of bone, viz.

The *os frontis*, or bone of the fore-head.

The *os occipitis*, *occiput*, or bone of the hind-head; and

The *ossa parietalia*, or parietal bones, and the *ossa temporum*, or temple bones, at the sides of the head.

These bones are connected to each other by

The *coronal future* before, which runs in a
di-

direction from ear to ear, and joins the bone of the fore-head with the parietal bones;

The *lamdoidal future* behind, which joins the parietal bones with the *occiput* or hind-head; and

The *sagittal future*, which runs lengthwise between the former two, connecting the parietal bones at the sides of the head to each other. This future is also continued forwards thro' the middle of the bone of the fore-head.

At the upper back part of the forehead, where the two futures, viz. the *coronal* and *sagittal*, cross each other, is an open membranous space, where the bone is wanting. This is of different sizes in different children, and is called the *Fontanella*, or open of the head.

At the hind-head, where the *lamdoidal* crosses the end of the *sagittal future*, is a small open point, called the *vertex*. It is this part which first presents at the centre of the *pelvis*, and continues to be the presenting part in a natural labour.

2. The child's head is of an oval figure, whether we view its superior part, called the *cranium* or skull, or the fore-part called the *face*. It may be said to be composed of two ovals; the smooth moveable *cranium*, and the rough immoveable *face*.

The oval of the *face* is, like the *cranium*, made up of several pieces of bone; but they are firmly connected to each other, and consequently do not yield like the bones of the skull in time of labour.

The head of the child is suited to the *pelvis* both in shape and proportions.

It commonly measures about an inch more, from fore-head to hind-head, than at the sides.

It measures about half an inch more from the chin to the top of the fore-head, than from the fore-head to the hind-head.

The greatest length of the head is from the chin to the *vertex*; when the shape is altered by the pressure it suffers in passing through the *pelvis*, the length will amount to six or seven inches, that is, above an inch or two extraordinary. In strictly laborious births, the head will considerably exceed the length now mentioned.

The breadth of the child's body from shoulder to shoulder, measures commonly from five to something more than six inches; the diameter of the breech is nearly equal. But, from the construction of the articulation at the shoulders, and the separation of the bones of the *ossa innominata*, both are capable of having their bulk considerably diminished by pressure. For children are often brought into the world, the circumference of whose bodies at the shoulders and breech greatly exceeds that of the cavity (of the *pelvis*) through which they passed.

V. GENERAL REMARKS.

I. From comparing the figure and size of the basin with the bulk of the child's head, we shall easily see how the latter will most easily pass through the former: But as the bulk and diameter of the one is not always exactly suited to the other, and as the bones of the head are more solid and closely connected in one instance than another, difficulties in the birth will from time to time happen.

II. Hence the advantage of the admirable make and construction of the child's head at the smooth moveable *cranium*; for if it were one firm solid body, whose bulk at any time exceeded the space included within the bony ridge of the *pelvis*, delivery could not be performed without extraordinary assistance; and the consequences would generally be fatal, either to the mother or child.

III. It is also evident that an alteration of the figure of the child's head, and diminution of its bulk, by the overlapping of the bones of the skull, answer a much better purpose than a separation of those of the mother's *pelvis*, which would be attended with many inconveniences.

IV. In natural labours, the progress of the head through the *pelvis*, for the most part, is as follows. The *vertex* first presents at the *brim*, the fore-head towards one side of the *pelvis*, the hind-head to the other, or nearly so, and the ears towards the *pubes* and *sacrum*. It would
con-

continue to pass on in the same direction till birth, if the *pelvis* were of equal width in all its parts. But as the widest part of the bottom of the basin is in a different direction from the brim, the head, in its progress, stops for some time where the *pelvis* becomes narrow: it then gradually makes a turn; the face gets into the hollow of the *sacrum*; the hind-head rises from under the *pubes*, where the *pelvis* is shallow; the *coccyx* also bends backwards. Thus the large oval of the head is again applied to the large diameter of the *pelvis*; and the head getting into the *vagina*, advances in a curved line of direction, and is at last protruded. The shoulders and breech follow the same direction with the head, accommodating themselves to the shape and different diameters of the *pelvis*; or, by the pressure, have their bulk sufficiently diminished to admit of their passage.

V. Hence appears the necessity of remembering the figure, construction, and diameters of the *pelvis* and child's head. To female practitioners, this knowledge is of the utmost importance. It points out the proper manner of turning the child, when the feet are delivered before the head; and thus prevents, in many cases, the life of the child, and, in some instances, that of the mother, from falling a victim to the midwife's ignorance. For, in preternatural labours, if the natural turns should be neglected, the midwife may pull till the body of the child be torn from the head, or at least till the life of the child be destroyed,

before delivery could be accomplished: A circumstance which actually happens where the practitioner is ignorant of the principles of the art.

To acquire a proper knowledge of the operative or practical part of midwifery, it is necessary that the structure and functions of the genital parts, the several changes which they undergo by pregnancy, and the causes which may prevent conception, or retard delivery, should be known. We proceed, therefore, to give a concise view of these subjects.

§ 2. *Description of the* SOFT PARTS of GENERATION.

The genital system is situated partly without the *pelvis*, and partly within its cavity. The parts are divided into *External* and *Internal*.

The external parts are, the *Mons Veneris*; the *Labia Externa*; the *Labia Interna*, or *Nymphæ*; the *Clitoris*; the orifice of the *Urethra*; the *Os Externum*; and the glands of the parts.

The internal parts are, the *Vagina*, and the *Uterus* with its appendages.

I. EXTERNAL PARTS.

The *Mons Veneris* is that rounded prominence above the *pubes* which makes the lower part of the belly.

From the inferior part of the *Mons Veneris* arise

rise the *Labia Externa*, or *Labia Pudendi**. They are continued downwards and forwards, in the direction of the *symphysis pubis*, as far as the *perinæum*; and cover some other of the external parts.

On separating the external *Labia*, appear the *Labia Interna* or *Nymphæ*. They are nothing more than two folds, or doublings, as it were, of the greater *Labia*, and have on that account by many been called *Labia Minora*, or lesser *Labia*. They are continued downwards on either side, and terminate nearly opposite to the orifice which opens into the bladder. Their principal uses are to guard the *urethra* from external injury, and allow the parts to stretch; for they disappear in time of delivery, and are again obvious when the tone of the parts is restored.

At their upper part, the *Nymphæ* † seem to unite and give origin to a red projecting body, called the *Clitoris*.

The *Clitoris* is of different sizes in different women, and in some it grows to a great length. Such women obtain the name of Hermaphrodite.

Downwards from between the *nymphæ*, nearly opposite to where they terminate, is a small rising prominence like a pea, in the centre of which is a small opening or hole. This is the orifice of the *urethra*, or passage to the bladder. It is called

The *Meatus Urinarius*. Its situation and direction ought to be accurately known by the

C 3

mid-

* *Pudendum* is a general term for all these parts together.

† The name *Nymphæ* probably arose from their supposed use in directing the stream of urine.

midwife, as the necessity for the operation of passing the catheter, or *sounding*, as it is called, often occurs in unmarried as well as in child-bearing women. Below the orifice of the *urethra* is

The *Os Externum*, or orifice of the *Vagina*. This orifice, which leads to the *vagina*, or Birth, is surrounded on the inside with several little raised bodies, like ragged portions of membrane or skin. They are called *Carunculæ Myrtiformes*, and are supposed to be the remains of a membrane which covers the vagina in young girls. When this membrane is entire, it is called *hymen*. In children, these parts have much the appearance of membrane. A slight degree of inflammation will make them cohere and close up the orifice of the *vagina*. The breaking of this membrane, which occasions the shedding of a few drops of blood, was, in the days of ignorance and superstition, considered as the only infallible mark of virginity. But this appearance may depend on the contraction of the parts, and various other circumstances; and few men are now so credulous as to depend on an appearance so vague and precarious. For while a few of the medical faculty assert the constant existence of this membrane, and consider it as one of the parts peculiar to females, others deny it altogether, or describe it as rare, uncommon, and unnatural. They recommend it as a rule, not only carefully to inspect these parts at birth, but to pass a small female catheter to clear the passage, and remove
any

any obstruction. If this was neglected, it was thought that it might afterwards produce many inconveniences, as the child grows up, from confinement and accumulation of the menstrual blood.

On the inside of the *Labia*, and within the orifice of the *Os Externum*, are placed a number of little bodies called glands. Their use is to pour out a glary slime called *mucus*, to keep these parts moist and slippery.

These parts are plentifully supplied with nerves, and hence endued with an exquisite degree of sensibility. In proportion to their sensibility they are irritable; that is, occasionally liable to swelling, inflammation, and their consequences. Even in the easiest labours, under the best management, they are apt to swell and inflame: therefore, touching or handling should be seldom practised; and when it is absolutely necessary, it ought to be done with all possible gentleness and delicacy.

An attention to the structure, figure, and situation of these parts, is surely, then, a point of the greatest consequence; for much of our success in practice will depend upon it.

The inferior portions of the great *Labia*, at the *Os Externum*, are bounded by

The *Perinæum*, which is the space between the *Os Externum* and *Anus* or fundament. Its length, in the natural state, is little more than an inch; but when stretched in time of labour, it often exceeds three inches. When thus extended, it becomes very thin, and is

liable on some occasions to be lacerated, or torn by the head, shoulders, or breech of the child pressing against it. Hence, at these times, this accident should be guarded against, by carefully supporting it in time of the pain.

The *Anus*, or fundament, is the passage into the *Rectum* or strait gut.

The orifices of these parts run in a direction, not quite straight, but a little curved or slanting.

This points out the proper method of introducing the catheter into the *urethra*, a finger into the *vagina*, and a glyster-pipe into the *anus*; which is first a little downwards and backwards, then forwards and upwards.

II. INTERNAL PARTS.

The internal parts of the genital system are, the *Vagina*, *Uterus*, and its appendages.

The *Vagina*, or passage to the womb, vulgarly called the Birth, lies immediately under the bladder, and upon the *rectum* or strait gut. In its natural state, it is about four or five fingers breadth in length or depth, and in width or diameter sufficient to admit a finger easily. It is narrower at each end, wider in the middle; but in length and depth, it is liable to considerable variation in different women, at different periods of life, and in different circumstances. Thus, it is narrow and contracted in young women, though capable of considerable dilatation. It is surrounded with a
kind

kind of folds or wrinkles, which have a beautiful appearance in virgins, not unlike the plaits of a well-dressed fine shirt. These, besides other uses, are admirably contrived to allow of its distention; but by long-continued or frequent connection with men, or from child-bearing, it loses this appearance more and more, till at last it becomes quite smooth.

This cavity is perforated with many orifices of glands; from whence a quantity of *mucus* is secreted, which lubricates and moistens the whole surface.

Its substance is membranous, but plentifully supplied with nerves; so that no part of the body is more sensible.

It is connected at the upper part with the bladder, and at the back part with the strait gut; so that any disorders in the one will be very readily communicated to the other. When stretched in time of labour, by the long-continued pressure of the child's head, it is apt to inflame, suppurate, or tear. If this should happen at the upper part, where it is connected with the bladder, an involuntary flow of urine for life is often the consequence; if where it is connected with the gut, an incurable fistulous sore will be produced, and the stools will be discharged continually from the *vagina*. It is also exposed to much injury from the officious handling of unskilful practitioners.

The internal coat of the *vagina*, or membrane which lines it, is liable to inversion, which constitutes the disease called the *Prolapsus*

pus of the vagina. Where the parts are much relaxed, or in those women subject to a *prolapsus*, this internal membrane is often protruded before the child's head in time of labour, and pushes outwards, appearing without the *os externum*, like a large round fleshy tumour. In this state the *vagina* has been frequently mistaken by the ignorant practitioner for some part of the child, taken hold of and pulled with violence, till the woman was miserably torn, or destroyed.

The *Vagina* reaches from the *os externum*, till it gets a little beyond the orifice of the womb.

The *Uterus*, or womb, opens into the cavity of the *vagina* by its neck, which projects within the *birth*, something like a nipple; in the centre of this projecting tubercle is the orifice of the womb. The broad upper part, or body of the womb, is called the *Fundus Uteri*; the narrow part or neck, is called the *Cervix* or *Collum Uteri*; and the orifice is distinguished by the different names of *Os Internum*, *Os Tincæ*, or *Os Uteri*.

The *Uterus* is of the shape of a pear, or small powder-flask, broad at the upper part or *fundus*, gradually becoming narrower as it approaches towards the *cervix*, till it terminates in its projecting orifice. It is about three inches long, situated between the bladder and *rectum*; its cavity, in the unimpregnated state, is so small as to be scarcely perceptible. Its situation is so loose, that it is capable of occasionally receding, by which the *vagina* is rendered longer
and

and deeper ; or of sinking into the *pelvis*, by which the *vagina* is shortened.

The external membrane of the womb is lengthened beyond its body on both sides, and forms the *Ligamenta Lata*, or broad ligaments. They serve to connect and sustain the womb to the sides of the *pelvis*, and to conduct the nerves and blood-vessels belonging to it.

The *Ligamenta Rotunda*, or round ligaments, are two round long chords, as it were, which descending from either side of the *fundus* of the womb, go out of the belly, and are inserted in the groins or thighs. They support the *uterus*, and prevent its rising too high.

The *Fallopian Tubes* are contained within the doubling of the broad ligament on either side, going out from the *fundus* of the womb. They are slender hollow tubes ; in their natural state flaccid. The one extremity is loose and ragged, like a fringe, with a small orifice in the centre ; being quite detached, it floats in the cavity of the belly. The other orifice opens within the womb at each corner of the *fundus*.

The *Ovaria*, or female *Testes*, are two small oval bodies, something like the testicles of a cock flattened. They are placed at the sides of the womb, a little below the ragged ends of the Fallopian tubes. In young healthy women, they are large, more plump, and rounded. In those advanced in life, or who have born many children, they waste, shrivel, and become smaller.

The

The genital system is admirably constructed for the important purpose of the preservation of the species. The manner how this is effected is a subject still involved in doubt and obscurity.

§ 3. THEORY of GENERATION.

AFTER many disputes, it appears at length probable, that the future child, which in its very minute state is called the *Germ* or *Embryo*, subsists in the *Ovaries* of females; and that what has been styled the *act of generation*, is only the means intended by Providence to supply it with life. With that view, the womb and *vagina* are plentifully supplied with nerves; and, during the communication between the sexes, seem to be endued with a double portion of sensibility. The state of the nerves which occasions this increased sensibility, is probably communicated to the Fallopian tubes, by which their ragged ends are erected, and applied to the *germ* in the *ovarium*, by which it escapes from its confinement. It finds, in the open extremity of the tube, a ready access, and through the tube itself a convenient passage to the womb; to which it soon adheres, and is nourished, during nine months, by the mother's blood. In consequence of the act of generation, the germ escapes from the *ovarium*, and the motion of its inherent fluid commences; for though supplied with fluids from the mother, they are circulated by its
own

own powers. . On this circulation of the fluids life depends; and the germ, when endued with life, is fully possessed of the means of continuing it.

The womb, besides containing and affording nourishment to the *fœtus*, furnishes the menstrual blood.

§ 4. Of the *MENSES*, or *COURSES*.

THIS evacuation, which every woman is well acquainted with, usually appears about the 14th, 15th, or 16th year; in this climate rarely earlier, and seldom later; and ceases about the 45th or 50th. It is liable, however, to some variety in different women, and in different climates, both with respect to its first appearance, time of stopping, the periods of recurring, quantity and duration.

It commonly appears once in twenty-eight or twenty-nine days, making a lunar month. From this circumstance, probably, the opinion of the moon's influence in occasioning this evacuation has arisen. It usually continues to flow for three, four, or five days, though most commonly for three only. The quantity generally discharged is from four ounces, (that is, the fourth part of an English pint) to eight or ten.

The appearance of the *menses* marks the age of maturity, and shows the *uterus* to be in a proper condition to admit, retain, and give nourishment to the *fœtus*.

The approach of the *menses* is commonly announced

nounced by the following symptoms: Fulness, tension, or pain in the breasts; head-achs; sometimes a slight degree of nauseating sickness; pains in the belly and loins, striking down the thighs; debility; often giddiness of the head; heaviness, weakness of the eyes, and a faint bluish or livid circle under the eye-lids. In general, this evacuation is always preceded with one or more of the above symptoms; for the situation of the woman may often be readily learned from the particular appearance of her countenance: But in other cases, no such alteration can be observed, and the woman herself suffers no deviation from her usual state of health.

I. IRREGULARITIES OF THE MENSES.

It is well known, that those women are most healthy who have this discharge most regularly; and, on the contrary, women who suffer bad health, either want it altogether, or have it sparingly, excessively, or at irregular intervals. Hence it has been supposed to be so much connected with health, and so essential to the female constitution, as to prove the source of most of the diseases incident to the sex.

A prejudice for a long while prevailed, that, when the menstrual evacuation was diminished or suppressed, something bad was retained in the habit. This arose from an erroneous opinion, now almost entirely exploded, that the menstrual blood was of a poisonous quality; would, by its vapour, kill animals, destroy vegetables, stop fermentation, and the like; and, there-

therefore, that a woman's presence at these times was extremely dangerous; that, if she touched wine, it would immediately become sour; if she assisted at the process of making gelly, it would never thicken; at salting meat, it would be spoiled. These superstitious prejudices are of ancient date, and now only kept up by the credulous and ignorant.

On this principle, the slightest obstruction was regarded as an evil of the most serious nature, and the most vigorous efforts were employed in order to expel what was imagined to be so hurtful to the constitution. Late observations, however, show, that the menstrual blood of a healthy woman, is an evacuation of pure good blood, like that from other parts of the body. It is liable, indeed, to the diseases of the general mass, and sometimes to a little acrimony from stagnating in the *vagina*.

The discharge first occurs, because such an evacuation seems to be wanted; it continues while there is occasion for it, disappearing in time of pregnancy and giving suck; and ceases when the constitution no longer stands in need of it.

When the constitution suffers from an *obstruction*, it is not from the retention of *diseased blood*, which ought to have been evacuated, but from the vessels being overloaded, or from the sudden accidental stoppage of an accustomed evacuation. And it may be here observed, in general, that irregularities of the monthly discharge are oftener the effect of something faulty

ty in the habit, than the cause of the bad health which at that time occurs.

Complaints which depend on this evacuation occur,

1st, About the time of its commencement;

2^{dly}, After the habit has been established; or,

3^{dly}, About the time of its final cessation.

1st, The commencement of the menstruating age introduces an important change in the female constitution. It ought, therefore, to be viewed as a critical season, which demands a greater share of attention than is generally paid to it. Many diseases occur about that age; and others, which had previously resisted the whole powers of medicine, often abate or disappear on the regular establishment of the menstrual evacuation.

Parents, and those who have the care of young girls, ought to be admonished, carefully to observe, and prudently to conduct, their management at this tender and critical age. Late hours, excessive heat by dancing, or long confinement in crowded places, and irregularities of every kind, ought to be prohibited in the strongest terms. When there is reason to expect the approach of the menstrual indisposition, every thing which may discompose the mind or body should be carefully avoided, particularly cold with moisture, or after the body has been over-heated, anxiety, and passions of every kind. The food should be plain and simple; gross food, as pork, salmon, &c. also astringent or austere drinks, as Port
I and

and claret wines, cyder, four milk, unripe fruit, &c. should be abstained from. In other respects, no greater alteration in the usual diet needs be observed.

Nature sometimes anticipates, sometimes protracts, those appearances which mark this period: for in some instances the *menses* occur at a very unusual and early age; and in others, they are protracted till a year or more after the ordinary time. This depends partly on the growth of the body, and partly on the state of the womb, and ought only to be regarded when attended with symptoms of bad health; as general debility or weakness, pale countenance, depraved appetite from impaired digestion, and their consequences. Such symptoms are commonly known by the name of *Chlorosis* or green sickness; and are to be treated, without much regarding to the *menses*, by prescribing those remedies that invigorate and strengthen the system; as free air, exercise, nourishing diet, bitters, preparations of steel, particularly in the form of mineral waters, or tincture of steel, which may be taken by drops, as ten or fifteen twice a-day, in a cupful of bitters, and the like, varying the remedies according to the particular circumstances of the case. If the health be much impaired, and the muscular flesh appears to waste, there is hazard of hectic fever ensuing; therefore recourse should be had to the advice of the most skilful of the faculty.

2dly, Women who have formerly been regular,
D lar,

lar, often miss the expected return, or the evacuation appears out of time, or it is more sparing, and merely the appearance of blood, or it greatly exceeds the usual quantity.—It is only the total absence for one or more periods, that obtains the name of a *suppression or obstruction*.

Irregularities in regimen, exposure to cold when under menstruation, violent passions of the mind, and a variety of other occasional causes, may accidentally put a stop to the menstrual discharge. In general, when once stopped, it is in vain to attempt recalling it till the approach of the next period. In a simple obstruction arising from cold, errors in diet, passions of the mind, or the like, bathing the feet and legs in warm water, or sitting over its steams for several nights before the expected period, taking a gentle vomit, or a laxative, is all the treatment which we would advise with a view to restore or promote it. If these fail, the best method of recalling the discharge, is to prescribe for the symptoms with which the suppression is attended. For example, if the *menses* be suppressed or obstructed, and the patient is young, florid in the countenance, distressed with headaches, or pains in different parts of the body, hot fits, restlessness in the night, and other marks of fulness, bleeding, repeated doses of cooling physic, as Glauber salts, cream of tartar, soluble tartar, and spare living, will prove the most effectual remedies. And the same treatment would be proper, whether the *menses* were suppressed or not.

But,

But, on the contrary, if ſhe complains of want of appetite, debility on the leaſt motion, night ſweats, and other ſymptoms of great weakneſs, a very different plan ought to be purſued. The diet ſhould be more ſolid and nouriſhing, along with the moderate uſe of wine, gentle exerciſe, the Peruvian bark, a courſe of ſteel mineral waters, and the cold bath, with the various preparations of aloes, joined to aſa-foetida and ſoap; for it is always neceſſary to vary the method of cure, according to the particular circumſtances of the caſe.

In ſpite of all the noiſe about *provocatives*, as they are called, for bringing down the menſes, there is not, as yet, in the whole catalogue of *medicines* any one which can be relied on for that purpoſe. Aloes has derived its great character in promoting the menſes, in conſequence of its violent operation and ſtimulating quality. In conſtitutions ſubject to piles, from the *teneſmus* or ſtraining it occasions in going to ſtool, it very often brings on that diſeaſe; in the ſame way it may have a tendency to bring down the menſes: Hence it is extremely improper in delicate ſyſtems, and in women ſubject to floodings. All ſtrong violent purgatives will act in the ſame manner.

If purgatives fail, white muſtard-ſeed may be tried; a ſpoonful is the common doſe, evening and morning, or a ſmall cupful of a weak infuſion of horſe-radish may be taken twice a-day, which, in ſome inſtances, may be conſidered as no contemptible remedy. Some uſe

an infusion of red madder (the dye so called) in beer, with the same view, and extol it with many encomiums. The proportion is two ounces to a Scots quart of beer, to stand infused for two or three days; the dose a beer glassful twice a-day; or it may be given in substance, beginning with a small dose, as fifteen grains of the powder, increasing it afterwards to a scruple twice or even thrice a-day. Medicines given with a view to promote the menses, should be begun about a week before the expected return, and continued for a few days after, or till the usual evacuation recurs. These, or an infusion of penny-royal, tansey, baum, or camomile, may also be used with advantage when the discharge is scanty or sparing.

Many other remedies are employed in order to remove obstructions or promote menstruation, such as exercise, as dancing, riding, &c. the warm bath, the cold bath, electricity, and the like; and nothing is more certain than that the same end is often accomplished by very different and opposite means. But, since a remedy which in one instance may prove mild, inoffensive, or successful, will in another constitution throw the patient into the most violent nervous or hysteric disorders, medicines of this kind ought to be given with great caution.

Painful menstruation chiefly happens to women of a delicate nervous habit, and to women of fashion and high life. Those of a low class, inured to exercise and labour, and strangers to those

those refinements which debilitate the system, and interrupt those functions so essential to the preservation of health, are seldom observed to suffer at these times, unless from a diseased state of the womb.

Delicate women, who are liable to sickness, headaches, or pain of the back and lower part of the belly, while *out of order*, ought to be cautious what they eat or drink. They should frequently lie down in bed through the day, when oppressed, languid, or pained; and should drink now and then moderately of any tepid diluting liquor that is most grateful to the stomach, as gruel, weak white-wine whey, cow-milk whey, penny-royal or baum tea, or the like, and carefully guard against cold, fatigue, and night irregularities.

Those spasmodic or grinding pains with which many women are so much distressed in time of menstruation, are best relieved by opiates. Half a dose, as fifteen drops, of laudanum, may be taken in a cupful of warm tea in the morning, and twice that quantity in weak negus, white-wine whey, or gruel, before going to bed at night.

Women who usually suffer much pain from menstruation, should be provided with a small phial of laudanum, or a small box of grain and half-grain opiate pills; a dose of either ought to be taken immediately when threatened with painful symptoms, and repeated evening and morning, in the manner directed, till the menstrual period be over. The binding quality of

the opiate must be counteracted by the use of gentle laxatives or glysters.

These indulgencies, however, should not be allowed but upon emergencies, as they are with difficulty left off.

II. OF FLOODING, OR AN IMMODERATE DISCHARGE OF THE MENSES.

THE menfes differ in quantity and time of duration in different women; and the same quantity which occasions debility and dejection of spirits in some, will to others prove salutary or critical. Hence we can only judge of the excess by its effects.

Women who are nervous and delicate, whose health has been impaired by frequent labours or miscarriages, whose blood is vitiated by a scorbutic or scrophulous taint, or whose constitution is weakened by a sedentary inactive life, low diet, or by any other cause of debility, are chiefly subject to immoderate, long continued, or frequent menstrual evacuations.

When the blood evacuated, instead of being purely fluid, comes off in large lumps, clots, or concretions, attended with a considerable degree of pain, throbbing, or bearing down, the case is highly alarming and dangerous; for it indicates a diseased state of the womb.

Frequent or excessive floodings are alway attended with languor and debility, a degree of faintness, pain in the loins, loss of appetite, and, when violent, anxiety, coldness of the extremities, and hysterics. The consequences of frequent attacks are, universal weakness of the system,

system, which bring on nervous complaints, swellings of the legs, and a gradual wasting, or hectic fever, which at last terminates fatally. The cure depends much on the cause, the constitution, and manner of life of the patient. More, in general, is to be expected from *regimen* than medicine.

Cooling diet, cool air, and cold applications, as wet cloths, frequently applied to the *os externum*, when the flooding is excessive and dangerous, are the principal remedies.

The patient should be kept as cool as possible, and perfectly at rest both in body and mind, while the flooding continues. Her food should be light and nourishing, but not heating, and drink should be taken quite cold. When great anxiety, languor, and faintness occur, light nourishment must be frequently given, and now and then a little cold claret, or simple cinnamon water, by way of cordial. In such circumstances, there is also a necessity for applying large thick compresses of soft linen, soaked in vinegar and water, to the loins, belly, and *os externum*, to be frequently renewed, lest they become warm.

Little dependence is to be had on the power of medicine for giving an immediate check to the discharge. When the patient is of a full habit, hot and feverish, the nitrous mixture will be most proper; but otherwise, rose-tea, agreeably sharpened with spirit of vitriol, is preferable. Alum whey is also a powerful remedy, and readily procured; a dram of alum

will curdle an English pint of milk ; the whey must be sweetened to the taste, and a small cupful must be drank often, as the stomach will receive it.

When there is much pain or anxiety, and no inclination to vomiting, opiates may be given with advantage.

The state of the belly must be attended to, and properly regulated by the use of glysters ; but they must be merely emollient, and exhibited in a degree of heat which we call tepid, that is, scarcely milk-warm. To prevent the return of the disorder, and to strengthen the system, a light decoction of the Peruvian bark, sharpened with elixir of vitriol, is a remedy more to be depended on than any other.

III. MANAGEMENT WHEN THE MENSES ARE ABOUT TO CEASE.

TOWARDS the decline of life, when the menses are about to cease, has always been considered as an important and critical period. Many women are much at a loss how to manage themselves at this time ; and many, on the first preludes of this approaching change, erroneously attempt, by art, to keep up or recall a discharge which nature no longer finds it necessary to continue.

Few women wish to be old ; and most of them are averse to improve, in a proper manner, the friendly admonition. They flatter themselves, when the preludes of its total cessation first appear, that it is only a temporary interruption or irregularity, occasioned by cold,
or

or depending on some adventitious or accidental circumstance. Their utmost endeavours are, therefore, employed to recall it, by using violent forcing remedies; or, if these fail, they attempt, by evacuations, change of regimen, and the like, to supply its place, or throw off the bad consequences of its retention.

In advanced life, the quantity of blood and juices gradually becomes less copious, and the waste is greater than the repair; many parts shrivel and contract; the womb, in particular, grows harder and more compact; the vessels are contracted, and many of them become impervious; so that the blood which formerly flowed easily through them, is now denied a passage; the accustomed evacuation at last finally ceases, and terminates the age of child-bearing.

The morbid symptoms which occur at this period, are rather to be ascribed to a general change of the habit, than merely to the absence or cessation of the menstrual evacuation. However natural this change may be to the female constitution, if we consider the many irregularities introduced by luxury and refined life, it is not surprising that this period, as well as the age of maturity, should prove a frequent source of disease.

When the *menses* are about to cease, the symptoms that occur are extremely different, according to the constitution and particular circumstances of the patient. In some, the evacuation seems to stop all at once, while no
bad

bad consequences follow. In others, for many months, sometimes for several years preceding its final cessation, it returns after vague and irregular intervals; at one time having the appearance of little more than merely a *show*; at another, it comes on impetuously, and the flooding continues for some time excessive. Women who are most apt to suffer at the decline of life, are those who have never had children; who have never enjoyed good regular health; whose health has been impaired by frequent labours or miscarriages; who have been subject to irregularities of the menses, to the whites, or to nervous and hysteric complaints. Yet it frequently happens, that women of a delicate relaxed habit, who had formerly been distressed with painful menstruation, or with nervous complaints while regular, gradually recover, and for a long while enjoy a state of health to which they were formerly strangers.

If the menses stop suddenly at an earlier period than may be expected, and there is no reason to suspect pregnancy, the nature of the symptoms will point out the proper management. When no particular complaint supervenes in consequence of their absence, it would be exceedingly absurd to bring down the body by an abstemious diet, low living, and evacuations; on the contrary, if the symptoms indicate a redundancy of blood, bleeding, gentle purgatives, and a spare diet, will be advisable.

The symptoms that appear about this time are, either,

1st, Those of fulness, in consequence of the sudden stoppage of an usual evacuation in full habits.

2^{dly}, Frequent, long continued, or immoderate floodings in feeble relaxed habits ; or,

3^{dly}, General affections of the system from an alteration of the constitution.

1st, It is well known, that many women who were of a slender make, soon become jolly and corpulent after the stoppage of the menses. This plenitude discovers itself by various symptoms. Some are affected with headachs, hot fits, restlessness in the night, violent pains in the belly and loins. In others, the legs begin to swell, the face grows bloated, or eruptions appear on different parts of the body ; and many are troubled with inflammatory or bleeding piles. These complaints can only be relieved by spare living, now and then letting a little blood, keeping an open belly, and using suitable exercise.

Spare living—The diet should be mild, light, and moderate, consisting chiefly of vegetables, milk, fruit, light pudding, &c. Animal food should be sparingly used ; white of fowl, or very light soups, as beef-tea, veal-broth, chicken-water, &c. are only allowable ; and spirituous, vinous, and heating drinks of every kind should be abstained from.

Now and then letting blood—The time and quantity must be regulated by the symptoms
and

and constitution. When headachs or giddiness, flushings after eating, oppressed sleep, and other symptoms of fullness come on, nearly about the usual period of menstruation, losing six, eight, or ten ounces of blood from the arm will generally give much relief. The same remedy must be repeated once in two, three, or four months, as the urgency of the symptoms seems to require; afterwards, the quantity and repetition may be lessened, as there seems to be less occasion for it.

An open belly—A gentle cooling purgative should be taken once a week, or oftener, as heat, pain, or gripes in the bowels, or any of the above symptoms of fulness occur. The best laxatives in such cases are, cream of tartar and magnesia, Glauber's salt and manna, infusion of fenna with manna and tamarinds, or prunes. Heating, griping purgatives, as pills with aloes, sulphur, and every thing of a stimulating kind, should be carefully avoided.

Exercise is beneficial, for the same reason that indolence and inactivity prove hurtful. It must be suited to the situations and circumstances of the woman. A prudent exertion of domestic activity, moderate walking, or riding on horseback, are the most proper.

If the above rules be attended to, the effects of fullness and plenitude will soon be removed; and if there be no other disease in the habit, natural health will be restored.

2dly, Frequent or immoderate floodings in feeble relaxed habits. In delicate or relaxed constitutions,

tutions, the menfes, near their time of ceſſation, appear like a flooding, continue for a week, ten days, or longer, and are afterwards abſent for many months; at other times they recur every fortnight, or oftener. In ſuch circumſtances, the flux muſt be checked by cold wet applications, as formerly directed; the painful ſymptoms muſt be relieved by giving opiates; and the conſtitution afterward ſtrengthened by a nutritious diet, bitters, and, when the patient is able to bear it, the cold bath.

If the flooding appears to proceed from fullneſs, proper evacuations, and the cooling regimen, as already fully treated of in the article of Flooding, are neceſſary.

3dly, When other ſymptoms of diſeaſe appear, as ſhooting pains about the under part of the belly, or region of the womb, and in the breasts, and other ſymptoms of bad health, they evidently indicate a change in the conſtitution, which depends on other circumſtances than the cloſing of the veſſels of the womb, and require ſuch means to be employed as the moſt ſkilful and experienced of the profeſſion can adviſe.

It ought to be remembered, that the womb is acutely ſenſible; that from it the firſt ſymptoms of diſeaſe often ariſe; that thoſe parts firſt ſuffer that are moſt immediately, by nervous ſympathy, connected with it; and that ſoon after the general health becomes affected. But when there is no actual morbid prediſpoſition in the habit, by a careful attention

tion to regimen and manner of living, women have a good chance, when this period is happily over, of afterwards enjoying a very comfortable state of health.

§ 5. *Local Disorders of the GENITAL PARTS.*

BEFORE we treat of pregnancy, and those subjects immediately connected with it, we shall consider some other complaints incident to the genital parts in the unimpregnated state, with the most effectual method of cure. An attentive midwife will thus be enabled to apprise the woman of the hazard of her case, or, when slight, to direct the most proper method of removing it.

The parts of generation, in common with others of a similar structure, are liable to swelling, inflammation, and their consequences. These may proceed from internal causes, or be the effect of external injury.

1. The *Labia*, when inflamed and excoriated, that is, fretted or ulcerated, from whatever cause, may grow together; as all parts in that state, when for some time in contact, will do: For example, if two fingers, or toes, having their contiguous sides in an excoriated state, be brought together, and kept in close contact for some time, they will cohere or grow together. This excoriation is produced by any acrid discharge, generally by the whites, the cleanings after lyings-in and miscarriages, and the menses when putrid by stagnation.—Cleanliness,

ness, and frequent washing with warm milk and water, are the best preservatives and cure, and should be used after every evacuation of the menses; for the blood very soon grows putrid. If these should not succeed, pledgits with sperma-ceti ointment must be applied, and afterwards the parts must be often bathed with cold water, in order to strengthen them.

2. The *Clitoris* and *Nymphae*, in some women, are apt to grow to an uncommon size: sometimes it is the effect of disease; sometimes no cause can be assigned for it. Except when inflamed, ulcerated, or much pained, no treatment is at any time proper. One of the *nymphae* sometimes projects a little farther than the other; but it is a circumstance of no consequence, and little regard needs be paid to it.

3. Difficulty, pain, or suppression of urine, are very frequent complaints of women.

Sometimes they are occasioned from gravel, or small concretions of stone getting into the urinary passage; sometimes from a glary *mucus* or slime choaking it up; sometimes these symptoms arise from natural temporary contraction of the passages themselves; and similar symptoms are also produced by a falling down of the womb.

When gravel is suspected, the woman should sit over the steams of warm water, or bathe the body up to the navel in a convenient tub. If a stone be found working its way forwards, nothing will more powerfully assist its expulsion than the warm bath. Repeated laxative glysters

glysters are also proper, and the painful symptoms must be relieved by opiates. If these remedies fail, the woman should be sounded; and if the catheter cannot be introduced, or if a stone be found in the passage, a surgeon must be called.

Glary mucus will be dissolved and removed by frequent bathing with warm water.

The *contraction* commonly occurs about the periods of menstruation: It generally arises from cold, and is to be removed by actual warmth, by directing warm steams to the parts, by fomenting the belly, by rubbing warm camphorated oil on the belly, by emollient glysters, or by opiates.

When suppression, or difficulty of urine, is occasioned by a falling down of the womb, which frequently happens, it must be replaced. Gently raising the womb with the finger introduced into the *vagina*, while the woman lies on her back, with her head and shoulders lower than her breech, will, in many cases, without using any other means, enable her to make water freely. If this fails, the catheter must be passed, raising up the *uterus* with the finger in the *vagina* till the urine be evacuated.

4. The *Os Externum* is sometimes shut up by a membranous expansion called *Hymen*.

This is an appearance entirely preternatural, and at a certain period of life produces the most painful and troublesome complaints. Hence the necessity of carefully inspecting these parts immediately after birth; for that is
the

the time for removing every unnatural appearance capable of remedy, and of preventing much future trouble. Should the *hymen* be neglected till the period of menstruation commences, a tumour or swelling will be gradually formed; and from the confinement of the menstrual blood, and the push it makes at the accustomed periods, the most violent bearing-down pains, resembling those of actual labour, will be occasioned.

The nature of the disease will readily be discovered by the painful symptoms; by their remission during the interval of the threatening menstruating periods; and from the state of the parts to the touch; for the finger will be refused admittance within the *os externum*, and a tense membranous substance be perceived; which has, in several instances, from its appearance, and the violence of the symptoms, been mistaken for the membranes of a child.

The only cure is to open the tumour, so that the contents may be freely discharged; using afterwards such dressings as will prevent the lips or sides of the wound from growing together. This operation is the province of the surgeon.

5. *Narrowness of the Vagina*, or a contraction of the orifice of the *os externum*, sometimes also occur. The *vagina* of a full grown woman is, in some instances, so much contracted, as scarcely to admit of a small writing quill.

It may often be dilated by a small tent of prepared sponge, compressed after being im-
E
mersed

merfed in melted wax, and afterwards allowed to cool, then cut into a proper fize, fmoothly rounded, befmeared with *pomatum*, and gently introduced within the *os externum*; a thread must be fixed to the extremity for pulling it out. By the natural moisture of the part, the tent will fwel and expand till it recovers its original fize.

The tent must be withdrawn every day, and a new one, a little larger, introduced in its stead. This practice must be continued for a week, or longer, till the passage be sufficiently enlarged.

6. *Fluor Albus*, or Whites, is a disease which occurs, perhaps, more frequently than any other female complaint.

The common causes of it are, weak debilitated constitutions, either from Nature, or full gross living, with little exercise, or from frequently layings-in.

The *whites* are often nothing more than an increased discharge of that glandular moisture which naturally lubricates the parts. It may be confined to the *vagina* only, to the neck of the womb, or may proceed from the same source with the menstrual evacuation. When it is confined to the womb alone, the disease is cured by pregnancy. When the discharge comes from the *vagina*, pregnancy generally increases it. This disease often prevents conception, and is a frequent cause of miscarriage; but in a slight degree frequently occurs without any material inconveniency. The cure is chiefly to be accomplished,

complished, in relaxed constitutions, by strengthening the habit, and particularly the genital parts; for which purpose, a proper regimen, Peruvian bark, mineral waters with steel, and sea-bathing, are the most powerful remedies. When the habit of body is full, suitable evacuations must be used.

The discharge is often to be diminished, though seldom entirely cured, unless in young people, when the complaint is recent, by styptic or astringent applications. With this view, the parts may be washed twice or thrice a-day, with a weak solution of sugar of lead or alum in rose-water, viz. the proportion of 30 or 40 grains to half an English pint of liquid; also, claret wine, an infusion of red-rose leaves in boiling water; green-tea; or the mineral water of the Moffat Hartfield spaw in Scotland, or of Tunbridge in England, make a very proper wash. With any of the liquors now mentioned, the parts may be safely bathed with a bit of sponge, or they may be thrown into the *vagina* once or twice a-day through an ivory pipe, by means of the elastic resin. But, except when the disease is inveterate, most women are averse to the use of injections.

The matter discharged is of various colour and consistence; and from its acrimony often inflames and excoriates the parts, or excites very troublesome and painful itching. In such circumstances it is of the utmost consequence to keep the parts clean and cool, by frequent

bathing with cold water, or with any of the above mentioned astringent liquors.

Though the matter evacuated is, very generally, of a white slimy appearance, scarcely staining the linens more than a colourless starch; yet, from stagnation, or a depraved state of the fluids, it may become coloured or acrimonious; and, in that state, has been confounded with a very disagreeable infectious disease; nor is it, in all cases, easy to establish the distinction. We can only judge of the nature of the disorder from the candour of the woman, and from her particular circumstances and connections.

The *fluor albus* is often connected with the state of the stomach; when the Peruvian bark, infused in lime-water, is one of the best remedies. It may be here observed, too, that women have, in many instances, been cured of the most obstinate habitual *fluor albus* by giving suck.

7. *Prolapsus uteri*, or falling down of the womb. The womb sometimes changes its situation, falling down into the *vagina*, and pressing on the *urethra* and *rectum*. This is what is vulgarly called a *falling down of the mother*. It generally proceeds from a weakness and relaxation of these parts: hence it is a common consequence of the whites; of miscarriage; of frequent pregnancy and labour; of flooding; and of every disease which debilitates the body. It is also frequently occasioned by too early exercise.

ercise or fatigue after lying-in, before the womb has recovered its original size.

The same strengthening remedies prescribed for the whites should be used here; for the constitution in general, and the tone of parts in particular, must be restored. *See wash & bath & pessary*

If internal strengthening remedies and gentle astringent applications should fail, and avoiding every kind of bodily exercise and fatigue, the womb must be replaced, and the woman for some time after kept in a constant state of rest and tranquillity. *Pessaries*, which are introduced into the *vagina* to support the womb, are painful and dangerous remedies, and ought not to be used but in the most critical emergencies by a skilful surgeon.

In young girls, a sponge dipped in alum-water will often supersede the necessity of a pessary; and in every subject, the most safe and convenient one is a simple ring of ivory *Laoutche* or box-wood, suited to the state of the parts.

The *vagina* is also subject to *prolapsus*; and it is often confounded with that of the womb. The disease is nothing more than the internal coat of the *vagina* inverted, and pushed out in the form of a tumour, frequently protruding entirely without the *os externum*. In that state the womb will be dragged along with it, and the orifice of the womb will appear at the upper part of the tumour, which distinguishes the falling down of the *vagina* from that of the womb. It arises from the same causes, and requires nearly the same treatment. Astringent

injections of alum-water, or solution of sugar of lead in decoction of oak-bark; the cold bath;—internally, the Peruvian bark, mineral waters with steel, and suitable regimen, are the best remedies.

The falling down of the womb, or protrusion of the *vagina*, ought to be carefully distinguished from diseased tumours of these parts.

8. *A Polypous Tumour.* A *polypus* of the *vagina* or womb, is a fleshy tumour of spongy consistence, which grows to some part of the *vagina* or womb.

The symptoms are something similar to falling down of the womb, as bearing-down pain, difficulty, pain, or suppression of urine; but the disease is always attended with frequent floodings. The tumour, like the womb, shifts its position according to its situation and size; but there is this remarkable difference between the former and the latter, that the *polypus* is fixed by a small neck, and its broad or most bulky part first presents. Though, like the womb, it frequently changes its position, and is often protruded without the *os externum*, it can always be readily discriminated from the falling down of the womb by the following infallible marks of distinction:

1. The tumour of the *polypus* is not only broad and bulky, like the upper part of the womb, but wants the orifice always observable in the prolapsed womb.

2. As it generally adheres by a small slender neck,

neck, it can be easily moved, or twirled round, as it were, by the finger.

3. The *polypus* is attended with frequent floodings, and a copious discharge of whites, with disagreeable itching, and sometimes considerable pain.

4. It oftener occurs about the decline of life than at other times.

If the disease be early attended to, in many instances, it can be removed without danger or occasioning much pain; but when the tumour is allowed to increase to a great size, the danger is proportionally greater. The cure is *by ligature* ^{or by} a chirurgical operation, which is entirely out of the line of the midwife's province.

9. *Sterility, or Barrenness.* The cause of barrenness is, in many cases, of difficult investigation. It may proceed from a fault in the seminal fluids of either sex. In women, it frequently arises from a disease in the parts of generation, or from some original defect in their formation or structure, particularly irregularities in the monthly flow, the whites, a stoppage of any of the passages, or a diseased hardness, called a *scirrhus*, either in the womb, ovaries, tubes, or ligaments.

The fault is sometimes deeply rooted in the constitution in both sexes; and it is often difficult to learn whether it exists in the man or woman. It is supposed to occur more frequently in the female; but is often the melancholy consequence of the *battered constitution* of the *debauchee*, who assumes the character of

husband when he can no longer support that of the *rake*.

In women, smallness of the breasts, irregular, sparing, or deficient menses, long continued or excessive *fluor albus*, and the appearance of extreme delicacy, are among the most certain signs of sterility.

If the disease be in the ovaries, or Fallopian tubes, it can neither be discovered nor remedied; and the only circumstances in which a cure can be attempted is by a surgical operation, where the *vagina* is too narrow or imperforated; by restoring and augmenting the menstrual flow when deficient and sparing; and checking the drains of a *fluor albus*.—But practitioners, most conversant in these subjects, are best able to form a rational conjecture of the cause, and to suggest the most probable means of cure.

10. *Spurious, or false Pregnancy*. Disease sometimes assumes the appearance of pregnancy; and not only deceives the uninstructed patient, but imposes on the skilful physician.

Obstructed *menses* frequently produce the symptoms of breeding; and wind in the stomach and bowels is often mistaken for the pregnant womb.

But the most common causes of these fallacious appearances are, tumours of the soft parts contained in the *pelvis*, as diseased womb, *ovaria*, or tubes, dropical swellings, and the like.

Disease may be distinguished from true pregnancy chiefly by the irregularity of the symptoms,

toms, by the age of the woman, and by information derived from the examination of the belly externally, and the state of the womb.

The progress of pregnancy is, in most cases, uniform and regular. The symptoms of breeding either abate or are entirely removed soon after the first quarter. A diseased womb, *ovarium*, or tubes, in their advanced state, may readily be perceived by the touch from the *vagina*. The hard unequal feel, and painful sensation when touched, are the certain and infallible marks of disease. Complaints of this kind most frequently occur when the *menfes* are about to take their leave.

It may be here necessary to caution a female practitioner against a symptom very apt to mislead and deceive her; that is, an uncommon fulness and firmness of the breasts, and a whey-like, or even milky liquor now and then distilling from the nipple. Any diseased swelling about the womb, from the well-known sympathy between it and the breasts, will often occasion that appearance.

Lastly, *False Conception* and *Moles*.—So late as at the beginning of the present century, these were common subjects of speculation; and every newly-married woman was under the most dreadful apprehensions on account of them. It was imagined that they derived their origin from witchcraft, from the arts of the devil, or proceeded from some defect, or an unnatural mixture of the seminal fluids of the sexes. In many parts of the world such absurd
and

and ridiculous notions yet in some degree prevail.

When the *Embryo* or *Foetus* is, by any accident, deprived of life in the early months, and is still retained in the womb, the delicate and gelatinous substance will readily be dissolved.

The after-birth, or the remaining parts of the *Ovum*, sometimes grow even after the death of the *foetus*. At other times, by the addition of clots of blood, they increase considerably in bulk; and being squeezed by the pressure of the contracting womb, are expelled in that state. It is this substance that has been commonly called a *false conception*. When it remains longer in the womb, and acquires a solid consistence, like a *scirrhus*, without any cavity in its centre, or traces of its ever having been an organic body, it is called a *Mole*.

Mere clots of blood, retained in the womb after delivery, or after immoderate floodings, at any period of life, constitute another species of mole that more frequently occurs than any of the former. These, though they may assume the appearance of pregnancy, are generally expelled spontaneously; and unless the womb be in a diseased state, are never attended with dangerous consequences.

CHAPTER II.

OF PREGNANCY.

WHEN the rudiments of the future child are conveyed into the womb, impregnation takes place; or, in other words, we say that the woman has conceived. While the parts which form the conception are blended together, so that one part cannot accurately be distinguished from the other, the whole mass is called *ovum*, a word signifying an egg. This *ovum* consists of four membranes; the *placenta* or after-birth; the *funis umbilicalis* or navel-string, leading to the child; and the surrounding watery fluids in which it floats.

Before the child acquires a distinct and regular form, it is termed *Embryo*; and afterwards it retains the name of *Foetus* till birth.

We shall first shortly trace the progress of the child, and then concisely describe the other parts.

I. GROWTH AND PROGRESS OF THE FOETUS.

It is exceedingly difficult to ascertain the proportional growth or progress of the *foetus* in the womb. In the early months, it is extremely small in proportion to the after-birth. An *ovum* between the eighth and ninth week after conception is commonly about the size of a hen's egg; the *embryo* at this time nearly about the weight of twenty grains. At three months,
the

the *ovum* may be about the weight of seven or eight ounces, and the *foetus* scarcely three ounces. At six months, the *ovum* may be about 20 ounces, and the *foetus* 12; at eight months, the *foetus* weighs somewhat more than five pounds, the *secundines* little more than one. The after-birth generally arrives at its full bulk about the seventh or eighth month.

An *Embryo* of four weeks is near the size of a common fly. At six weeks, the size is about that of a small bee, the head nearly as large as the whole body, and the extremities then beginning to shoot out; the pulsations of the heart also are visible. At 12 weeks, the *foetus* is near three inches long, and its form pretty distinct. At four months, the *foetus* measures about five inches; at five months, between six and seven inches; at six months, about eight, or between eight and nine inches; at seven months, between 11 and 12 inches; at eight months, between 14 and 15 inches; and at full time, from 18 to 21 inches. The weight of a child at full time, is generally from six or seven to nine pounds, which it seldom exceeds. But general calculations, for many reasons, must be very uncertain.

The period of gestation is nine calendar months; that is, from 270 to 275 day: but in the human species, as in other animals, it may be anticipated or protracted. Some woman bring forth their children at the end of the eighth month; others go nine lunar months only, and produce as full-grown children as those

those who go the usual term. The protraction of the time of gestation is less frequent, though there are many well attested facts in support of it. Cows, and other domestic animals, the date of whose conception can be known to a day, frequently exceed their term of delivery eight or ten days, and in some instances even more. Is it not therefore reasonable to presume, that the same circumstance may happen to women, though the uncertainty of their reckoning renders the precise period more difficult to be ascertained? Women commonly reckon from the stoppage of the menses, and from the quickening of the child. The former of these is vague and uncertain; for conception may happen immediately after the menstrual evacuation, or not till three weeks later, which will make the difference of at least three weeks in the reckoning.

The *quickening of the child* is still more vague and precarious. Women seldom perceive the sensation of the child's motion till the womb ascends above the brim of the *pelvis*. This change in the position of the *uterus* will be affected by the shape of the *pelvis*, the size of the child, and manner of life of the mother. By the quickening of the child is understood nothing more than that the mother is sensible of its motion; for the child lives from the moment of the animation of the germ, in consequence of conception; but the first sensation of the movements of the *foetus* may depend more on the sensibility of the mother's feelings,
than

than on the stirrings of the child. Women, too, are observed to quicken at different times in different pregnancies; no dependence, therefore, can be had on a circumstance so precarious.

Many occasions, however, occur to enable a woman to form a probable conjecture when the time of her lying-in may reasonably be expected. Experience will afterwards assist her; for many perceive themselves to be pregnant from some particular symptom which affects them at some particular period of gestation. It is a well known fact, that there is a greater disposition in the *uterus* to conception immediately after the disappearance of the *menfes* than at any other time; and on this foundation many women are enabled to reckon with surprizing exactness.

II. CONTENTS OF THE GRAVID UTERUS, OR, DESCRIPTION OF THE SEVERAL PARTS OF THE OVUM.

THE *Embryo* on its first formation in the *ovum*, and the *foetus* during the whole time of pregnancy, is enclosed in four membranes, viz. the *false chorion*, which is a double membrane; the *true chorion*; and the *amnion*, or internal membrane next the child, which includes a fluid called the liquor of the *amnion*, in which the *foetus* floats.

The *Placenta* or *after-birth*, is formed by that part of the *chorion* or external surface of the *ovum* which first attaches itself to the womb. It is a thick, soft, fleshy-like mass, connected
to

to the *foetus* by the navel-string, and to the womb by the external layer of the *false chorion*. It differs in shape and size; it is thickest at the centre or middle, and gradually becomes thinner towards the edges, where the membranes go off, all round, making a complete bag or covering to inclose the waters, navel-string, and child. The after-birth may adhere to any part of the womb, though it adheres most frequently to the upper part. It is composed of an immense number of blood-vessels; which running from the external to the internal surface, by a beautiful group of branches, at last meet, more or less towards the centre, and form the umbilical rope or navel-string.

The outer surface of the *after-birth*, or that connected with the womb, seems divided by many small lobes or fissures. These lobes are most remarkable when the after-birth has been pulled from the womb by force. The reason of this is, that when we deliver the *after-birth* before the womb has time, by its contraction, to separate and disengage it, the fine membrane that connects the *after-birth* to the womb is torn; by this means the mouths of the blood-vessels are exposed; the contraction of the womb, by which only they can be shut, is retarded, and the blood flows freely. Hence arise those profuse and alarming floodings that generally follow the premature and precipitate extraction of the after-birth; but which may be generally prevented, by giving time for the
womb

womb to contract itself, before any attempt be made to deliver the *placenta*.

The internal membrane, called the *Amnion*, immediately incloses the child and furrounding water. It is by much the finest and most transparent of the membranes, having no blood-vessels that can be discerned by the eye. It is, however, firmer and stronger than any of the others.

The true *chorion* is also thin and transparent when separated from the other membranes; but the two layers of the *spongy* or *false chorion* are opaque, that is, not transparent. This double *false chorion* is composed in this manner: The outer coat or membrane, after having covered the whole body of the *ovum*, meets at the *placenta*, and seems to turn back again to cover the inner surface of the womb. The other membranes belong to the after-birth, and come off along with it. The membrane that lines the womb, called by Dr Hunter *decidua*, or falling membrane, is cast off with the cleansings. If it should be peeled off by the rash extraction of the after-birth, a flooding will ensue, as already observed.

The waters contained within the *amnion* are called the *liquor amnii*. They are purest in the early months; afterwards become thick and muddy, sometimes ropy; and therefore would be very unfit for the nourishment of the child: add to this, that the *foetus* cannot swallow; so that it can only be nourished by the blood of
the

the mother conveyed by vessels running along the navel-string.

The use of the water is to promote the distention of the womb, to prevent the parts of the *foetus* from growing together, to defend the *foetus* from external injury affecting the mother, and to dilate and lubricate the passages at birth.

Water is sometimes collected between the *chorion* and *amnion*, or within the two layers of the *chorion*. This is called the *false water*. It may be evacuated at any time of pregnancy, without any other inconvenience than the alarming appearance it occasions; except that, by the rupture of the external membrane, the resistance of the others is proportionally weakened.

Twins, triplets, &c. have each a *placenta*. Though in general they adhere together at the edges, yet they are sometimes separate and distinct, and cast off at different times, each chord having its own after-birth and membranes. This should put practitioners on their guard, not to leave their patient till they be well assured that there is no other child.

The *navel-string* connects the child and *placenta*, and conveys blood from the one to the other. The blood, therefore, of the mother is twice absorbed before it reaches the child; first from the womb by the vessels of the *placenta*, and again from them by those of the child.

The *chord* is of different length and thickness, commonly about the thickness of an ordinary fin-

ger, and of length sufficient to admit of the birth of the child with safety. The thickness of the chord is owing to a quantity of gelatinous fluid interposed. The thickest chords are not always the strongest; so that, for this reason, as well as for many others, we should trust more to the natural separation of the after-birth by the contraction of the womb, than by hastily pulling at the navel-string.

III. POSITION OF THE CHILD IN THE WOMB.

WHILE the child is contained in the womb, its position is such as to take up the least room; it describes a figure nearly oval, of which the head makes one, and the breech the other extremity. The head is generally downwards, and reclined forward towards the knees, which are drawn up to the belly; the heels are bent backward towards the breech, and the arms are commonly placed along the sides, or supporting the head and face. But, as the *foetus*, during a great part of pregnancy, floats, as it were, in a quantity of fluid, various accidents may occur to produce an alteration of the ordinary position; and when the child changes its position after it moves itself with difficulty in the *uterus*, from its increased size, it may be confined in the same posture during the remaining time. In this manner *preternatural* labours sometimes happen.

IV. CHANGES THE WOMB SUFFERS BY PREGNANCY.

DURING the progressive increase of the *foetus*,
the

the womb suffers considerable changes, both with regard to its figure, bulk, and situation.

For the first two or three months, the cavity of the womb is of a triangular figure, as before impregnation; but, as it stretches, it gradually becomes more rounded. In general, the gravid womb never rises directly upwards, but inclines a little to one side; most commonly to the right. This never happens, however, in such a degree as to prove the sole cause, either of interrupting or preventing labour, as the famous Dr Daventer, and many late authors, erroneously imagined, who ascribed most of the difficulties that occurred in labour to the *oblique position* of the womb.

Though the womb is gradually distended from the moment of conception, and its position consequently changed, it is yet difficult, from any appearances, to judge of pregnancy in the early months.

In the first three months, the orifice of the womb, when touched by the finger, feels smooth and even, and there is little difference from the unimpregnated state. When any difference can be perceived, the projecting part of the mouth of the womb will seem larger, longer, and more expanded. The *uterus* now sinking into the under part of the *pelvis*, will be readily felt to the touch by the finger; and the *vagina*, on that account, will seem shorter.

As the contents of the *uterus*, in early gestation, are entirely confined to the *fundus*, or upper part, the first change from pregnancy arises

from the womb sinking downwards towards the lower circumference of the *pelvis*; the intestines following the direction of the *uterus*, the belly by that means will be somewhat diminished in its size, and appear flatter. Hence ‘the belly diminished in size, and sensibly flatter, along with the usual symptoms of breeding,’ give a more probable presumption of pregnancy than any others which can be depended on in the early months.

In early gestation the *uterus* is confined within the bony cavity, has a natural tendency from its weight and increasing bulk to gravitate downwards; the adhesion of the *ovum* or conception is slight and feeble, and the mouth of the womb is then only slightly closed with a soft glary *mucus*. For all which reasons, abortion, or miscarriage, occurs much more frequently in the early than later months; a very necessary and important caution to those who wish to guard against the hazard of miscarriage; for a very trifling accident or neglect will then often be sufficient to occasion it.

As the *fundus* of the womb stretches, the neck shortens; but little difference can be observed on the neck till some time after the fifth month. From this time it gradually loses its sheath-like appearance, till at last it be distended nearly equal with the *fundus*; so that, at full time, the neck entirely disappears, and the orifice feels something like a ring on a globe, or appears of an oval figure, having the longer sides behind and before, like the mouth of a young puppy
or

or tench, from whence it obtained the name of *Os Tincae*.

Nearly about the fifth month, the womb rises out of the *pelvis*; and the *fundus* may be now felt above the *brim*, by applying the hand on the belly, like a hard rounded ball, between the belly and back-bone. If the woman be rather spare than jolly, pregnancy may be judged of with more certainty about this time, by feeling the belly outwardly, than by the touch of the finger in the *vagina*. About the seventh month, the *fundus* of the womb reaches as far as the navel, and, at full time, ascends almost as high as the pit of the stomach. For this reason women are more subject to vomitings, breathlessness, and cough, in a first than following pregnancies; for, by the habit of frequent distention, the belly and other inclosing parts yield to the stretching of the womb, which projects more outward, and less upwards, the oftener pregnancy is repeated. During pregnancy, the vessels of the womb become prodigiously enlarged; and the number and size of them are most conspicuous where the after-birth is attached: The mouths of the veins, at that part of the surface of the womb which the after-birth covers, are so large as to admit the point of a finger; but the immediate contraction of the womb after delivery, prevents the fatal effusion of blood that might be expected.

The substance of the womb continues pretty nearly of the same thickness during impregna-

tion ; but, in some instances, when much distended, is evidently thinner. It is also of a softer and more spongy texture. It sometimes tears by the vast distention in time of pregnancy, or in time of labour, when the position of the child is awkward, and the labour-throes are frequent and severe. This accident, however, very rarely happens, perhaps not once in many thousand instances. But, by unskilful attempts to turn the child, or to stretch the orifice of the womb, it has often been torn, and the unfortunate woman has fallen a victim to the rashness of an ignorant operator. Even the judicious Dr Smellie was not aware of the dreadful consequences of anticipating nature in her operations ; for he candidly acknowledges, that, by attempting too early to dilate the orifice of the *uterus* in order to turn the child, the *uterus* was frequently torn ; and although the woman sometimes recovers where the thin membranous edge of the orifice only is torn *, lacerations of the body of the *uterus* are almost always fatal.

The ligaments of the womb suffer considerable changes by pregnancy. The round ligaments are much stretched as the womb mounts upwards ; and to this cause those pains are probably owing, which begin in the belly, striking down to the thighs, which are very distressing to many women towards the latter end of gestation. The womb, during pregnancy,

* See Smellie's Midwifery, Vol. III. Coll. XXXV. Cases X. and XVI.

nancy, is chiefly enlarged towards the *fundus*; so that the broad ligaments are left much below the principal bulk of the womb; consequently, from pulling violently at the string to deliver the *placenta*, the *fundus* may be pulled down through the mouth of the womb. This is styled *the inversion of the womb*, and is a very dangerous and frequently fatal accident. This violence has another bad effect; for, as the *uterus* has not time to contract and close the vessels, fatal floodings often ensue.

V. SUPER-FOETATION.

AMONG many ridiculous notions entertained relative to generation, it was formerly imagined that a woman was capable of conceiving a second time during pregnancy, at the distance perhaps of several weeks after the first conception.

Soon after impregnation takes place, the internal surface of the womb is lined by the external coat turned back as it were from the *ovum*, in the manner formerly explained*; the orifice of the womb is also cemented by a gelatinous *mucus*; the Fallopian tubes become loose and flaccid, and are supposed, by the change the womb undergoes, to be removed at too great a distance to be able to reach the *ovaria*, to receive from them another *ovum*.

This very improbable opinion arose from a circumstance that now and then happens in the human species, where one of two or more *fœ-*

F 4

tuses

* See p. 80.

tuses dies in the womb at an early period, and is thrown off some time before the other, or along with it at full time, generally in a putrid or spoiled state, though sometimes without any appearance of putrefaction. Thus two children, or three, may be born at full time, of different sizes, though conveyed into the womb at one conception.

VI. EXTRA-UTERINE CONCEPTION.

INSTANCES sometimes, though rarely, occur of *foetuses* remaining in the *ovarium* or *tubes* *, or where the *foetus* grows to the outside of the womb, or to some of the neighbouring parts. These *foetuses* are generally of a small size, and die at an early period. They are often discharged by abscesses through the skin of the belly, or by stool. A few extraordinary histories are recorded, of women having carried such *foetuses* for a great many years without danger, or even much apparent inconvenience.

VII. MONSTERS.

THE various kinds of monsters that occur in the animal creation, may chiefly be accounted for either from the parts of the *embryo* or *foetus*, in their soft and delicate state, by some accident being jumbled together, or from one or more *foetuses* adhering too near each other, and at length coming into contact; by this means some parts grow excessively, others are destroyed, others appear double, &c. There are no
nerves

* See the manner how generation is effected, p. 44.

nerves in the *placenta*, or connecting medium between the mother and child ; hence few are now so credulous as to imagine, whatever fabulous stories have been related to the contrary, that the imagination of the mother has any power to alter the form or condition of the *foetus*.

Some of those deviations from nature are, however, too obscure and mysterious to admit of any rational explanation.

C H A P T E R III.

DISEASES OF PREGNANCY.

THE diseases of pregnancy, though troublesome, are very seldom fatal. Many women, as soon as they have conceived, feel a slight degree of fever, and disagreeable pains in different parts of the body : the stomach loaths its usual food, or what is taken is soon after thrown up ; and the appetite is sometimes so whimsical, that the most unnatural and disagreeable substances are longed for.

These early symptoms have been generally imputed to the *obstruction of the menses*. But they frequently occur before any evacuation can be said to be stopped : for women, it is well known, more readily conceive soon after menstruation than at any other time ; and they then feel the symptoms of breeding several weeks before the following period.

Many women suffer a considerable degree of
pain

pain and indisposition, even while under the most regular and natural menstruation. Cold, violent emotions of the mind, or other irregularities, at these times, often occasion the most sudden and dreadful hyseric or nervous disorders. This immediately arises from some change in the womb, which we style *irritation*; for every part of the female frame sympathises with the womb. The probable cause of the symptoms which occur in the early stages of pregnancy, therefore, is a change in the state of the womb in consequence of conception; for women of their first child, and nervous women chiefly, suffer in the early months.

Diseases incident to the pregnant state are liable to considerable variation, not only in different women of different constitutions, but in the same woman in different pregnancies, and at different periods of the same pregnancy. Some complaints, as those of breeding, are confined to the early stages; others occur in the advanced months, arising from the stretching of the womb, and its pressure on the neighbouring parts; and a third series may be mentioned, confined to no particular period, but which happens at all the different terms of gestation.

S E C T I O N I.

Complaints occurring in the Early Stages of Pregnancy.

THE most common symptoms of breeding are, Nauseating sickness and vomiting; heart-burn; *diarrhoea* or looseness; unnatural cravings;

cravings; swelling and pain in the breasts; fainting; nervous or hysteric fits.

1. *Sickness and Vomiting*—chiefly occur very early. They are sometimes slight, at others attended with much straining, bleedings at the nose, violent headaches, and frequently produce miscarriage; they are generally attended with languor, low spirits, and disturbed rest, and often give way to air, company, and gentle exercise. If, however, these remedies fail, the complaints require more serious attention. When symptoms of fulness appear in young women formerly healthy, along with pain or giddiness in the head, flushings in the face and palms, and when the sickness is constant or excessive, bleeding, with an open belly and spare diet, will afford the greatest relief: But in nervous habits, where there is the appearance of delicacy, where the woman is debilitated from want of appetite, by frequent vomitings, a disposition to sweat in the night, or after using inconsiderable motion, bleeding must be avoided with the utmost care; and we are *then* chiefly to trust to a light nutritious diet, given by little at a time, and often repeated, consisting of beef-tea, young fowl, light puddings, and the like; always regarding, as far as prudence will permit, the particular taste of the patient. The moderate use of wine may also be necessary, and small doses of any light stomachic bitter, as Columbo or the Peruvian bark. After a very restless night, an opiate may be given now and then the following night with great advantage.

When

When the stomach loaths all kind of food; when the sickness is excessive; when the strainings are frequent and severe; fourteen or fifteen grains of ipecacuan may be given, not only with safety, but often with the happiest effects.

The indigestion incident to the early months is increased by improper food, which the woman is often obliged to swallow much against her inclination; it is also kept up by confinement and a sedentary life. Gentle vomits are therefore, in this view, absolutely necessary, and affect the body much less than natural straining. They require to be repeated once a-week, or oftener, as the use of them is indicated by sickness and loathing, retchings, an ill taste in the mouth, putrid belchings, and the like. Breeding sickness, however, it must be observed, is sometimes merely a nervous affection, proceeding from irritation in the womb, by a *living body distending it*; and in many instances, neither regimen, change of air, mineral waters, bitters, nor any remedy, will prove beneficial for removing or palliating it; and no sensible relief is afforded till the womb changes its position, and rises above the brim of the *pelvis*. From this time the motion of the child is distinctly perceived; and few complaints afterwards occur, except those which arise from the pressure of the womb on the surrounding parts.

2. *Heartburn*.—Many women know that they are with child from this symptom alone; which
in

in some instances accompanies all the stages of pregnancy. At other times, it is peculiar to breeding, or to advanced gestation. As a pregnant symptom, it is often impossible to remove it entirely till delivery; but it may be palliated by attending to the state of the stomach. Those foods which are observed to occasion it ought to be carefully avoided. The acedent state of the stomach, or tendency of what is taken to become sour, must be corrected by drinking lime-water, prepared chalk and water, or, when costive, by taking small doses of magnesia, to which, when the stomach is much disordered, a few grains of fine rhubarb may occasionally be added. The digestive faculty should also be restored by the use of the bark. When it disagrees in substance, an infusion in boiling water is an agreeable, and in such cases a useful preparation. The proportion is half an ounce of finest powder of bark to an English pint of boiling water. It may be elegantly flavoured by adding some cinnamon bark; or if the stomach be very weak, two or three table-spoonsful of the spirituous tincture of bark, or of plain brandy, may be added to the watery infusion. The dose is a cupful twice or thrice a-day.

3. *Diarrhoea* or *Looseness*.—This complaint also generally arises from the disordered state of the stomach; and is to be palliated or removed by gentle vomits, small doses of rhubarb, opiates, and a proper regulation of the diet.

4. *Unnatural Cravings*.—The longings of preg-

pregnant women, however seemingly absurd, often appear to be entirely involuntary. Wonderful instances of them are related in medical history. In general the passion, though sometimes keen, is of no long duration. It is commonly increased by indulgence, and chiefly confined to high life: But when it can be done with safety, it ought to be gratified. The woman *then* expects a little indulgence, and is undoubtedly intitled to it. The appetite is feeble and whimsical, the stomach loaths many substances, and rejects others. The inclination ought therefore to be studied; and altho' an unlimited compliance with every desire might be improper, the wished-for substance, when it can be easily obtained, should be procured. Anxiety and disappointment in the irritable state of breeding may produce disagreeable consequences; for the mind, as well as body, requires tranquillity. The only precaution, in these circumstances, necessary to be observed, is not to carry our indulgence so far as to do hurt.

5. *Swelling and Pain in the Breasts.*—This is a natural symptom, and not much to be regarded. Tight pressure should be carefully avoided; and the breasts, when very tense and much pained, may be rubbed with warm fine olive-oil twice a-day, and afterwards covered with soft flannel or fur. The belly should be kept moderately open, and the diet should be rather spare. The uneasy tension seldom continues above a few weeks; when it is excessive, and

the woman is young, of a full habit and florid complexion, bleeding is also essentially necessary.

6. *Fainting, Nervous or Hysterical Fits*,—sometimes occur about the time of *quickening*. They are commonly slight, of short duration, never threaten any dangerous consequence, and are always relieved by the usual remedies of mild cordials, tranquillity of mind, and rest. But should they be occasioned by falls, fright, or immoderate passions, as disappointment, vexation, melancholy, and the like, they frequently end in the loss of the child, and sometimes threaten the life of the mother. In those cases, the only certain remedy is opium.

Lastly, Some women have a remarkable degree of thirst and feverish heat; some have lassitude, drowsiness, or frequent inclination to sleep, during the first quarter of pregnancy. These evidently indicate a considerable degree of fulness; and are to be obviated by gentle evacuations, spare living, and, occasionally, exercise in the open air. The woman ought then to sleep by herself, lightly covered; the bed-chamber should be open and airy; the diet should be light and cooling, and ripe fruit should have a large share in it.

In some instances the general health is much impaired by the *breeding sickness*, which commonly continues till the motion of the child be distinctly perceived; that is, till between the third and fourth month, or about the end of the fifth month, when these symptoms spontaneously

neously go off, and the usual health again returns, till another series of complaints occur, from the distention and pressure of the womb in the advanced months.

SECTION II.

Complaints occurring in the advanced Months of Pregnancy.

THE second class of complaints, which arise from the pressure of the bulky womb, often threaten the life of the mother, while the former ones only ended in miscarriage. They are,

1. *Difficulty and suppression of urine, with falling down of the womb.*—These symptoms, if early attended to, and if the necessary precautions of keeping the belly open and avoiding fatigue be regarded, will seldom prove troublesome or dangerous, but cannot be entirely removed till the womb changes its position, takes a different line of direction, and, by mounting upwards, rises out of the *pelvis*, and is then supported by resting on the broad bones of the haunches. This commonly happens about the fourth month, or soon after; but if from fatigue, costiveness, or any other circumstance, the womb should be prevented from rising upwards, it will distend backwards; and by its weight the *fundus* of the womb will fall back into the lower part of the *pelvis*, and be lodged in the hollow of the *sacrum*, so that the *vagina* will be pulled back-

backward and upward after it. The bulk of the womb may be felt through the *vagina* and behind it, for it lies between the *vagina* and strait gut; the *os tincae* will consequently be uppermost. This is styled the

Retroversion of the womb.

In the falling down of the womb in the unimpregnated state, it only changes its place, shifting downwards, but still retaining its usual figure. Thus the *os tincae* is the presenting part, though it sometimes sinks so low as to protrude without the *os externum*. But in the *retroverted* womb, the *fundus* being the most bulky, and the heaviest part, always makes the most depending part of the tumour. It is covered, however, with the *vagina*; and in the complete state of the disease, constantly attended with a prolapsus of the *vagina*, which protrudes in the form of a rounded tumour without the *os externum*.

In the beginning of the disease the urine is voided with difficulty; at last there is a total stoppage of urine and retention of stools. The womb, constantly augmented by the increase of its contents, sinks lower and lower, the most violent bearing-down pain and straining are brought on. The throes soon become so violent, that the womb seems as if ready to be protruded without the *os externum*. The openings at the bottom of the *pelvis* give way to the distending cause, in the same manner as they yield to the head of the child in time of labour; and at last the tumour becomes so bulky as to

elude the possibility of reduction*. In these circumstances, from the continued suppression of urine, the bladder is so much distended, that in some instances it hath actually bursted; or by the inflammation of it and the womb rapidly communicating to the other bowels, the woman, exhausted by fever, and the most excruciating pain, loses her senses, and dies delirious or convulsed.

No complaint immediately depending on pregnancy, requires so much attention as the disease just now described. In the beginning, under proper management, there can be no hazard: but if neglected, the utmost danger is to be dreaded; for if the urine cannot be drawn off, and the tumour reduced, death will be the unavoidable consequence.

Little sagacity is necessary to discover the disease; it can only happen in the first months of pregnancy, and chiefly occurs from the third till the end of the fifth month. From the particular make or shape of the *pelvis*, some women are more subject to it than others. Thin spare women, for instance, are much more liable to it than those who are plump and jolly. The most common occasional causes are, fatigue of every kind, as much walking or riding, dancing,

* In a case related by Dr Hunter in London, 4th volume of London Medical Observations, the reduction could not be accomplished even after the death of the woman, and tho' the urine had been drawn off with the catheter, till the bones of the *pubes* were cut through at the symphysis, and forcibly separated from each other.

cing, &c. violent efforts of coughing, vomiting, straining when costive, or to void urine after a long retention.

The symptoms are, 1. Frequent desire, difficulty, or total suppression of urine. 2. *Tenesmus*, or frequent inclination to stool. 3. Violent pain and bearing down of the womb, which, by neglect and fatigue, soon increase, so as to resemble the throes of labour. And, *lastly*, When endeavouring to pass a finger into the *vagina*, a tumour, or rounded swelling, is perceived, which presses down in the time of pain like the head of the child in the advanced stages of labour.

The cure consists in replacing the tumour, and taking proper precautions to prevent its return. When the disease is slight, it is easily remedied; but if there is much pain and bearing down, if it has been neglected for some time, and the bladder much distended, there is difficulty in passing the catheter to draw off the urine, and much more in reducing the womb.

Such cases require the advice and management of the most skilful and experienced of the medical profession; it will be prudent, therefore, for female practitioners to have immediate recourse to their opinion and assistance.

The first part of the cure consists in removing every obstacle which may prevent the reduction. With this view the urine must be drawn off with the catheter, and the *rectum* emptied by repeated emollient glysters. If the parts are so irritable or inflamed, that the introduction

of the catheter gives great pain, fomentations must be first applied, or a bath of warm water used; and if there is much inflammation or fever, the patient should be plentifully bled at the arm.

The reduction of the tumour must next be attempted, by endeavouring to pass two or more fingers, if the whole hand cannot be introduced, well anointed with butter or pomatum, in the direction of the *vagina*, raising the *fundus* of the womb, first backwards, then upwards and forwards towards the *pubes*, so as to favour the return of the *os tincae* to its proper place. This may at first be attempted while the woman lies on her back; but if any difficulty occurs, she must be placed upon her knees, with her head low, and firmly secured in that position. Sometimes there is a necessity for introducing a finger within the *rectum* to assist the reduction. But when the womb has been long out of its place, or is pushed so low as to protrude at the *os externum*; when the symptoms are violent, and the operation of replacing the womb appears difficult; no female practitioner should attempt it, unless the assistance of a surgeon is not likely to be soon procured.

A relapse can only be prevented by confining the woman in bed till the womb, by rising out of the *pelvis*, becomes supported on the broad haunch bones. The belly must be kept open; the urine must be regularly evacuated by the catheter, if it does not pass freely; and the woman must be kept on a light cooling diet, till the dangerous period be over.

2. In the advanced months of pregnancy, costiveness, piles, swellings in the legs, thighs, and *labia*, pains in the back and loins, cough and breathlessness, sometimes also cramps and cholic pains, suppression, difficulty, or incontinency of urine, occur.

Costiveness is a very common complaint during pregnancy. Cholic, stomach complaints, headach, piles, and abortion, are frequently occasioned by it. It should, therefore, be guarded against as much as possible. It is generally to be prevented by a proper regulation of diet; and if that fails, some gentle laxative, suited to particular constitutions and circumstances, should occasionally be employed, as cream of tartar, magnesia, manna, or lenitive electuary.

But to remove obstinate costiveness, repeated glysters ought to be administered. At first they may be given purely simple, as warm water with three or four table-spoonsful of fine oil, or a solution of Castile soap; since it is to the diluting resolving effects of these injections that we chiefly trust. If necessary, some gentle stimulant may afterwards be added, of which about a quarter of an ounce, or half an ounce, of common salt seems to be the best.

The *Piles* are a common consequence of costiveness, and frequently occur in the advanced stages of pregnancy. They are of two kinds, external and internal. In general, they can only admit of a palliative cure during gestation. For this purpose a light, cooling diet,

and keeping the belly moderately open, are the chief remedies. Flowers of sulphur are supposed by many to possess a specific quality for the cure of hemorrhoids: But it is probable their good effects depend on their laxative property only. If sulphur possesses a heating quality, as has been supposed, it may be corrected by mixing half the quantity of cream of tartar with it; and a tea-spoonful thus mixed may be taken occasionally. When piles are external, attended with throbbing pain, heat, and swelling, fomentations and poultices will give relief. If the woman is otherwise disordered with heat and feverish indisposition, she ought to lose blood from the arm; and in some instances the application of leeches to the swelling will be attended with the happiest effects. But such means of relief must be used with caution in the pregnant state. Sometimes the piles break, and a considerable discharge of blood ensues. This evacuation in women of a full habit of body is generally critical; it not only removes pain and inflammation of the part, but proves, in many instances, highly beneficial to the constitution. The bleeding, when moderate, should be promoted by fomentations, poultices, and occasionally sitting over the steams of warm water. It should never be restrained, but when it is excessive, proves of long duration, or the returns are so frequent as to impair the strength.

When the disease is internal, it is distinguished from the former species by the name of *blind piles*.

piles. The only remedies, when attended with pain and fever, are occasional bleedings, gentle laxatives, and a spare cooling diet. Fatigue should be carefully avoided, and the patient should rest often in the day on a bed or couch.

Swellings of the Legs, Thighs, and Labia, are complaints incident only to advanced gestation. They chiefly happen in a first pregnancy, or where the distention of the belly, and consequently the pressure of the womb, is very great. Though troublesome and inconvenient, they seldom prove dangerous, where the habit of the body is otherwise sound. At first they subside in the morning, and return towards the evening; but at last they suffer little diminution from the preceding night's rest. The disease will only admit of palliation till delivery; for which purpose, along with a light cooling diet, and gentle exercise when the woman can bear it, a frequent lying posture, an open belly, and rubbing the legs twice or thrice a-day with a flesh-brush or warm flannel, will prove the most effectual means.

Pains in the Back, Belly, and Loins, are occasioned by the stretching of the womb and its ligaments, or by the pressure of the bulky womb on the neighbouring parts. These symptoms are most troublesome in a first pregnancy, or in twins or triplets. Occasional small bleedings, a proper regulation of the diet, which should be cooling and light, and keeping the belly open, are the best palliative remedies.

If the woman be of a full habit, and liable to inflammatory complaints; if the pressure be very great, as it is in the advanced months of gestation, or when the womb is greatly distended by twins, &c. when proper remedies are neglected, inflammation of the womb or convulsions may ensue, or the womb may actually be torn, and the *foetus* and waters escape into the cavity of the belly; the event of which is always fatal.

Convulsions.—No disease is more dreadful and alarming in appearance than *convulsions*; tho' they are confined to no particular period of pregnancy, they are most frequent and most dangerous in the latter months.

The fits come on very suddenly, generally preceded by pains about the region of the womb, anxiety at the pit of the stomach, and intolerable headach; these are soon succeeded by distortions of the body, foamings, &c. Sometimes the disease terminates fatally in a fit or two. If the woman survives a few fits, and recovers her senses in the intervals, there is less danger. The child is often thrown off by the fits, at whatever period of pregnancy they occur.

As the disease is always attended with the utmost hazard, and frequently kills the woman like a fit of apoplexy, the most skilful of the medical profession must be immediately consulted. Convulsions may arise from the pressure of the womb only, which confines the blood in the upper parts by pressing on the arteries, or from its being too much stretched.

These

These cases are highly dangerous, because they do not often admit of relief till after delivery. It is also evident, that they may arise from frights, violent passions, and too great evacuations, in the pregnant as well as in any other state, and that they are then less alarming; unless when they attend profuse floodings.

The most speedy and effectual means of relief, in the first cases, consist in emptying the vessels by a bold and plentiful bleeding, opening the belly by repeated laxative glysters, and afterwards keeping the woman cool and quiet, and confining her to a spare diet.

If there are symptoms of labour, the membranes should be broken, and the delivery assisted, whenever the circumstances of the case will admit of it.—The relief of every other case, while there is time for it, should be left entirely to the usual practitioner.

Cramps in the legs, thighs, or belly, are very troublesome, and are best relieved by dry rubbing with flannel or a flesh-brush; or by rubbing on the parts camphorated or anodyne balsam, or by the application of *æther*. They frequently arise from the womb constantly pressing on the same part. This is the natural effect of confinement and a sedentary life; and therefore the uneasy sensation can only be removed, or palliated, by frequent change of posture and gentle exercise. To relieve the complaint, when very troublesome in the night, and the belly is not bound, opiates may be given freely.

Cholic pains.—These are sometimes so severe towards

towards the latter end of gestation, as to resemble the throes of labour. When the belly is loose there is little hazard. Small doses of rhubarb, and an opiate occasionally at bedtime, with a proper regulation of the diet, are the most effectual remedies. The diet should consist of rice, beef-tea with rice, light bread, or rice-pudding, and the like, and milk when it does not disagree with the stomach. Acescent and flatulent foods and drink should be avoided. But in those cholics attended with obstinate costiveness, there is always a considerable degree of danger. Inflammation affecting the bowels is rapidly communicated to the neighbouring parts, and the event is often fatal. The cure in these cases, consists in bleeding, emptying the bowels by repeated laxative glysters, and afterwards strictly confining the woman to a spare cooling diet.

If, along with costiveness, she should complain of a violent continued fixed pain in the belly, with fever; if she be of a full habit of body, and glysters give no relief; the event is extremely precarious, and a skilful practitioner ought immediately to be had recourse to.

In such circumstances, the common, though pernicious custom of giving spirits, hot drinks with spiceries, and other stimulating things, must be carefully avoided; for by that means the inflammatory complaints would be hurried on, and the unfortunate termination of the disease accelerated.

Cough and breathlessness, in advanced gestation, arise

arise from the pressure of the bulky womb against the *diaphragm* or membranous partition which divides the belly from the chest. From this cause the cavity of the chest is straitened, the lungs are compressed, and the free motion of the blood and air through them interrupted. Such complaints, it is sufficiently obvious, will only admit of palliation till delivery.

When the belly rises very high, a gentle pressure from the stomach downwards, by a napkin or roller, may be useful. But it is a means of relief that must be used with great caution; for so dreadful are the effects of violent pressure, or tight lacing, during pregnancy, that it often kills the child, now and then the mother; and therefore ought to be guarded against from the earliest months. The woman should be placed in a posture most favourable for the dilatation of the chest: Hence in the night, her head and shoulders should be raised, so that she may be between half sitting and lying. Urgent symptoms are to be relieved by frequent small bleedings. The belly must always be kept open. The diet should be spare; and when the cough is very frequent, and the breathing uneasy, blisters, and the prudent use of opiates, will often procure all the temporary relief which the circumstances of the case will admit of.

Difficulty or incontinency of urine, is occasioned by the mechanical pressure of the bulky womb on the bottom or neck of the bladder.

When

When the belly hangs much over the pubes, a gentle pressure to alter its direction is sometimes useful. Change of posture is also necessary. When there is total suppression of urine, the catheter must be used.

Incontinency of urine is inconvenient; it frets and excoriates the parts, and confines the patient from exercise of every kind. It is occasioned either by the continued pressure of the womb on the bladder in certain positions; or proves the consequence of the fits of coughing, in which case the urine is forced off by starts or dribblings. There is no cure but delivery. An open belly, and frequent change of posture, are the only palliatives. Thick compresses of soft linen cloths or sponge must be applied to the *os externum* to imbibe the moisture. They ought to be retained with a T bandage*, and frequently renewed as they become damp.

SECTION III.

Flooding and Abortion.

BESIDES the complaints now mentioned, others may occur, which, though not immediately produced by pregnancy, are exasperated, and of consequence rendered more dangerous by it, and therefore require a particular

* The T bandage consists of a strip of linen rag for putting round the waste, to which another of equal length is to be fixed at the middle behind, to be brought between the thighs, and fixed to the one before.

ticular attention and management. The treatment of these is the immediate province of medical practitioners. To their advice early recourse ought to be had. Nor should any prudent woman hazard her reputation, where the experience of the most eminent of the faculty often proves insufficient to rescue the patient from threatening danger.

Flooding, and *abortion* or *miscarriage*, are neither confined to the early or later months, but from time to time occur in all the different periods of gestation; the one is a frequent consequence of the other, and the event of either is precarious. In the early months, when the child has little life, a considerable discharge of blood often precedes the expulsion of the *foetus*; and in the later stages, the evacuation is often so considerable as to endanger the mother's life.

No abortion can happen without some degree of flooding; but every appearance or show of flooding does not infalliably terminate in abortion. To give, therefore, an accurate idea of the subjects, they ought to be considered in different articles.

I. FLOODING.

FLOODING is an evacuation of blood from the *uterus* during pregnancy, confined to no regular or stated periods.

The immediate cause is, a separation of some portion of the external surface of the *ovum* from the womb, in the early months; or, in advanced

vanced pregnancy, a separation of some portion of the *placenta*.

The occasional causes of this separation may, in general, be referred,

1st, To those that affect the general health, as external accidents, viz. falls, blows, strains.— Or internal causes, which alter the course of the circulation, viz. fevers, fulness, debility, and every thing which heats or increases the circulation of the blood.

2^{dly}, Those that more immediately affect the womb and its contents ; as,

Diseases of the womb, *placenta*, or *foetus* ; irritation communicated to the womb from distant parts, as violent cough, or vomiting ; diseases of the bladder and intestines occasioning straining in making water, or at stool, &c.

Floodings are seldom attended with danger during the first five months ; yet every appearance of this kind is to be dreaded : for in early gestation, abortion is often the unavoidable consequence ; and after the sixth month, from the size of the womb, and proportional increase of the blood-vessels, the loss of blood may be so great as to endanger not only the life of the child, but of the mother.

When a pregnant woman has been attacked with any degree of flooding, it is difficult to give an immediate check to it, and prevent the threatening consequences, and still more so to guard against a similar accident in future. A flooding is liable to recur on the slightest accident. The least flutter, surprise, or overheat,

is apt to induce it; and in order prevent its recurrence, the woman must subject herself, during the remaining part of her pregnancy, to the most disagreeable restrictions.

How cautious, therefore, ought women to be of their conduct, in carefully guarding against those accidents, which not only endanger the loss of their life and of their offspring, but introduce such a change of constitution, as to render the remains of life, however protracted, comfortless and unhappy? In early gestation, when the adhesion of the delicate *ovum* to the womb is slight and feeble, the most trifling circumstance is sufficient to destroy the connection. The first slip endangers a second; and besides the loss of health, which frequently ensues, there is great hazard that the woman will never after be able to go with child to the full period.

If the flooding be moderate in quantity, without much pain or bearing down; if what is evacuated be pure red blood; if there be no appearance of clots, or of a watery fluid, or of a fleshy skinny-like substance; the discharge may yet, by proper management, be restrained, and the woman be enabled to keep her child to the full time. But in proportion as one or more of the symptoms above mentioned occur, there is hazard of abortion; and in proportion to the repetition of flooding, or of abortion, the danger increases. When the constitution has been much impaired by frequent abor-

abortions, a flooding in the early gestation, as in the fourth or fifth month, may be fatal.

The MANAGEMENT, in cases of flooding, must be varied according to the stage of pregnancy, the occasional cause, and the constitution or habit of body of the woman. Our principal views must be to check the discharge, and support the strength of the patient.

The discharge can only be mitigated by such means as lessen the heat of the body, and retard the motion of the blood; or favour the formation of clots, by which the mouths of the vessels are plugged up.

Rest and tranquillity of mind,—cool air,—a light cooling diet,—occasionally small bleedings at the arm,—the prudent use of opiates, and,—cold applications to the body, are the chief remedies.

Rest and tranquillity of mind—are indispensably necessary in the floodings of pregnant women. On the earliest appearance of that kind, the woman should be put into bed, and confined there till the flooding be entirely removed. She should lie on a hair matrafs, by herself, lightly covered with bed-clothes; company should be avoided; and the tranquillity of her mind ought to be promoted as much as possible.

Cool air—in such circumstances is of the utmost importance; a free circulation should be kept up in the bed-chamber, that the woman may breathe it in full draughts. Nothing will prove more comfortable and refreshing, or more effectual for removing feverish heat, and con-

frequently for lessening the motion of the circulating fluid. From exposure to cold air alone the happiest effects are often produced, and an immediate check is given to floodings of a most alarming nature.

Light cooling diet.—In the healthiest state the pulse rises, and the motion of the blood is somewhat augmented after eating: It is also well known, that some substances have a greater tendency to heat the body, and bring flushings in the face, than others. For these reasons the diet should be spare; little food should be given at once; it ought to be of a cooling nature; and meat and drink of every kind should be taken very cold. How improper then and dangerous is the extremely pernicious, though common practice, of giving red wine warmed with spiceries, with a view to restrain a flooding? From such treatment, what can be expected but that which actually happens? The flooding by that means is kept up till abortion ensues; and if it be in the advanced months of gestation, so profuse a deluge is frequently occasioned, that the unfortunate woman very quickly sinks under it.

Bleeding at the arm.—Few remedies have been more abused, or less understood, than that of bleeding. It may be safely and advantageously practised in the beginning, when the pulse is full and strong; when there is much feverish heat, attended with flushings, headach, or pain in the belly; when the woman is young, strong, and vigorous, and especially when the

disease is the effect of accident; and, at any rate, when the spirits are violently agitated, and the habit appears to be full or plethoric.—But it is improper, and ought to be carefully avoided, when much blood has already been discharged; when there are evident symptoms of approaching miscarriage; when the woman is low, sunk, and dejected, and the pulse small and feeble, however frequent.

Opiates—have a surprising power of lessening nervous irritation and mitigating pain. Whether they have any particular virtue in restraining *hemorrhagies* is doubtful. In floodings the spirits are generally much fluttered, and the whole nervous system in great agitation. To procure a temporary rest and composure is, in such circumstances, of great consequence. With these views opium is a valuable medicine; and its good effects, in many instances, when given with prudence, may be depended on. But it disagrees with some particular constitutions, inducing sickness and vomiting; and in other cases it cannot be given with safety. Opiates are improper when the habit is full, or fever runs high, till the vessels be emptied naturally by the flooding, or by bleeding at the arm. Opium, too, binds the belly. Floodings are increased or kept up by a costive belly; therefore the intestines should be emptied by emollient glysters. They should be perfectly simple, and be administered in a state not more than milk-warm.

Besides the remedies now mentioned, if the flood-

flooding be excessive, cold applications to the *pubes, os externum*, and loins, should occasionally be employed; as thick linen-compresses, the size of a common handkerchief, wet with vinegar and water, which should often be renewed, lest they become warm.

Some practitioners propose to stuff the *vagina* with lint or tow soaked in any styptic liquor: but it is a method which has no particular advantage to recommend it; and, in the pregnant state, the introduction of such irritating substances may do hurt.

When the woman is near her time, and every method employed to check the hemorrhage fails, there is no chance of preserving her life but by emptying the womb by a speedy delivery.

The most dangerous floodings are those where the after-birth is attached at the neck or over the mouth of the womb. From the time the neck of the womb begins to stretch, or the orifice to open, some portion of the *placenta* must, in such circumstances, unavoidably be separated, and a flooding ensue. This case is more alarming than any other; and when there is reason to suspect it, the woman should be carefully examined by the touch. The *placenta* will be readily discovered by its soft pappy feel. Here a few minutes neglect may prove fatal to the unfortunate woman; for her life, and that of her child, depend entirely on a speedy delivery.—How that is to be performed will be explained hereafter.

II. OF ABORTION.

ABORTION, or miscarriage, may be defined 'The premature exclusion of the *ovum* from the *uterus*.' Some still retain the following distinction: If miscarriage should happen in early gestation, they call it an *abortion*; but if it occurs after the seventh month, a period in which the child often lives, they term it a *premature birth*.

The symptoms that threaten miscarriage are,

Flooding.

Pains in the back and belly.

Bearing-down pains, with regular intermissions.

The evacuation of the waters.

The subsiding of the belly; want of motion, and other suspicious signs of the death of the child.

The immediate cause of miscarriage is the same with that of true labour, viz. 'A contracting effort of the womb, in order to expel its contents.' Its more remote causes are,

I. Whatever interrupts the regular circulation, 1. Between the womb and *placenta*; 2. Between the *placenta* and child; or, 3. In the body of the child itself.

II. Every cause which promotes the contraction of the womb.

1. To the former may be referred,

1. A diseased state of the womb, by which

the vessels may be unfit to transmit blood in proper quantity to the *placenta*.

Whatever destroys the connection of the *ovum* in early gestation, or afterwards of the *placenta* with the *uterus*, occasioning partial or total separation, as already enumerated in the causes of flooding.

Diseases in the habit of the mother, and every cause which determines the blood to other parts, as profuse evacuations, &c.

2. Diseases of the *placenta*, as hardness or scirrhusity, dropical swellings called *hydatides* or watery bladders, &c. which render it unfit to absorb and transmit the blood to the child.

Diseases of the umbilical chord, as knots and coils; circumvolutions round the child's body; and pressure, preventing the course of the blood through the vessels.

3. Original diseases of the *foetus*. Accidents peculiar to itself, or communicated from the mother; pressure of the womb on the child's body, when the water is in small quantity, &c.

II. To the latter,

Whatever stretches the neck of the womb, or produces an irritation on its orifice; as, Mechanical injury from bruises, strokes, &c.; agitation, from violent exercise, passions of the mind, &c.; exertion, from vomiting, straining at stool, &c.; frequent venery,—a common cause in early gestation, when the attachment of the *ovum* to the *uterus* is slight*; painful motion and struggling of the *foetus*: By

H 3

all

* See p. 84.

all which an impetus, or push, being made against the orifice of the womb, its contraction will be promoted, and labour-pains brought on.

Abortion may also be occasioned by such causes as determine the blood too suddenly to the womb or neighbouring parts; as acute fevers, shocks from the extremes of unexpected passions of fear and anger.

Lastly, Too great a quantity of water, from its pressure, may destroy the texture of the membranes; which giving way, the *liquor amnii* will be evacuated, and labour soon after ensue: Or even when there is no great quantity of water, the membranes may want that strength and firmness necessary to give sufficient resistance; so that from the slightest accident giving way, labour will from that cause be unexpectedly brought on.

Abortions, unless from frequency of repetition, are seldom immediately dangerous in the first five months; but a frequent habit of miscarriage often lays the foundation of diseases, which, by gradually impairing the constitution, render life comfortless and unhappy.

Falling down of the womb,—*fluor albus*,—frequent or excessive floodings,—diseases of the womb,—hysterical and nervous complaints,—and, in a word, bad health, in the strict sense of the expression, are the common consequence of frequent miscarriage.

The appearance of miscarriages is various. Sometimes the *ovum* comes off entire; sometimes

times it breaks, and the small *foetus* is first expelled, the bag or *placenta* afterwards. Abortions are generally preceded by some degree of flooding: but in some instances, labour-pains come on without any prefaging symptom. When preceded by flooding, if the *foetus* should be expelled before the *placenta*, the flooding frequently continues till it be excluded; which in some cases is the work of many days, or even of several weeks. But when the *ovum* comes off entire, the flooding, for the most part, immediately ceases.

In early gestation the size of the *ovum* is as follows: six weeks after conception, its bulk is nearly equal to a pigeon's egg; in eight weeks, to that of a hen; and in twelve weeks, to that of a goose.

Miscarriage happens much more frequently from the eighth to the eleventh week, than at any other period of pregnancy; a circumstance which suggests a necessary caution to women in the early months.

When threatening symptoms of miscarriage occur, in order to form a proper judgment, every clot or lump that is passed should be immediately put into a basin of cold water, and carefully reserved for future inspection.

The Treatment in Cases of Miscarriage.

THE management must be varied according to circumstances; nor is it possible to give more than general directions, where so great variety of management is often necessary.

Abortion, as has been already observed, is often preceded by no presaging symptom, till the rupture of the membranes, and the evacuation of the contained fluid, or till regular bearing-down pains announce the approaching expulsion of the *foetus*; and the connection between the *foetus* and mother may have been destroyed some time before any appearance of miscarriage is observed: For instance, though in early gestation the woman often miscarries about the eleventh or twelfth week from conception, the *foetus* had perhaps lost its life at eight weeks. And again, in advanced pregnancy, when by some accident the child perishes, perhaps about the fifth or sixth month, it will still be retained in the womb, in some instances, nearly till full time. For these reasons, it is often impossible, either to prevent miscarriage when symptoms appear to threaten it, or to guard against such accidents in future.

As women who have once aborted are very liable to a recurrence from a similar cause at the same particular period, such an accident, in future pregnancies, should therefore be guarded against with the utmost care. On the first appearance of threatening symptoms, the woman should be confined to bed, and kept quiet till every alarming symptom be removed; her diet should be light and cooling; the state of the belly should be attended to. When she is hot and feverish, much fluttered, or pained, a little blood may be taken from the arm, and an opiate occasionally given at bed-time. She ought
to

to be kept very cool and quiet: but excepting so far as it depends on these and such like precautions, little is to be trusted to medical treatment.

Manual aid, that is, assistance by the midwife's hand, is seldom required, or can be practised with advantage, in the first five months of pregnancy.

If the *foetus* hath been expelled, and the flooding should still continue, it is probably kept up by the partial separation and adhesion of the *placenta*. In that case, if the lower part be detached, and can be readily reached by passing a finger within the mouth of the womb, the motion of the finger may promote its contraction; the *placenta* may then be naturally expelled, or the finger may get beyond it, and we may be able to bring it forward. In like manner, when the pains are frequent and grinding, when the woman floods excessively, if the finger can only be admitted within the orifice of the womb, it may be gently dilated in the time of a pain; and afterwards, if the finger can be made to pass beyond the bag of the *ovum*, it may be loosened, disengaged, and scooped forwards: If this method should fail, and the *ovum* can only be reached with the finger, its structure may be destroyed by thrusting the finger through it; when the contents being evacuated, the *foetus* will be expelled, and what remains will afterwards be cast off.— But the former method is more eligible when practicable; for tho' the flooding is in danger of
being

being kept up while any part of the conception is retained, yet it is of consequence to know, that *much mischief* may be done by *officious interference*.

The practice of assisting in the manner mentioned, applies chiefly to abortions from the third to the end of the sixth month; and it is only excusable in cases of excessive or alarming floodings. Great care must be taken not to mistake the projecting *os uteri* for the conception; such blunders have been committed, and the consequences proved fatal.

From the length of the neck of the womb in early pregnancy, the dilatation of its orifice, sufficient to allow the escape of the *ovum*, is often a very tedious and painful process. Glysters, in such cases, often slightly irritate, and promote the expulsion of the conception.

Sometimes when the *placenta* is long retained after the expulsion of the *foetus*, and lies beyond the reach of the finger to be extracted in the manner directed, it will slough off in putrid pieces, and require a week, ten days, or even several weeks, before the whole substance be expelled. It is then attended with an extremely offensive smelled putrid discharge from the *vagina*; sometimes inflammation of the womb itself, sometimes of the *vagina*, with mortification, ensue; and there is danger of putrid fever supervening, the event of which may be fatal. An offensive smelled or putrid discharge from the *vagina*, in cases of abortion, is therefore to be considered as an alarming symptom. It more commonly occurs only in fevers,
or

or when the woman is in a bad habit of body. To prevent disagreeable consequences, the parts should be kept clean, by frequently injecting into the *vagina* warm water, or decoction of bark, with a small proportion of tincture of myrrh; and the bark should be given in substance, in large and frequent doses, as the stomach will bear it.

We cannot, in this place, avoid mentioning a circumstance which sometimes happens.

In cases of twins, or triplets, one conception may be interrupted by the growth of another, and the *embryo* or *foetus* perishing, it may be retained for some time afterwards, and then miscarriage, or the expulsion of that *ovum*, will ensue. The remaining conception may, however, be retained; and the woman, under proper management, be enabled to carry the child till full time.—This suggests an important caution, to be careful in those cases where, though one conception has been expelled, there are *still* evident symptoms of pregnancy; such as, if, in the early months, symptoms of breeding should still continue, the breasts should soon after grow flaccid; if, in advanced gestation, the belly should continue to increase in bulk, with sensation of motion, &c.

When the strength is much impaired from miscarriage, a regimen suitably adapted to the circumstances of the case, with ass's milk, afterwards exercise, change of air and scene, sea-bathing, a course of mineral waters, the use of the bark, and a variety of management, to be regu-

regulated according to the situation of the woman, by the usual practitioner, will be necessary.

In order to avoid miscarriages, we shall next subjoin some

Rules and Cautions for the Conduct of Pregnant Women.

WOMEN, when pregnant, should live a regular and temperate life, carefully avoiding whatever is observed to disagree with the stomach; they should breathe a free open air; their company should be agreeable and cheerful; their exercise should be moderate, and adapted to their particular situation; they should, especially in the early months, when the connection between the *ovum* and womb is feeble, avoid crowds, confinement, every situation which renders them under any disagreeable restriction; agitation of body, from violent or improper exercise, as jolting in a carriage, riding on horseback, dancing, and whatever disturbs either the body or mind.

Attention to DRESS is not less necessary, though much neglected. Nothing is more injurious than the very common, but extremely hazardous custom of confining the breasts, and swathing the belly. It injures the child, and depresses the nipples, so as to render them unfit for their office. Jumps, therefore, should be put on early, and worn constantly.

In a state of pregnancy, an open belly is necessary and important; it keeps the stomach in
good

good order, prevents cholics, and a great many other complaints. The body may, in general, be kept cool, temperate, and open, by a proper regulation of the diet. When that fails, magnesia, stewed prunes, lenitive electuary, or a laxative pill, may occasionally be used.

In the advanced months of pregnancy, when heavy or unwieldy, troubled with pains, cramps, or swelled legs, frequent rest on a bed or couch through the day is absolutely necessary; and in the night the posture of the body should be frequently changed, that the womb may be prevented from constantly pressing on any one part. Moderate easy exercise in a carriage is also useful, and should be continued as long as it can conveniently be employed.

When miscarriage has repeatedly occurred at a particular period, and the child is produced feeble and weakly; when it appears bloated with sores about the feet, fundament, and private parts; or when dead children, with their bodies putrid and spoiled, are brought forth; the fault is probably in the constitution of the mother. Such accidents can only be prevented by knowing and removing the cause; when there is reason to suspect it, both parents should be put under the care of a regular practitioner.

PART II.

LABOURS.

LABOUR is 'the effort of Nature to expel 'the child.' But her operations are not always uniform: for though some labours are strictly natural, and require little or no assistance, others are slow and tedious, difficult and laborious; they require skill and attention, and sometimes the most active efforts to preserve either the mother or child.

Labours are of three kinds,

NATURAL, LABORIOUS, and PRETERNATURAL.

I. In whatever manner the head of the child presents, when the delivery, at full time, is accomplished by nature, and every thing goes favourably on, the labour is, with great propriety, called *natural*.

II. When the birth is protracted beyond the usual time, or requires extraordinary assistance, it is termed *laborious*: And,

III. *Preternatural*, when, in whatever manner the child presents, the head is the last part of the delivery.

CHAPTER I.

Of NATURAL LABOUR.

WHEN the womb is increased to the utmost degree of distention of which it is capable; or, when the neck is entirely obliterated, and the orifice begins to open; the womb will contract, and labour ensue.

The pains are at first slight and transitory; they soon, however, become more constant, and increase in force. They begin about the small of the back or loins, and strike forward towards the *pubes*, and down the thighs. They return at pretty regular intervals. The woman is at first cold, or affected with shiverings; but these are soon succeeded with hot fits, and flushings in time of the pain. On touching, a copious discharge is soon perceived to come from the *vagina*; it is sometimes tinged with blood, and is then called the *red shews*. The mouth of the womb gradually opens, and can be felt to dilate in time of a pain. The waters are collected, and protrude the membranes in the form of a bladder; which expanding more and more by the repeated force of the labour-pains, the orifice of the womb at last becomes completely dilated; the membranous bag gives way; the water is evacuated, which lubricating the passages, the child advances; and by the expulsive force of the womb, assisted by the other powers, which are chiefly the midriff and muscles

muscles of the belly, the delivery of the child and secundines is accomplished.

Spurious or false pains frequently occur towards the latter end of gestation. They ought to be carefully distinguished from those of genuine labour, both on account of the patient and practitioner, that the health of the former may not suffer from being prematurely put on labour, or the patience of the latter be tired out by unnecessary watching.

Spurious pains are generally occasioned by the stretching of the womb, and its pressure on the neighbouring parts; or by costiveness. They are most troublesome in the evening after the fatigue of the day; they frequently increase in the night; they are more trifling and irregular than true pains; they produce no change on the mouth of the womb, and are attended with no increased discharge from the parts. They are often, however, a prelude to approaching labour; which in many women is announced by the following symptoms: *1st*, The subsiding of the belly; that is, a considerable diminution of its bulk. *2dly*, A discharge of *mucus* from the vagina, sometimes tinged with blood. *3dly*, Incontinency, frequent desire, or suppression, of urine. *4thly*, *Tenesmus* or cholic pains about the loins and pubes. *Lastly*, Extreme inquietude and restlessness, with hot and cold fits, when every situation is alike irksome and insupportable; for the woman can neither sit nor stand, walk, nor rest in bed, for any considerable time.

The event of labours is so precarious, that no certain

certain judgment of their manner of termination can be formed, almost from any symptoms, till the progress be considerably advanced. We are chiefly to judge from the force, duration, and recurrence of the pains; from their effect in dilating the mouth of the womb; from the time of rupture of the membranes; from the construction of the pelvis, and the bulk and position of the child's head. The labour promises to be natural and easy when the woman is healthy and not advanced in years; when the pains come on regularly; when the child, at full time, presents properly; when the head is of a moderate size, and the parts of the mother are suitably proportioned. The first labour, for obvious reasons, is generally the most tedious. It is worth remarking, that labour-pains often continue from six to twelve, eighteen, or twenty-four hours: that is, if the woman be not delivered in six hours, the labour will perhaps be protracted for six hours more; if not in twelve, she will then go on nearly to the end of the 18th hour, or to the 24th; and every six hours of pain generally alternate more or less with intervals of ease. The nature and duration of labour is, however, so precarious, and liable to so much variation, even in the same person, that we ought to be cautious in giving any opinion.

The management of women during labour has been much influenced by fashion and caprice in all ages. It is needless to recite the different methods still practised in different countries. The great object is to guard against

cold and fatigue, to reserve the woman's strength and support her spirits as much as possible, and to give all the indulgence which her critical situation stands in need of.

Preparatory to delivery, the make of the bed, and her own drefs, ought to be adjusted.

The best situation for the bed is, to place it in the room at a proper distance from the wall; not in a direct line between the door and chimney, if it can be easily avoided, but in such a situation that the room may be ventilated, without the air rushing on the woman in a stream. The curtains should consist of thin linen, or linen and cotton; they should be kept as clean as possible, and some portion always left open to admit the fresh air, and allow the escape of that which is foul.

A hair-mattress should be placed above the feather-bed; over the mattress a dried skin or piece of oiled cloth ought to be laid; above it a pair of clean sheets is to be spread in the ordinary way; over which another pair of sheets must be applied across the bed, folded lengthwise, in form of a roller, with their ends tucked in at the sides of the bed; and an old blanket and sheet are to be folded in a square form, and put under the woman's breech, that on removing them after delivery the bed may be dry. The whole may be secured from sliding by means of a needle and thread.

The under sheet at the fore side of the bed should be pressed in; and the upper sheet, when turned over the bed-clothes and outer

covering, and secured by means of a needle and thread, will be a proper direction for the hand of the operator.

The dress of the woman is chiefly confined to a half shift, linen skirt, and light bed-gown.

The *position for delivery* need not be peculiar, till the mouth of the womb be pretty much dilated; she may then be laid in bed, on her back, her head and shoulders being raised by pillows, and her knees drawn up to her belly: Or, what is preferable, she may be laid upon her left side, with her breech brought forward towards the edge of the bed, her head a little obliquely to the opposite side, and her knees kept separate by placing a folded pillow between them. But when the labour turns out tedious, she ought not to be confined very long in any posture.

Some prefer being delivered on a couch, or small bed, which, moving by castors, can afterwards be brought close to the other bed, where every thing is ready prepared for the woman's reception after delivery.

FIRST STAGE.

THE dilatation of the parts, which is the *first stage of labour*, should be trusted to Nature, except when floodings are dangerous. It is necessary, however, to examine by the touch, to obtain information, 1st, Whether the pains be genuine; 2^{dly}, What kind of labour it is; 3^{dly}, How the parts are formed. And it is necessary to repeat the examination from time to time, to observe the progress of the labour.

But this must be regulated by the particular circumstances of the case. In the beginning, the woman should be seldom touched. It ought to be done with delicacy and gentleness, insinuating the fore-finger of the right hand, well lubricated with pomatum or butter, into the *vagina* in time of a pain, and cautiously carrying it, first backward towards the *sacrum*, to feel for the orifice of the womb, and then upwards and forwards towards the *pubes*, to learn how the child presents. If the finger can be admitted for some way within the orifice, and if it appears thin, soft, open, and dilatable, and any part of the membranes, or of the child's head through them, can be perceived, especially if the orifice be observed to dilate in time of the pain, and the membranes, or child's head, to push downwards, the pains are genuine, and labour is actually commenced. But if the orifice of the womb be, with difficulty, reached; if it be hard, and still retains something of the figure of a tubercle or nipple; or though it should be so open as to admit the finger, if the opening be continued only for a little way, and neither any part of the membranes or child can be felt through the orifice; the pains are spurious. *superficial*

If the pains come on slowly, and while they recur at distant intervals, there is little necessity for repeating the touch. The parts are, at first, narrow and contracted; there is little secretion of moisture; the mouth of the womb is at a considerable distance, often cannot be come at
by

by a practitioner of experience; and frequent touching, according to the rude practice of those who are ignorant of the structure of the parts, readily brings on swelling and inflammation; which, if the labour should be slow, may be attended with very disagreeable consequences.

There is little occasion for repeating the touch, till the pains become strong and frequent, and the membranes push down, or protrude, in the form of a bladder.

With regard to actual assistance, little ought to be done, but to apply a warm cloth to the *os externum*, till the first stage be accomplished, or till the membranous bag spread out at the *os externum*, or the waters be evacuated, and the head of the child be advanced at the bottom of the *pelvis*, so low as to press against the *perinæum*.

In time of labour the woman should be kept very cool. If there be time for it, the intestines should always be emptied by giving a simple glyster, and repeating it as often as may be necessary. As few assistants as possible ought to be near the patient, that she may not be disturbed with their noise, or over-heated by crowding about her. When the mouth of the womb is opened about the breadth of half a crown, she may be put in the proper position for delivery; and her hands and feet supported, during the pains, by something against which she may rest. Her back, when uneasy, should also be supported, either with a bolster

or pillow, or by pressing with the hand of an assistant. All efforts to press down, except those of Nature, ought to be discouraged. And the membranes must be carefully preserved till they spread out like a bag or bladder, and protrude at the *os externum*: for they gently stretch and moisten the parts in a manner which we cannot imitate; and if the waters escape too soon, the passages become dry, and the labour painful and tedious.

When the mouth of the womb is so much enlarged, that no part of the orifice can be felt, the soft parts are sufficiently dilated. This completes the first stage of labour; and in a natural easy delivery, under proper management, it generally requires from four to six or eight hours.

SECOND STAGE, *Delivery of the Child.*

WHEN the membranes continue entire till they protrude at or near the *os externum*, and the mouth of the womb is so much dilated that no part of the orifice can be felt, the membranes may be broken with safety; the head of the child then descends into the hollow of the *sacrum*, often by the force of the next pain, and the birth quickly follows. Some women have one continued bearing-down pain, from the bursting of the waters till the child be completely delivered; others have a remission of pain for some time after; and some incline to sleep for several hours, till awakened by the return of pains: but in general, if the parts be properly prepared for the passage of the child,
and

and if no obstacle prevents, by a few strong pains the child is excluded.

Therefore, when the first stage of labour is nearly accomplished, the midwife ought to watch with unremitted attention, and should examine in time of every pain, since it may then be done without any inconvenience to the woman. An attentive practitioner will readily observe the progressive advance of the child by the force and violence of the pains which frequently occasion an universal trembling or shivering, from the irritation of the child's head on these nervous parts; so that the woman can scarcely refrain from crying out. We are also assured that the head quickly advances by its pressure against the bottom of the *pelvis*; for the *perinaeum* begins to stretch, the fundament to be dilated, and the top of the child's head to protrude a little through the external orifice.

The parts are then so violently overstretched, that if the *pelvis* be well proportioned, and the pains strong and forcing, the head of the child may be propelled so suddenly as to tear the whole of the *perinaeum*, if the proper assistance should be neglected. Instances have actually happened, in which, from neglect of the necessary support, the child has been born through the *fundament*.

The management at this period of the delivery is an important part of the midwife's task, and should be attended to with the strictest care. From the time that the head

begins to bear upon the soft parts at the bottom of the *pelvis*, a little butter or pomatum may be gently rubbed on the *perinæum* and *labia*, and occasionally repeated as the dryness or rigidity of the parts require. For though, in a strictly Natural labour, nature may be generally trusted, yet in particular circumstances some variety of management is necessary.

When the *perinæum* is considerably stretched, it may be supported by the palm of the hand, to press gently against it in time of a pain; but it should be so regulated, as neither to interrupt nor officiously to assist the progress of the birth, which is to be considered as the work of Nature. A cloth smoothly folded, like a thick compress, and large enough to cover the whole *perinæum* and *fundament*, should then be employed. By this support, the overstretching of the *perinæum* will be lessened, the sensibility of the parts somewhat diminished, the passages gradually opened, and the head of the child will advance through the *vagina*, in a safe, slow, and gentle manner. The only caution necessary to be here observed is, to avoid pressing too early or violently; for in a first labour, or when the parts are very dry and rigid, the stretching of the *perinæum* may be the work of several hours; but in those who are in the frequent habit of bearing children, and who have generally easy labours, it is often accomplished by a few pains.

When the head is completely protruded through the external orifice, the *perinæum* must
be

be released, by cautiously sliding it back over the face and chin of the child; and this ought to be further ensured by passing a finger below the chin, and so moving it round and round. After a pain or two, the shoulders and body will follow; nothing more, for the most part, being necessary, but to support the child, by applying the hands at either side of the head, while it is gradually pushed forward by the expulsive force of the natural pains. Though five minutes, or more, should be requisite for delivery of the body, after the head is protruded, no matter; the child seldom suffers from the delay. The shoulders generally accommodate themselves to the shape of the basin, and turn towards the *pubes* and *sacrum*, when the delivery is trusted to Nature; whereas if art interposes, the extraction is accomplished with difficulty, and the mother, as well as the child, in some degree suffer*.

As the shoulders advance, the midwife must gently shift her hands, lay hold of the child's body, and draw it forwards in a direction towards the *perinæum*. After the shoulders pass, the rest of the body slides out easily.

The child being delivered, and laid on its side, with its back to the mother, at a little distance from her, to prevent any accident from a gush of blood, water, &c. getting into its mouth, a soft warm cloth should then be applied over the *pubes* and *os externum* of the mother.

When

* See Mr White's Treatise on the Management of Pregnant and Lying-in Women, page 105.

When the child has cried, breathed freely, or otherwise discovered signs of life, the navel-string should be tied and divided, the infant wrapped in a warm shirt or receiver, and given to the nurse or assistant.

The best ligature for tying the navel-string is, narrow tape, knitten, or several threads waxed together. Small cord or thread rather cuts than secures the vessels; and threads of worsted, very commonly used, often separate. A narrow tape of five or six inches long should be applied about three fingers breadth from the belly of the child, twisted round and tied leisurely, in two or three knots; the navel-string should afterwards be cut at a little distance from the ligature, lest the knot should slip. The ligature should be tight; and if done in the dark, care must be taken not to wound the child when the string is cut. For the sake of cleanliness, two ligatures are sometimes used; the cord is then to be cut between them.

The delivery of the child, after the passages are dilated, is the *second stage* of labour.

THIRD STAGE, *Birth of the Placenta.*

§ 1. *General Management of the AFTER-BIRTH.*

NATURE generally does the business by the spontaneous contraction of the *uterus*; for in proportion as it diminishes in size, the after-birth is gradually disengaged, forced down lower and lower, and at last entirely expelled.

Immediately after the child is born and removed, the midwife should steal her hand under

X 503 The best & most rational method is under
have to divide the funis, till the circulation is

under the bed-clothes, and press gently on the woman's belly; by this means the contraction of the womb will be promoted, the midwife will become acquainted with its manner of contraction, readily discern when there is any other child, and learn the proper time of assisting the expulsion of the after-burthen.

When the bulk of the belly is considerably lessened; when the contracting womb has shifted its position, and can be perceived like a hard round ball at or below the navel; or, when the woman complains of a grinding or griping pain; then is the time to give assistance. In most cases, this happens from ten minutes to half an hour after the delivery of the child. The *placenta* adheres most firmly in premature births; when the woman has been in bad health during pregnancy; in lingering or difficult births; or when hasty attempts are made to extract it. It is most easily and quickly separated in a first birth, when the woman is in good health, and when the labour has been properly managed.

The method of assisting the separation and expulsion, is to take hold of the *umbilical chord*; twist it, first round two fingers, then over the whole fingers of the left hand, close to the *os externum*, pulling gently from side to side, and backwards towards the *perineum*, taking the advantage of a pain, if it comes, and desiring the woman to press down moderately; but all violent exertions should be avoided; for by coughing, retching, sneezing, &c.

&c. dangerous floodings may be brought on. We know it advances by the lengthening of the chord, and the bearing down or straining of the woman. When the broad bulky part of the cake comes to the *os uteri*, it generally stops, and often meets with considerable resistance. This may be removed by pressing a finger or two of the right hand, guided by the chord, within the orifice of the womb, till the thick central part of the *placenta* be felt, from which the fingers must be made to pass till they reach the edge; or by giving a little time, pulling gently at the chord with the left hand, and pressing on the body of the *placenta* in a proper direction with the fingers of the right, the edge can generally be brought down; which must be grasped firmly in the hand, and the whole cautiously extracted, put in a cloth or basin, and removed.

Nature, however, is not infallible in her operations, nor can the *placenta* always be extracted by pulling at the chord.

It is therefore necessary, on several occasions, to introduce the hand into the *uterus* to remove the *placenta*: As for example,

1st, In cases of flooding.

2^{dly}, When the chord is torn from the cake; or,

3^{dly}, When it is retained beyond the usual time, either by the contraction of the womb; or,

4^{thly}, By the uncommon adhesion of the cake.

§ 2. *Management of the CAKE in Cases of FLOODING.*

HERE there is a partial detachment; and if the *uterus* be not emptied of its contents, by which only it can be put in a condition to contract, and stop the bleeding from the vessels, the discharge will be dangerous and fatal; therefore, when the woman floods, the *placenta* ought immediately to be removed. The hand of the operator should be gradually, but with a certain degree of courage and resolution, introduced into the *uterus*, taking the navel-string for a guide, and gathering the fingers together in a conical manner. If the *placenta* seems attached to the opposite side, the hand already introduced must be withdrawn, and the other passed in its stead; or if, from its adhesion towards the upper part of the womb, it appears to be without the reach of the hand, the position of the woman must be altered, and she must be shifted from one side to the other, from the side to the back, cross the bed, or placed on her knees and elbows, according to the particular circumstances of the case.

The *placenta* can be readily distinguished from loose clots of blood by its firmness; and from the womb, by its softness and want of feeling. It may be disengaged, by insinuating the fingers between it and the womb, through the membranes, when the separated edge of the cake can easily be come at. If it cannot, the thick middle part of the placentary mass should be grasped firmly, spreading out the fingers, and

and gathering them together upon it; and in that manner gradually endeavouring to disengage and bring it away. It is dangerous to strip or peel it from the womb, by placing the fingers on the outside of the membranes, as authors generally advise; for by that means, where the womb has lost its contractile power, a fatal deluge may ensue.

§ 3. *Management of the CAKE when the CHORD is torn or putrid.*

NEARLY the same method should be followed, only allowing a longer time for the contraction of the womb. By such prudent conduct, little will probably be left for art to perform.

When there is no rope left for a direction, the hand must be slowly passed into the *uterus*, and the ragged membranes round the edge of the *placenta* searched for. If it cannot be brought by the edge, let the hand be conveyed from the edge to the thick puckered centre; and by spreading out the fingers, then bringing them together, so as to grasp the *placenta* in the palm of the hand, and repeating the same again and again, the separation of the whole substance of the cake being accomplished, let it be brought down and removed.

§ 4. *Retention of the AFTER-BIRTH by the unequal Contraction of the WOMB.*

THE mouth of the womb may be too much contracted, or the cavity of the womb may be
con•

contracted in the middle like a sand-glass, and retain the cake.

Having waited a considerable time, and repeatedly failed in attempting in the ordinary way to extract it, let the hand be introduced, in a conical manner, within the *uterus*; and having gradually overcome the resistance, let the *placenta* be carefully separated and extracted.

If insurmountable difficulties occur to prevent the hand from reaching the *placenta*, and the contraction cannot be overcome in the common manner, the hand should be withdrawn, the belly fomented, and thirty or thirty-five drops of laudanum given. When the woman has rested for some time, several hours perhaps, (which she may safely be allowed to do if she does not flood), is composed, begins to be drowsy, or affected with after-pains, the hand will then readily obtain admittance, and the extraction be safely accomplished.

§ 5. *Retention from the uncommon Adhesion of the CAKE.*

WHEN the *placenta* is diseased, the cake, in some instances, seems to grow to the womb like moss to a rock. This, however, seldom occurs: but in that case force must never be used; for we may tear the womb, and at least bring on inflammation and mortifications. We must attentively examine the cake; and if there is any portion loose, must endeavour to bring it away; the rest must be left to Nature

ture to be expelled with the cleanings, or by means of suppuration.

Adhesions of the *placenta*, from diseased *scirrhusity*, always threaten some degree of danger; for though what adheres slightly be detached from that portion in contact with the *uterus* with the utmost possible caution and dexterity, and with all the expedition the circumstances of the case will admit; yet before that process be accomplished, from the vast destruction of blood-vessels a fatal deluge may ensue. Where the event is so precarious, practitioners should be cautious of giving an opinion, and midwives of interfering.

Female practitioners, unless the woman be in danger from flooding, ought, in all cases of difficulty and danger, to avoid combating with obstacles insurmountable by ordinary means; and should, without a moment's delay, call in an experienced surgeon.

Upon the whole, it may be observed; that it is alike hazardous to interrupt or counteract Nature in her efforts, or to neglect the proper and critical time of giving assistance.

The rash and indiscriminate practice of precipitating the extraction of the after-birth has been fatal to many thousands. An error so dangerous should therefore be guarded against with the utmost care. By employing sudden or violent efforts to bring it away, by pulling at the chord, profuse floodings, laceration, or inversion of the womb, and afterwards incurable *prolapsus*, with their consequences, may be occasioned. I have known many melancholy

choly instances of such misconduct.—The scenes that followed are too tragic to be related; nor could the address of the most skilful of the profession prevent the fatal event that soon ensued.

On the contrary, if the *placenta*, either wholly or in greatest part, be retained, and nature should fail to expel it, unless it be removed by art the consequences will be fatal. For in that state, without circulation, it will in a few days become putrid; the putrefactive process, continually augmented by the stagnation of the lochial blood, will be readily communicated, first to those parts in immediate contact, as the *womb* and *vagina*; from whence inflammation and mortification will be produced; afterwards, from the absorption of putrid matter, the mass of blood will be affected: hence the most malignant species of childbed-fever will supervene, and death at last close the scene.

It ought therefore to be a rule with every practitioner who regards her own character, and the important life of the patient, never to take her leave till the woman be delivered of the after-birth, and composed for rest.

CHAPTER II.

LABORIOUS LABOURS.

LABORIOUS Labours, which make the second class, are,

1. Tedious or lingering.
2. Difficult or laborious.

SECTION I.

Lingering Labours.

FROM the impatience and anxiety of the labouring woman, or the ignorance and officiousness of those about her, lingering labours prove more troublesome and distressing to the patient, and more perplexing and vexatious to the practitioner, than any other. They occur very frequently; and require skill, address, and the most indefatigable patience, in the management.

Labour may be protracted, or the labour-pains interrupted, by obstacles arising from,

- I. The mother.
- II. The child; or,
- III. The membranes, water, chord, or *placenta*.

§ 1. *Treatment when occasioned by Complaints in the*
MOTHER.

IN the mother, tedious labours may proceed from,

- 1. General complaints, as
 - Cholic,
 - Nauseating sickness or vomiting,
 - Flooding,
 - Cramps,
 - Lowness and faintness,
 - Convulsions.
 - Feverish indisposition
 - from inflammatory fulness,

Hætic

Hectic or consumptive habit,
 Passions of the mind,
 Improper treatment.

2. Local complaints in the parts, and their neighbourhood; as,
 Narrowness of the *pelvis*,
 Thickness and rigidity of the mouth of the womb,
 Dryness and contraction of the *vagina*.
 A diseased state of the parts, from
 Swellings or ulceration;
 Prolapsus of the womb, *vagina*, or strait gut;
 Stone in the *urethra*;
 A collection of dried excrement in the *rectum*.

I. GENERAL COMPLAINTS.

1. *Cholic*.—Pregnant women, from the pressure of the bulky womb, and other causes formerly mentioned, are subject to costiveness; and particularly towards the latter end of gestation, the pains occasioned from it are often so distressing as to resemble real labour. Many women have severe attacks of cholic immediately previous to labour; the reason of which is sufficiently obvious. The belly, which formerly rose so high that the *fundus* of the womb pressed against the pit of the stomach, afterwards subsiding, by the child sinking to the lower part of the womb, and the oval of the head being applied to the oval of the basin, the contents of the intestines will be forced

lower and lower, and the strait gut be distended. Hence cholic pains, irritation and uneasiness, a frequent desire to go to stool, or frequent loose stools, generally ensue. The best palliative remedy is, to inject emollient glysters repeatedly till the bowels be entirely emptied. Although some degree of purging should attend the *tenesmus*, it will be necessary to wash the strait gut, by the use of one or more warm-water glysters. The irritating cause being in this way removed, an opiate, if no inflammatory heat or fever prevents, may be afterwards given with advantage.

2. *Nauseating sickness with vomiting*.—When these symptoms occur, warm water or chamomile tea should be drank freely. Sickness and vomiting in some degree happen in the easiest labours. Sometimes they proceed from a disordered state of the stomach; but in general, are to be accounted for from the well known sympathy of the womb with the stomach, and accompany the stretching of the *os uteri* only.

3. *Flooding*—in advanced gestation is always an alarming symptom: but if labour be commenced, the danger is less; for as the pains increase, the bleeding generally abates; if it should not, the contraction of the womb may be promoted by breaking the membranes, when the orifice of the womb is dilated about the breadth of a half-crown piece. This expedient seldom fails to give an immediate check to the flooding. When any appearance of flooding occurs, the woman must be kept very cool, and

an opiate may occasionally be given to remove pain or uneasiness. She ought to be encouraged with the best assurance of a happy delivery, and the natural pains should be waited for. But if the discharge of blood proceeds from the separation of part of the *placenta* attached to the neck or over the orifice of the womb, which may readily be known by a careful examination by the touch, it is an alarming circumstance: in that unhappy situation, the flooding will increase with labour-pains; for in the same proportion as the mouth of the womb dilates, the after-birth will be more and more detached, and may be entirely disengaged before the orifice of the womb be sufficiently opened to allow the child to pass. In a situation so critical and alarming, the earliest assistance of a skilful practitioner should be procured; for there is no other method of preserving the woman and child but by an expeditious delivery*.

3. *Cramps*—in the thighs, legs, more rarely in the belly, are very troublesome to some women. They proceed chiefly from the pressure of the head of the child on some particular nerves in the *pelvis*, and can only be removed by delivery. But as these pains, however severe, are never dangerous, it is not adviseable to force the delivery,

K 3

livery,

* See this important subject farther explained in the 3d general cause of Laborious Labours, under the article *Improper attachment of the Placenta*; and in class 4th of *Præternatural Labours*, under *Method of delivery in turning cases*.

livery, in any other manner than by breaking the membranes, when readily within reach. Opiates sometimes give relief.

4. *Lowness and faintness*—happen chiefly to women of weak nerves, or those whose health is impaired by former sickness, or by mismanagement. They accompany the first part of labour only; but when the strong pains come on, the woman recovers her spirits, and acquires vigour and resolution.

If lowness, dejection, and debility occur, from whatever cause, the chief object to be aimed at is, to regulate the management in such a manner, that the woman's strength may be supported, and her spirits kept up. She must not be put on labour too early; she must avoid heat, fatigue, and every means of exhausting her bodily strength or spirits. If the pains be trifling, or without effect, if she be restless, anxious, and dispirited, opiates are particularly indicated. They remove spurious or grinding pains, procure rest, and amuse her during the tedious and painful time. Little else, for the most part, is to be done. If the *uterus* once begins to dilate, though the progress goes on slowly, it is by much the best and safest practice, to trust chiefly to a proper regulation of management. The pains at last will become strong and forcing; and the delivery, even where the woman has been very weak, will often have a safe and happy termination.

5. *Convulsions*—often occur during labour in
those

those cases where the woman had been subject to them when pregnant, and in some instances they are fore-runners of labour itself. They may arise from fulness, when the woman has been over-heated by stimulating food and drink, confined air, or other mismanagement; or they may proceed from irritation, by the stretching of the mouth of the womb, or the contracting of the womb itself to expel the child; for sometimes, though rarely, the womb bursts, from the violence of the labour-throes, and the child escapes into the cavity of the belly.

When the fits are slight, of short duration, recur at distant periods, and the woman is sensible during the interval, there is less danger. But when they come on suddenly, when the face is frightfully distorted with foamings, &c. when the fit continues long, or recurs often, leaving a total stupor behind, the most unhappy event is to be dreaded.

Sometimes the child is thrown off in time of the fits; and in some instances a single fit or two prove mortal.

Bleeding, laxative glysters, and cool air, are the chief remedies. When it can easily be done, delivery should be assisted, and the earliest recourse should be had to the assistance of a skilful surgeon.

6. *Feverish indisposition from fulness.*—Fever always retards labour from the debility which constantly attends it. In robust young women, the muscular parts are tense and rigid, and the passages stretch slowly. Bleeding, an

open belly, cool air, and a cooling regimen, are in such circumstances absolutely necessary. If they be neglected, dreadful convulsions may ensue; or a fever begun with labour, may afterwards end fatally.

7. *Hætic or consumptive habit*—It is a melancholy scene to attend a labouring woman in this state. The pains are weak and trifling; she cannot force much down; she is feeble, and liable to faint when the pain goes off. But, however apparently exhausted, the progress of labour goes on, in most cases, much better than could well be expected. The orifice of the womb gives little resistance to the force of the pains, weak and trifling as they are; the parts are soft and lax, and soon stretch in such a manner, that if there be no fault in the *pelvis*, the child readily obtains passage.

Here little is to be done but supplying the patient from time to time with light nourishment; with cordials that do not heat; and keeping up a free circulation of cool air all around her: For this purpose the bed-curtains should be quite drawn aside, doors and windows widely opened, and she should be placed in a position, with her head and breast well raised, that an easy respiration may be promoted.

Hætic women, under proper management, rarely sink immediately after delivery; they generally survive a week or longer, though they seldom outlive the month.

8. *Passions of the mind*.—Any piece of news, in which the woman, her family, or relations,

are interested, whether good or bad, should be carefully concealed, and every circumstance that tends in general to affect the passions; as labour may not only, by that means, be interrupted, but the most dangerous symptoms, as floodings, convulsions, faintings, and death itself, prove the consequence.

9. *Improper treatment.*—Fever and excessive debility are often occasioned from mismanagement, the effects of which, by exhausting the strength, and weakening the force of the pains, are sufficiently obvious.

It is of great consequence, and the advice cannot be too much inculcated, to avoid exhausting the woman's strength in the beginning. If she considers herself in labour from the earliest appearance of those grinding pains which often precede genuine labour for several days, she will be justly alarmed at the slow progress, and frightened at the length of time which still remains: Impatience, anxiety, and despondency will at last succeed, till her strength and spirits be nearly exhausted*.

On the part of the mother, the progress of labour may also be prevented, by

II. LOCAL COMPLAINTS IN THE PARTS AND THEIR NEIGHBOURHOOD; as,

1. *Narrowness or distortion of the bones of the pelvis.*—Where there is any material defect in this cavity, a proper knowledge of the conformation and structure of the parts will enable the

* See the article Lowness and Faintness, page 150.

the practitioner to judge. If, from the figure or appearance of the woman's body, there is reason to suspect a faulty *pelvis*; if the spine be twisted, the legs crooked, the breast-bone raised, or the chest narrow; whether the *pelvis* be affected or not, she will require a particular management; for the constitution of such women is generally weak and feeble, and they cannot be much confined to bed on account of their breathing. Therefore recourse should soon be had to the advice of a regular practitioner.

The *pelvis* (as particularly explained under the article of *Distorted Pelvis*), may be faulty at the brim, bottom, or in the cavity or capacity. The first of these, which occurs oftener than any other, is most difficult to discover.

The second can be readily perceived by the touch; for we can feel the defects in the shape of the *sacrum* and *coccyx*, in the position of the *ischia*, and in the bending of the *pubes*; and where the distortion is so general, that the whole cavity of the *pelvis* is affected, the shape of the woman's body, the slow progress of the labour, and the state of the parts to the touch, will afford sufficient information.

In the first case, we can only know the distortion by the symptoms; for we should not attempt to introduce the hand till the mouth of the womb be dilated: it is afterwards unnecessary; for we know that the *pelvis* is too small, or the head of the child too large, by its not advancing in proportion to the pains, and by feeling a sharp ridge like a sow's back on
the

the top of the child's head, which is occasioned by the bones rising over each other in consequence of the pressure.

How long Nature in such circumstances can support the conflict, is difficult to say. It is sufficient to observe, that when things are properly prepared for the advance of the child, when the first stage of the labour is accomplished but its progress is *then* suspended, it is of little consequence to the midwife whether the obstacle is to be referred to the child or the mother. Female practitioners should carefully avoid the hazardous extreme of too long neglecting that assistance which may relieve them from much embarrassment, and preserve the labouring woman from threatening danger. By such prudent conduct, a woman of merit and understanding will recommend herself to the confidence of those who employ her, and those reflections be prevented, which, though in many instances ill grounded, have in others been the reproach of female practitioners; for, if the strength of the labouring woman begins to decline, if the head of the child has been long confined, or wedged, as it were, in the bony passage; if the genital parts begin to swell, and the urine be suppressed; the longer the proper means of expediting delivery be neglected, there is less chance of preserving the life of the mother or child; and the midwife is culpable for her neglect or misconduct. But, on the contrary, she ought not to betray that timidity, impatience, or distrust, which may alarm her
patient

patient unnecessarily. She should form an opinion from an attentive consideration of the circumstances of the case, and should guard against being imposed upon, either by the anxiety and impatience of the distressed woman, or by the noisy clamours of the impertinent attendants.

2. *Thickness and rigidity of the os uteri.*—This is one of the most common causes of lingering labours; it chiefly occurs in elderly women, in strong robust constitutions, or where the intervals between child-bearing have been distant. If the orificium uteri, instead of kindly opening with the pains, and becoming thin, soft, and dilatable, should form a thick ring or flap, stretch slowly, and the pains are frequent but unprofitable, a tedious labour may be expected. Warm-water glysters, injections of warm oil into the *vagina*, and the vapours of warm water, after the waters have passed, are the only means of relief; for it is difficult and dangerous to stretch the mouth of the womb with the fingers. But, though the labour be lingering, if we have patience to wait on Nature, we shall generally find her efforts sufficient; for, in a first labour, or when the woman is advanced in life, and the parts are dry and rigid, from 36 hours till three days may be required for the dilatation of the orifice of the womb; yet, if the management be properly regulated, neither the mother nor the child will be in danger, and the mother's recovery will perhaps go on as favourably as if the delivery had been accomplished in a few hours.

3. *Dryness*

3. *Dryness and constriction of the vagina.*—The disadvantage of these contractions in the soft parts chiefly is, that the head of the child is detained for some time from advancing without the *os externum*, after it has passed through the bony cavity. But the child seldom suffers; and when in hazard, can seldom be saved without injuring the mother. Warm fomentations to soften the parts, not to heat the body, may in these cases be used, and oil or *pomatum* applied: but it is of the greatest consequence that the parts should stretch slowly; so that we ought not to hasten the stretching by any manual application.

4. *A diseased state of the parts.*—A prudent sensible woman, who has been regularly instructed in the art, will readily discover any deviation from the natural state of the genital parts, and should take the earliest opportunity of giving notice, that the necessary assistance of a skilful surgeon may in proper time be obtained.

5. *Swelling, inflammation, or ulceration of the vagina*—may proceed from various causes. In a diseased state of the parts, the throes of labour will be more severe, but there is seldom difficulty or danger from it. Oedematous swellings, that is, those which pit to the touch, extending from the legs and thighs to the *labia*, incident to the last stages of pregnancy, however formidable in their appearance, very seldom prove the cause either of interrupting or preventing delivery.

Sores or ulcers from a venereal cause will give great pain in time of labour ; but the disease is now so well known, that if a pregnant woman be so unfortunate as to receive the infection, she will hardly think of neglecting to take advice, or of applying the proper remedies, till the term of lying-in.

From previous ulceration or laceration of the *os uteri* and *vagina*, disagreeable constrictions happen ; but they are frequently overcome in time of labour. There are many well attested instances, where, at the commencement of labour, it was utterly impossible to pass a finger within the contracted orifice of the *vagina* ; yet the parts dilated as labour increased, and the delivery terminated happily. In some cases, the dilatation begins during pregnancy, and is completed in time of labour.

Unnatural tumours about these parts require the aid of surgery.

6. *Prolapsus of the uterus, vagina, and strait Gut.*—In a *pelvis* too wide in its dimensions, the womb at full time may descend into the *vagina* by the force of the throes of labour, though such cases very rarely occur. The only treatment is to support the womb well by pressure with the hand in time of the pain, that the stretching of the parts may be gradual.

The *vagina*, in weakly women, often prolapses in time of labour, and is protruded before the child's head by the force of the pains. If this happens, it must be replaced in the absence of the pain, by gentle pressure with the fingers,

fingers, introduced in a proper manner and direction, and its return afterwards prevented.

7. *Prolapsus of the gut*—must be treated in a similar manner; its protrusion may be prevented by pressure with a thick linen compress applied over the fundament, and retained with the hand in time of the pain.

8. *Stone in the urethra.*—In those women subject to gravelish complaints, a bit of stone thrust forwards, by the force of labour, from the neck of the bladder into the urinary passage, will occasion difficulty, pain, or suppression of urine, and may, if not removed, prove an insurmountable obstacle to the progress of labour. If it cannot easily be pushed back, by introducing the catheter, a surgical operation must be had recourse to.

9. *Hardened excrement collected in the strait gut*—frequently proves an obstacle to labour; for the contents of the gut form a large tumour, which can be readily felt from the *vagina*, and diminishes its cavity. This tumour has been sometimes mistaken for the child's head; but the mistake is soon discovered by a skilful practitioner, for it is removed by frequent glysters.

§ 2. *Treatment of lingering Labour, when depending on the CHILD.*

The protraction of labour may depend on the child, and may arise from,

1. The bulk or solidity, or
2. The unfavourable position of the head.

I. THE

1. THE BULK OF THE HEAD.

There may be either a natural disproportion between the head and body, or the swelling may be occasioned from a collection of water in the head, or be the consequence of the child's death.

From the structure and make of the *pelvis* and head in a natural state, it is evident that a head of a larger size, having the bones soft and moveable, will pass through the *pelvis* with less difficulty, and occasion less pain in the birth, than a smaller head, having the bones more solid, and the sutures more firmly connected. A large head may be suspected when the *vertex* does not lengthen out by the force of the pains, (as it commonly does in lingering labours), when the progress of the labour is suspended, though the pains continue to be strong and frequent after the soft parts are sufficiently dilated; when the woman is in good health, and there is no other apparent cause to account for the protraction.

When the swelling proceeds from a collection of water in the child's head, it may be known by the head presenting at the brim of the *pelvis* in a round bulky form, by the distance between the bones of the head, and by a softness and fluctuation evident to the touch.

When the child has been long dead, the head and body often swell to a great size. This may be known from the history of the case; from a particular puffy feel of the presenting
part

part of the child; from the discharge of putrid waters, sometimes mixed with the *meconium* of the child; and from the separation or peeling of the outer skin of the head when touched. Though it may be here observed, that the most probable or suspicious symptoms of the child's death are often deceitful.

From whatever cause the head is enlarged, if the difficulty arises from that circumstance, and the force of the pains proves insufficient to push it forwards; if it has made no sensible progress for several hours after the waters were discharged, and the *os uteri* is fully dilated; and if the pains should begin to remit or slacken, and the woman to be low, weak, or dejected; it will then be necessary to have recourse to the assistance of art.

THE UNFAVOURABLE POSITION OF THE HEAD.

THE head of the child may be squeezed into the *pelvis* in such a manner as not to admit of that compression necessary for its passing thro' the bony cavity.

Where the *pelvis* is well formed, and the head of an ordinary size, although it should present in the most awkward and unfavourable position, it will yet advance; and Nature, under proper management, will, in most cases, safely accomplish the delivery. The labour will unavoidably be more painful and laborious; but whatever time may be required, there is less hazard either to the mother or
L child,

child, than if delivery had been hastened by the intrusion of officious art.

But if the woman be weak or exhausted, and the pains trifling; if the head of the child be large, the bones firm, and the futures closely connected; or if there be any degree of narrowness in the *pelvis*; a difficult labour may be expected: and the life of both mother and child will depend on a well-timed and skilful application of the surgeon's hands.

The unfavourable position of the head may be referred to two kinds, which include a considerable variety.

1st, *When the crown instead of the vertex presents.*

2^{dly}, *Face-cases.*

1. *When the fontanella or open of the head, instead of the vertex, first presents to the touch, a more painful or tedious labour may be expected; for the head does not take the same mechanical turns in passing through the pelvis as in natural labour; the face either originally presents to the pubes, or takes that direction in passing; the bulky crown is forced within the brim of the pelvis with more difficulty; the progress of the labour is more slow and painful: and when the head has advanced so far that the crown presses on the soft parts at the bottom of the pelvis, there is much greater hazard of the tearing of the perineum than when the lengthened out vertex presents: but if no other obstacle occurs, the labour notwithstanding will, by proper management, generally end well; and*

and much injury may be done by the intrusion of officious hands.

2. *Face-cases*—Of laborious births, face-cases are the most difficult and troublesome. From its length, roughness, and inequality, the face must occasion greater pain; and from the solidity of the bones, it must yield to the propelling force of labour-throes with more difficulty than the smooth moveable bones of the *cranium*. Our success in delivery in these cases will chiefly depend on a prudent management, by carefully supporting the strength of the woman.

The varieties of face-cases are known by the direction of the *chin*; for the face may present,

1st, With the chin to the *pubes*.

2^{dly}, To the *sacrum*.

3^{dly}, and 4^{thly}, To either side.

The rule in all these cases is, to allow the labour to go on till the face be protruded as low as possible.

It is often as difficult as hazardous to push back the child, and to bring down the crown or *vertex*, as to turn the child, and deliver it by the feet.

Sometimes a skilful artist may succeed in his attempt to alter the position when he has the management of the delivery from the beginning; or, in those cases where the face is considerably advanced in the *pelvis*, may be able to give assistance by introducing a finger or two into the child's mouth, and pulling down the jaw, which lessens the bulk of the

head ; or, by pressing on the chin, to bring it under the arch of the *pubes*, when the crown getting into the hollow of the *sacrum*, the head will afterwards pass easily. But in general, face-cases should be trusted to nature; and assistance by the hand or instruments is seldom advisable, or even safe.

§ 3. *Treatment when protracted labours arise from the*
PLACENTA, &c.

THE third general cause of tedious or lingering labour, arises from the *placenta* and its appendages.

1st, *The membranes may be too strong, or too weak.*

From the former of these cases, the birth is, in some instances, rendered tedious ; but as the same effect is more frequently produced by the contrary, and the consequences much more troublesome and dangerous, practitioners should be exceedingly cautious of having recourse to the common expedient of breaking them, till there be a great probability that the difficulty proceeds from that circumstance ; and even then, it ought not to be done till the parts be almost dilated, and the head of the child well advanced in the *pelvis*. Many inconveniences ensue from a premature evacuation of the waters ; for the parts then become dry and rigid ; the dilatation goes on more slowly ; the pains often either remit, or become less strong and forcing, although not less painful and fatiguing ; the mouth of the womb,
which

which was previously thin and yielding, may be observed to contract, and to form a thick ring, for some time obstinately resisting the force of the pains; the woman's strength languishes, and her spirits are overcome and exhausted; and at last the child's head becomes locked in the *pelvis*, merely from want of force of the pains to propel it.

An inconvenience of too great rigidity of the membranes is, that the child at full time may be protruded, inclosed in the complete membranous bag, surrounded with the waters. But such instances seldom occur. When the whole *ovum* is thus excluded at once, there is hazard of flooding from the sudden detachment of the *placenta* and membranes. It should therefore be prevented by breaking the membranes when they advance and spread out at the *os externum*, and the head of the child follows in the same direction.

The method of breaking the membranes is to pinch them between the finger and thumb; to push a finger against them in time of a pain; run the stilette of a catheter through them; or, when there is little water protruded, and they are applied close in contact with the child's head, they must be destroyed by scratching with the nail; but care ought to be taken lest the scalp of the child's head, covered with *mucus*, should be mistaken for the membranes.

2dly, *The waters may be too copious or sparing.* The *first* is inconvenient; for by this means, the weight of the water gravitating against the

under part of the membranes in time of a pain, may burst them too early, and occasion the disadvantages before mentioned.

An extraordinary quantity of water may overstretch the womb, and prevent or weaken the pains. Such a cause of protraction may be suspected, if the first stage of labour goes on very slowly; if the woman be very big bellied, and if much time be consumed before the head of the child becomes locked in the bones of the *pelvis*. In these circumstances, if the pains should cease, and become trifling, the membranes may be ruptured with safety and advantage.

Little or no water—is sometimes contained in the membranes. The parts then stretch with more difficulty and pain, and must be lubricated from time to time with butter or *pomatum*, in the manner mentioned under the article of *Rigidity of the soft parts*.

3dly, *The chord may be too short, or too long.*

The extraordinary length of the chord, by forming folds round the child's neck or body, may prove the cause of protracted labour; but there is generally sufficient length to admit of the birth of the child safely; and it is time enough, after the child is delivered, to slip the noose over the shoulders and head. After the head is protruded, the shoulders are seldom prevented from advancing by folds of the chord round the neck; and it very rarely becomes necessary to pass a finger between the child's neck and the chord, to divide the chord, while
the

the child is in the birth; a practice that may be attended with trouble and hazard.

Another inconvenience of the great length of the chord, though it may also proceed from the low attachment of the *placenta*, is

The prolapsus or falling-down of the chord, doubled, before the child's head—A circumstance which often proves fatal to the child; for if it be not reduced by pushing it up within the *uterus*, beyond the bulky head of the child, and prevented from returning, with the fingers, till the head, by force of the pain, descends into the *pelvis*, the circulation will soon stop by the pressure of the chord between the head and *pelvis*, and the child will infallibly perish. If this method of reducing the chord should fail, or if the pains be too quick and forcing to admit of the attempt, a warm cloth should be applied to the *os externum* over the chord, to cover it from the cold, and the natural pains should be waited for: if the pains be very strong and forcing, and the progress of labour quick, the child may yet be born alive. Some advise to preserve the child by turning and delivering by the feet; but it is at best precarious; for new difficulties may occur; the operation is painful and hazardous; and it would be extremely criminal to expose the mother's life to danger, when there is no certainty of preserving the child. In such intricate cases, the midwife should never depend on her own skill, when there is easy access to the advice and assistance of a regular practitioner.

The navel-string is sometimes naturally thick and knotty, or thickened; and of consequence shortened by disease. If this happens, part of the *placenta* may be separated as the child advances and a flooding ensue; or the string may be actually ruptured, and occasion the death of the child; but such instances are very rare.

The 4th cause is, *The improper attachment of the placenta over the orifice of the womb*, and is a more dangerous circumstance than any other; for if the delivery be not speedily accomplished, blood, from the separation of the *placenta*, will pour out so profusely, that the unfortunate woman will very quickly sink under it. This unhappy event can be prevented by no other means but by an expeditious delivery. The alarming situation of the woman will be sufficiently indicated by the appearance and rapid increase of flooding, and by the soft pappy feel of the after-birth to the touch. One half hour's delay, or less, may in such circumstances prove fatal to the mother and the child; therefore the friends should immediately be apprised of the danger, and the earliest assistance be procured*.

SECTION II.

Of Difficult or strictly Laborious Labours.

DIFFICULT, or *strictly laborious labours*—are,
 “ Cases where Nature is insufficient to
 “ perform her office, and where the hand of
 “ the

* See Method of delivery in Flooding Cases, class 4th of Preternatural Labours.

“ the operator is not able to assist her.” In these cases, we are obliged to use instruments; which, except in the most difficult circumstances, are such as injure neither mother nor child, and are styled *Forceps*; in more desperate ones, we are obliged to use those which destroy the child, in order to preserve the mother.

1. The *Forceps* may be considered as artificial hands, so formed, that when the head of the child is properly advanced, and the parts of the mother sufficiently prepared, can be introduced into the *pelvis* without doing any injury to either.

When the woman is placed and secured in a proper position, they are to be passed, blade by blade, cautiously guided by the hand of the artist, and applied over the ears of the child; the handles being then brought together and secured, the extraction is to be made in a slow deliberate manner, waiting for pains, if there are any; or, in their absence, imitating Nature as nearly as possible, by resting at regular intervals, that the parts of the woman may have time to stretch, and the head of the child to mould itself to the passage.

This instrument is now arrived at so great a degree of perfection, that the child's head is seldom bruised or otherwise injured during the extraction, unless the size be uncommonly large, or the parts of the mother much contracted; and in the hands of an expert practitioner, the *forceps* give so little pain to the
mo-

mother, that when absolutely necessary, they may be introduced without her knowledge.

2. The instruments destructive to the child are, scissars, crotchet, and blunt-hook.

When, from the enormous size of the head or child, or narrowness of the *pelvis*, the child cannot be delivered with the *forceps*, and the woman's life is in danger, the size of the child must be diminished, and the extraction afterwards made by the hand of the surgeon, the crotchet, or blunt-hook. But as, in this class of labours, the delivery is to be performed by instruments, to the management of which women, from their delicacy and tenderness, are unequal, we shall add no more on the subject. In all cases of difficulty and danger, where the former and subsequent methods fail, the midwife should apply to a skilful surgeon.

CHAPTER III.

PRETERNATURAL LABOURS.

LABOURS are styled *preternatural* 'when any part of the child's body, except the head, presents, or is first felt by the finger at the mouth of the womb.'

We have already said, that, in the most natural position, the top of the head presents; but the feet and breech often first appear, and the child is delivered in that manner. In other cases of preternatural presentation, the position must

must be altered; and the child, in the language of midwifery, is then said to be *turned*.

The causes of preternatural labours probably are,

The motion and stirrings of the *foetus*, either naturally, or from shocks affecting the mother. For in the early months, the *foetus* having once altered its position, may be prevented from recovering it by folds of the chord round its body and limbs; and in advanced gestation, if the breech should get undermost instead of the head, the child will, with difficulty, be restored to its proper position, as the quantity of water is constantly decreasing, and the child becoming more bulky.

The position of the child in the womb may be also influenced by its particular figure and construction, the quantity of surrounding water, the length of the chord, the manner of stretching of the womb, the shape of the basin, and a variety of other circumstances.

We can sometimes discover that the child presents in an unfavourable position, even when the labour is but little advanced.—We suspect it,

1st, If the pains be more slack and trifling than usual.

2^{dly}, If the membranes be protruded in a long form, like a gut, or the finger of a glove.

3^{dly}, If no part of the child can be felt when the orifice of the womb is considerably opened; or,

4^{thly}, If the presenting part, through the mem-

membranes, be smaller, feels lighter, and gives less resistance, when touched, than the bulky heavy head.

It can with more certainty be ascertained after the membranes are ruptured, by feeling distinctly the presenting part. If the child's stools be passed with the waters, it is a sign, either that the breech presents, or that the child has been for some time dead; though there are some exceptions to this rule.

Preternatural labours are difficult of delivery or hazardous, from,

1st, The health and constitution of the woman, and figure and dimensions of the *pelvis*.

2^{dly}, The bulk of the child's body and manner of presenting.

3^{dly}, The time which has passed since the waters were evacuated; for if that has been long, the womb is more strongly contracted, and the presenting part pushed on, and more firmly locked in the *pelvis*.

4^{thly}, From a plurality of children; the chord falling down before the presenting part being entangled with its limbs; or from profuse flooding.

The variety of preternatural positions may be reduced to the following classes:

I. When one or both of the lower extremities present; as one or both feet, knees, or the breech.

II. When the child lies cross the *pelvis*, in a rounded or oval form, with the arm, shoulder, side, back, or belly presenting.

III. One

III. One or both arms protruded before the head.

IV. Premature or flooding cases; or where the navel-string falls down double before the presenting part, and the child's life is in danger from its compression.

Each class of this general division includes a variety of particular cases. By giving a few examples of each class, a general idea of the manner of treating the whole will be formed. It is, however, necessary to observe, that though delivery in some preternatural cases may be easy, that it is always precarious, and often difficult.

CLASS I. *When one or both feet, knees, or the breech, present.*

Case 1. The simplest and easiest case of preternatural labour is supposed to be *when the child presents with the feet*; but there is sometimes danger lest the head should be retained after the delivery of the body, which is less when the child presents double, though even in that position a first child frequently loses its life.

We are often able to discern the presenting part long before the membranes break, and it is of great consequence to discover early how the child lies; but in making the necessary examination, care must be taken not to press the finger against the membranes in time of a pain. When the presenting part is at a distance, or the position of the child appears doubtful or obscure,

obscure, the woman should be shifted from her side to her back, examined in a sitting posture at the *pubes* where the *pelvis* is shallow, or on her knees. A hand is often mistaken for a foot; but the latter may be readily distinguished from the former by the weight and resistance it gives to the touch, by the shortness of the toes, and the length of the heel.

When one or both feet present in the passage, little more ought to be done than if the labour were strictly natural, till the orifice of the womb be sufficiently dilated, and the presenting part advanced at or without the *os externum*. The woman must then be placed either on her side, with the breech over the edge of the bed, and her head obliquely to the opposite side; or, on her back cross the bed supported by an assistant in the bed to raise her head and shoulders, and an assistant at either side of the bed on a low seat, whose office is to secure the woman's feet, to separate her knees, and prevent her from shifting. When any difficulty in extracting the head may be suspected, or when the midwife is not very dexterous in the art, the latter posture is preferable. It is also, in general, for young practitioners, the best position in all those cases where it is necessary to pass the hand into the *uterus*, to make the delivery by turning the child.

When the parts are thus sufficiently open, or the feet, by the force of the repeated pains, advanced at, or protruded without the orifice of the *vagina*, the midwife may then take hold, first of
one

one leg, grasping it firmly above the ankle, and gently endeavouring to pull it down in the time of a pain, not in a straight line, but from side to side, or from *pubes* to *sacrum*; when the pain remits, a warm cloth is to be applied to the *os externum*, and the return of the pain should be waited for. The other leg is then to be taken hold of, and pulled down in the same gradual gentle manner with the former; by pulling alternately, first by one foot then by the other, there is less hazard of injuring the *uterus* than if an attempt were made to bring down both feet at once; and the passages being thus gradually stretched, will be better prepared for the delivery of the bulky shoulders and head.

When the feet are sufficiently advanced for it, a warm cloth should be wrapped round them, which will enable the operator to take a firmer hold, and defend the child from the hazard of injury by the extraction. But the cloth should be so applied as to leave the toes exposed; for *they* are the proper direction for turning the body. If they already point to the *sacrum*, the child is to be brought along in the same direction, till it stops from the resistance of the shoulders. But if, instead of pointing backwards, the toes should point to the side or belly, the child's body must be gradually turned till the belly be applied to the back of the mother, and the back of the child to the mother's *pubes*.

The proper time to begin to turn is a little before the breech advances to the *os externum*. The turn should not be made all at once, but
gra-

gradually; the child's body must be firmly grasped with both hands, pushing a little upwards, then turning to one side, just before the return of the pain, carefully observing and favouring that line of direction which the child naturally inclines to take. The attempt must be repeated during every pain till the child's body be turned round, and the face applied to the *sacrum* of the mother. The motions of the child's head and body do not always exactly correspond. Therefore, after the belly of the child presses against the *perinæum* of the mother, a quarter turn extraordinary is still necessary, which must again be reversed before the operator begins to extract. By that means the arm will be prevented from getting under the face, the broad shoulders will be applied to the widest diameter of the *pelvis*, the face will be turned towards the angle of the *sacrum*, and readily follow in that direction.

When the breech is entirely protruded without the *os externum*, the child must be taken hold of, by grasping firmly with the thumbs above the haunches, and the fingers spread over the groins; the extraction must be gradually performed, moving from side to side, pressing a little downwards towards the *perinæum*, and waiting for natural pains, or resting from time to time. As the belly advances, the operator must slide up her hand, or two fingers, and very gently draw down a little the umbilical chord, lest, being tense and overstretched, the circulation might be interrupted, and the life
I of

of the child destroyed, which often happens where this precaution is neglected.

After the breech is protruded, and the navel-string begins to be compressed by the stricture of the *os tincæ*, the delivery must be conducted with all the expedition that the mother's safety will admit of. When the child is advanced as far as the breast, its farther progress is prevented by the arms going up by the sides of the head. This obstacle must be removed in this manner: The child's body ought to be supported by the left hand of the midwife, which must be passed under the breast of the child, in such a manner that the child may rest on the palm and arm of that hand; the child must then be drawn a little to one side, that two or more fingers of the right hand may be passed at the opposite side into the *pelvis*, over the back of the shoulder, as far as the elbow, to bring down the arm obliquely along the breast, gently bending it at the fore-arm, in such a manner as to favour the natural motions of the joint. Having then shifted hands, the other arm must be disengaged and brought down in the same manner.

Both arms of the child being relieved, the woman may be allowed to rest a little till another pain or two follow; when by bearing down in the time of the pain, the head will generally be forced down and delivered. But if the woman be much exhausted, and the head does not quickly follow, the child will be lost from the pressure of the navel-string.

The pulsation of the arteries in the chord should regulate the time for extracting the head: while the pulsation is strong, there is no hazard from delay; if the pulsation be weak or languid, more especially if the chord begins to be cold and flaccid, the extraction must be quickly performed, otherwise the child will be destroyed.

The extraction of the head in preternatural labours is often the most difficult and dangerous part of the delivery. The cause of resistance, when it does not advance, is chiefly owing to its confinement between the *sacrum* and *pubes*, when the bulky part of the head is detained at the brim, or at the lower part, by the chin catching on the sacro-sciatic ligaments. The method of delivery is to introduce two fingers of the right hand (which hand and arm at the same time must support the body of the child) into the mouth, and pull down the jaw towards the breast; then applying the other hand with the fingers spread, so as to press down the shoulders, the midwife must rise from her seat, and pull in a direction from *pubes* to *sacrum* with considerable force, alternately raising and depressing the head till it begins to yield, so that the chin being constantly pressed to the breast, the face will descend from the hollow of the *sacrum*; the delivery must then be finished by bringing the hind-head from under the *pubes* with a half-round turn.

During these efforts, an assistant must be directed to press on the *perinæum*; and whenever

the circumstances of the case will admit of it, the exertions of the operator should coincide with the natural throes of labour, by which the extraction will be greatly facilitated.

If the position be unfavourable, the face if possible should be turned towards the *sacrum*, by pushing up the head, or by pressing on the chin; if the mouth cannot be reached, the pressure should be made any where on the lower jaw; if the difficulty arises from folds of the chord round the legs, thighs, body, or neck of the child, these must be disengaged in the easiest manner possible. The contraction of the mouth of the womb round the child's neck rarely proves the cause of resistance, except when the feet are pulled down too early, or in premature labours, when it may be gently stretched with the fingers; and further endeavours should be delayed for some time.

If all the methods now directed for extracting the head should fail, and the obstacle should depend on the bulk of the head or narrowness of the *pelvis*, it will be needless for the midwife to exhaust herself and distress her patient by longer persisting in fruitless efforts, except so far as the pains can assist. A surgeon should immediately be sent for, lest from too frequent coercive exertions, the body of the child be pulled from the head; an accident which ought never to happen in the hands of a well instructed practitioner.

Case 2. *When one foot only presents*, the other is sometimes detained by catching on the *pubes*,

and if easily come at, should be brought down, always observing to humour the natural motion of the joint; but if the leg should be folded up along the child's body, or of difficult access, the attempt is troublesome and even dangerous, from the hazard of contusion or laceration of the *uterus*. It is seldom necessary, as the breech will be naturally forced down by the assistance of pains, or by gently pulling at one leg only.

Case 3. *When one or both knees present*, the legs often cannot be brought down, till the breech be gently raised and pushed a little back in the *pelvis*.

Case 4. *If the feet should offer along with the breech* it must be cautiously thrust back, while the former are secured and brought down, till the position be reduced to a footing-case, and the delivery otherwise managed, as already directed.

Case 5. *The Breech.*

The varieties of the *breech* are,

1st, The fore parts of the child placed to the *pubes* of the mother;

2^{dly}, To the *sacrum*;

3^{dly}, To either side.

Sometimes the position of the breech may be discovered before the membranes break; but afterwards with more certainty by the *meconium* or stools of the child accompanying the waters; and by feeling the buttocks, thighs, or genitals of the child to the touch.

In whatever manner the breech presents, the delivery should be submitted to nature, till the
child

child be advanced so far that the feet can be laid hold of and brought down. If the fore parts of the child be already placed towards the *sacrum* of the mother, nothing else is necessary but to support the child till it advances so low by the force of the natural pains, that the feet can be readily and safely brought down.

If the fore-parts of the child be placed to the fore or side parts of the mother, when the child is so far advanced that it can be laid hold of and wrapped in a cloth, the mechanical turns must be made, and the delivery finished, as directed in footling-cases.

There is much less hazard, in general, in allowing the child to advance double, than in precipitating the extraction, by pushing up to bring down the feet before the parts have been sufficiently dilated; a practice difficult and troublesome to the operator; painful and sometimes dangerous to the mother; and by which the child is exposed to the risk of strangulation, from the retention of the head after the delivery of the body. If the child be small, tho' doubled, it will easily pass in that direction: if large, though the labour should be painful, the natural throes are less violent and dangerous than the pain occasioned, *first* by introducing the hand with a view to turn; and, *2dly*, by pushing up the child in order to lay hold of the feet and bring them down. If the child advances naturally, it will be less exposed to suffer; if it should not advance, there is this advantage, that the parts of the mother will be

properly prepared, when the strong pains are abated, for passing the hand into the *pelvis*, to raise up the breech, search for the feet, bring down one or both, and deliver.

The propriety of this mode of treatment is supported by the pains being much stronger in *breech-cases* than in natural labour: but it cannot be followed when the mother is weak and the pains trifling; when she is affected with floodings or convulsions; when the child is of a very large size, or the *pelvis* narrow; when the navel-string falls down, and is compressed between the thighs of the child, or between the child and the *pelvis*, and cannot be reduced above the presenting part.

The *prolapsus* of the navel-string generally accompanies that position of the breech, where the child presents with its fore-parts to the belly of the mother. Sometimes the chord can be reduced and the child's life preserved; but, if the breech be far advanced, and the pains strong, it is not only difficult but hazardous to push up the child, who can seldom in such circumstances be preserved. It is better, therefore, to let the child be propelled by the natural pains, rather than hazard the life of the more important mother, by attempting to push up and turn it. But, in all doubtful and perplexing cases, where there is time for it, the advice of a more skilful practitioner ought to be taken.

When the breech is so far advanced that a finger or two can be passed under the bended thigh, as far as the groin of the child, assistance
may

may be given with great advantage, by alternately pulling, first at one side, then at the other, in time of the pain. But great care ought to be taken not to mistake the shoulder for the breech, and not to injure the child by violent pulling. Such errors have often been committed, and the consequences have been fatal.

In breech-cases, the greatest caution is necessary when the genital parts present, lest the child should be injured by too frequent touching.

CLASS II. of Preternatural Labours, when the Child lies cross in a rounded or oval form, with the arm, shoulder, side, back, or belly presenting.

IN the former class of preternatural labours, though the birth may sometimes, when the child is small, be accomplished without manual assistance; when the child lies across, no force of pain can make it advance in that position; and without proper aid, both mother and child would perish.

If a skilful practitioner hath the management of the labour from the beginning, the child may generally be turned, in the worst position, without much difficulty: but when the waters have been for some time evacuated, and the womb is strongly contracted round the child's body, turning will be difficult and laborious to the operator; painful, and even dangerous to the mother. For it ought to be considered, that the great difficulty and hazard of

turning are chiefly owing to the resistance which the womb gives, not so much to the position of the child. When the water, in whole or in part, is retained, there is easy access to reach the feet and bring them down; but in proportion as the water is evacuated, the cavity of the womb becomes less spacious, and turning is thus rendered both troublesome and dangerous. It was the old practice in preternatural labours to make the head present; but on account of its bulk it could seldom be done; and the force employed in making the attempt was often attended with fatal consequences. The method of delivering by the feet is the most important modern improvement in the practice of midwifery; an improvement to which many thousands owe their lives.

When the child lies in a transverse position, the management is very simple. We must gently pass the hand into the *uterus* to search for the feet, bring them down with the utmost caution, and finish the delivery as directed in footling-cases. For which purpose, the following rules should be observed; where, from the absence of a surgeon, and the case being of such a nature as not to admit of a delay, the midwife is obliged to proceed.

Rules for turning the Child.

1. The woman must be placed in a convenient posture, and kept steady by assistants, that the operator may be able to employ either hand,

hand, as the circumstances of the case may require.

2. Though the best posture, in general, for young practitioners, is to lay her on her back, with her breech placed over the edge of the bed, and her legs supported by assistants, it will be sometimes necessary to turn her to her side; and in those cases where the child's feet are of difficult access, or where they lie towards the *fundus uteri*, the woman should be placed on her knees and elbows.

3. The orifice of the *womb* should be enlarged so much as to admit the hand to pass freely; and the strong pains should be abated, before any attempt be made to deliver.

4. It is of great consequence to endeavour to learn the position of the child, and to attend to the shape and dimensions of the *pelvis*, before attempting to make the delivery.

5. In preternatural cases, every possible means ought to be used to preserve the membranes as long as possible. If they should break before the hand is introduced, and the state of the parts will admit of it, the hand should be quickly after passed; part of the water being thus retained, the operation of turning will be greatly facilitated. But if the waters be drained off, and the *uterus* rigidly contracted round the body of the child, warm oil should be injected into the *uterus*, and a full dose of laudanum, to lessen the rigidity of the parts, should be exhibited previous to any attempt to procure delivery.

6. The

6. The hand of the operator must be lubricated with pomatum before attempting to introduce it into the *vagina*; the fingers must be gathered together in a conical form; and the resistance of the *os externum* be overcome by slow and gradual efforts.

7. In passing the hand into the *uterus*, it ought to be done in the gentlest manner, but with a certain degree of resolution and courage. The passages should be well lubricated with butter or pomatum; the line of the *vagina* and *pelvis* carefully attended to; the movements of the operator must be slow and gradual: and thus, by giving time, the utmost rigidity in the soft parts may be overcome.

8. The hand should be introduced in the absence of pain: and when the pain recurs, the operator should stop; otherwise there is great hazard of injuring the womb.

9. The hand should, if possible, be introduced by the fore parts of the child, as the feet are generally folded along the belly; and both feet, if easily come at, should be laid hold of.

10. In pushing back any part of the body of the child to come at the feet, the palm of the hand, or broad expanded fingers, must be used. This part of the operation should be performed always during the remission of pain, which should also be observed in bending the legs; but in making the extraction both of the legs and body, the efforts of the artist ought always to co-operate with those of Nature.

11. As the breech advances through the *pelvis*,

vis, the child, if not already in the proper position, must be gradually turned with the fore parts posteriorly to the mother.

12. Practitioners in midwifery should be cautious of giving credit to any report of the child's death; for many of the symptoms are fallacious. Children are often born alive when there is little reason to expect it: Therefore in pushing up, bringing down the legs, or extracting the body, the child should never be treated roughly, but handled with the greatest delicacy.

13. When the hand is within the *pelvis*, and there is a necessity for passing it pretty high in the *uterus* to search for the child's feet, the proper direction is not precisely in the line of the *navel*, as Dr Smellie advises; but inclining it a little to one side, to avoid the prominent angle of the joints of the loins at the upper part of the sacrum; by which more room will be gained, and less pain given to the woman; for the womb presses strongly there.

14. When the hand is interrupted in passing, by the spasmodic contraction of the *uterus*, we must desist from insinuating the hand till the constriction of the *uterus* is abated.

15. If the hand cannot pass beyond the presenting part of the child to come at the feet, instead of thrusting back the presenting part with violence, it should be, as it were, first raised up in the *pelvis*, and then moved obliquely to the opposite side. By this means difficulties, otherwise insurmountable, may be removed, and great danger often prevented.

16. When

16. When both feet cannot readily be obtained, the foot and leg of the presenting part should be endeavoured to be first brought down. Hence more room will be procured for searching for the other foot; and the extraction will be performed with more ease and safety.

17. If the second foot cannot readily be found or brought down, the child may be extracted with the utmost safety by one foot only, provided we proceed slowly in the operation; for it is always dangerous to employ force.

18. When the foot or feet begin to protrude without the *os externum*, let them be covered with a soft cloth; and take the advantage of the natural pains to assist the extraction.

19. In all preternatural labours, when the child is delivered as far as the breech, the stricture of the navel-string should be removed, by gently drawing it down a little, as already directed.

20. As the breech advances towards the *os externum*, the proper means of guarding against laceration of the *perinæum* must be attended to.

21. The arms are to be relieved, and the head extracted, in the manner already directed in footling-cases.

22. Children delivered by the feet, are not only often still-born, but the body is sometimes separated from the neck, and the head left behind in the womb: An accident which can only happen by the rashness, negligence, or unskilfulness, of the practitioner.

The

The causes chiefly are, 1st, The putrid state of the child's body in consequence of its death; 2^{dly}, The neglect of the operator to make the proper turns when extracting the body; 3^{dly}, The narrowness of the *pelvis*.

To prevent it when the child's body is putrid, the operator should never attempt to extract the head till two fingers be put into the mouth; and by pulling down the jaw, and pressing on the shoulders, while an assistant presses gently on the woman's belly, and the woman herself bears down in the time of a pain, the extraction may generally, unless when the *pelvis* is narrow, be effected.

23. If the head should be actually separated and left behind in the womb, it will scarcely be advisable for a female practitioner to attempt the extraction; for there is little chance of success. Her interference is only allowable if the woman floods, or should be threatened with fits, or any other dangerous symptom, and a surgeon cannot be soon procured; in that event, she should be placed in a position between sitting and lying, and the midwife, with two fingers introduced into the child's mouth, and the help of an assistant to press on the woman's belly, may *then* use her best endeavours to extract it.

By attending carefully to the above rules, lacerations of the *uterus*, floodings, convulsions, inflammation, and their consequences, may be prevented, and the child's life often preserved, even when it presents in the most awkward position.

We proceed to consider a few particular cases.

Case I. *The arm presenting*.—This position occurs frequently. It is of some consequence to form a general notion how the child lies, before the operator sits down to deliver. The right hand, by a little attention, may readily be distinguished from the left, if we lay hold of the child's hand in the same manner as in shaking hands.

It is often in the power of a skilful practitioner to prevent the hand from coming down, or to reduce it when it protrudes. But if the arm be forced into the passage so low that the shoulder is locked in the *pelvis*, it is needless to give the woman the pain of attempting the reduction, unless when the head can be made to present, as the hand of the operator can be passed into the *uterus* by the side of the child's arm; which will of course return into the *uterus* when the feet are brought down into the *vagina*. As the head, in this case, cannot easily be made to present, in order, therefore, to make the delivery by turning the child, the hand and arm of the operator, well lubricated, must be conducted into the *uterus* by the side of the child's arm, along the breast and belly of the child towards the opposite side of the *pelvis* where the head lies. If any difficulty occurs in coming at the feet, the hand already introduced must be withdrawn, and the other passed in its stead. If still the hand cannot easily be pushed beyond the child's head and shoulder,

shoulder, the presenting part must be gently raised up, or cautiously shifted to a side, that one or both feet may be taken hold of, which must be brought as low as possible, pushing up the head and shoulders and pulling down the feet alternately, till they advance into the *vagina*, or so low that a noose or fillet can be applied: and thus, by pulling with the one hand by means of the noose, and pushing with the other, the feet can be brought down, and the delivery finished in the most complicated and difficult cases.

The method of forming the noose is by passing the two ends of a piece of tape or garter through the middle when doubled; or, if the garter be thick and clumsy, by making an eye on one end, and passing the other extremity through it. This must be mounted on the points of the fingers and thumb of the hand of the operator; who must take hold of the child's foot, slip it over the foot and ankle, and secure it by pulling at the other extremity.

Case II. *The Shoulder*.—Great care ought to be taken that it may not be mistaken for the buttock. The shoulder will feel harder and more bony than the full thick fleshy hip; a mark which may be taken along with the others formerly mentioned in breech-cases.

Though the child should originally present by the shoulder, when the *orificium uteri* is dilated, the arm, if not prevented, may readily be forced by the repeated efforts of the labour-throes into the passage. In proportion as the presenting part advances, and the shoulder
be-

becomes locked in the *pelvis*, delivery by turning will be more difficult and hazardous.

Except the child be of a very small size, and the hand pressed close to the side of the head, it is impossible for the head and arm to pass together: it is therefore cruel and barbarous to pull the arm in order to deliver the child in that way. The arm has been often torn from the body, and the mother has died in the attempt. In cases of arm-presentation, the child, with *strong forcing pains*, is sometimes protruded by the breech *.

Case III. *The side*.—This is discovered by feeling the ribs.

Case IV. *The back*.—This is discerned by feeling some part of the spine or back-bone.

Case V. *The belly*.—It is known by the soft yielding substance of the part, and by the falling down of some portion of the umbilical chord.

These three presentations, viz. the *side*, *back*, and *belly*, more rarely occur, as the *uterus* will with difficulty admit of such positions.

When any of these parts do present, they seldom advance much beyond the brim of the *pelvis*; and the child is in general as easily turned as in other presentations which more frequently occur.

The belly, from the difficulty with which the legs can be bended backwards, unless the
child

* See Observations on Spontaneous Evolution of Children presenting by the Arm, by Dr Denman, London Medical Journal for 1784, pages 64 and 301.—See also Outlines of Midwifery, page 392.

child be flaccid, putrid, or before the time, will very seldom directly present: if it does, it will be early and easily discovered by the *prolapsus* of the chord; and there will be no great difficulty to come at the feet and deliver.

The rule in all these cases is, to insinuate the hand into the *uterus* in the gentlest manner possible, when the state of the parts will admit of it; to search for the feet, bring them down, and deliver, agreeably to the directions already given for that purpose.

CLASS III. *of Preternatural Labours. One or both arms presenting, and the head following nearly the same direction.*

THE most difficult and laborious of the preternatural labours occur,—*When the child lies longitudinally in the uterus, with the arm or shoulder presenting, and the head more or less over the pubes, or resting on one side at the brim of the pelvis, the feet towards the fundus, the waters evacuated, and the uterus closely contracted round the child's body.*

When the arm protrudes in this manner, it ought, if possible, to be reduced, and the head brought down into the *pelvis*; for it is often equally difficult and dangerous to deliver by the feet, and sometimes utterly impracticable.

A skilful midwife, having the management of the delivery from the beginning, will often be able to prevent the protrusion of the arm, which ought to be attempted as soon as possible after the rupture of the membranes. If she fails, and the arm should be forced down, the earliest

opportunity should be taken to reduce it. If successful, it will prevent much future trouble; it will be a happy circumstance for the mother, and may be the means of preserving both her life and that of the child. With this view, when the position of the woman is adjusted, the hand of the operator, well lubricated, must be insinuated through the *vagina* and *uterus*, conducted by the child's arm, till it reaches as far as the arm-pit or shoulder. The shoulder must then be raised up, and shifted, as it were, obliquely to the side of the *pelvis*, opposite to that to which it inclines. By this means the position of the child will be somewhat altered, and the arm drawn up within the *vagina*; so that it will be afterwards no difficult task to reduce it completely. But should this method fail, an attempt may be made to push up the fore-arm at the elbow; and in bending it, great care must be taken to avoid over-straining or dislocating the joint. These attempts must only be made in the intervals of pain; when the pain recurs, the operator ought immediately to desist; for by pushing in time of the pain, or in an improper direction, the *uterus* may be torn, and the most fatal consequences soon ensue.

In whatever manner the reduction of the child's arm shall be accomplished, if any method proves successful, it must be retained in the *uterus*, by the hand of the operator, till the child's head, by the force of the next pain, fills up the *pelvis*, and prevents its return; other-

otherwise the arm will be protruded as often as it is reduced.

But if the opening of the mouth of the womb should be too small to admit of the reduction of the arm, or the passage of the hand, with safety; if the head pushes rather to one side of the *pelvis*; if the throes of labour are violent, and the intervals short; the midwife ought immediately to call in a surgeon, and perhaps this measure might be prudent on the first appearance of this case. If in the interval she may have reduced the arm, it will not be disagreeable to him, but materially assist the delivery; for, by delay, the *uterus* is more strongly contracted round the child, and the presenting part further protruded, and more firmly locked in the *pelvis*.

When both arms present, the delivery must be conducted much in the same manner as when one only presents. The former case is nearly as easily managed as the latter, as the head seldom advances far in that position, being locked in the *pelvis*, as it were by two wedges; so that the arms can either be reduced, with a view to bring down the head, or there will be easy access to come at the feet, to bring them down and deliver.

CLASS IV. of *Preternatural Labours*. *Method of turning the Child while the membranes are whole, or soon after their rupture.—Method of delivery in Flooding-cases, and when the navel-string presents.*

WHEN the membranes remain entire till the

soft parts of the mother are so much dilated that the hand of the operator will readily find admittance, or when the hand can be passed within the cavity of the womb, immediately after the membranes break, so that great part of the water may be retained, the delivery may be accomplished, in the most unfavourable cases, with ease and safety. But when the waters have been long evacuated, and the womb is rigidly contracted round the body of the child, the case will prove laborious to the operator, painful to the mother, and dangerous to her and the child.

When there is reason to suspect a *cross birth*, which can often be known either by feeling the presenting part through the membranes, or by some of the signs already mentioned, the woman should be managed in such a manner that the membranes may be preserved as long as possible; for this purpose she should be kept quiet in bed, and placed in that posture least favourable for straining, or the exertion of force in the time of a pain. She should be touched as seldom as possible, till the orifice of the womb be sufficiently dilated. She should then be placed in a proper position for delivery, that the midwife may gently put up her hand in a conical form, with the fingers gathered together, through the *vagina* and *uterus*. The hand must be passed on the outside of the membranes between and the womb, in a direction towards the *fundus*. The membranes may then be broken, by pinching them between a finger and thumb,

thumb, or by forcibly thrusting a finger against them in time of a pain. The hand must now be directed where the feet may reasonably be expected to lie; one or both of which must be taken hold of, and brought down. If the membranes should be ruptured in the attempt, the hand must be passed up into the womb as expeditiously as it can be done with safety. Part of the waters being retained by the introduced arm, the operation of turning will by that means be greatly facilitated.

If the membranes should be ruptured before the mouth of the womb be sufficiently opened to allow the hand to pass, even in these circumstances it is necessary that the woman be kept quiet in bed; and the same precautions should be used as if the membranes were entire; for the retention of a small quantity of water is of great consequence in turning.

After the hand is introduced into the cavity of the *uterus*, if the *placenta* should be found to adhere at that side, and to interrupt the hand of the operator from passing, it must be withdrawn, and the other hand be introduced at the opposite side.

Method of Delivery in Flooding cases.

FLOODINGS generally proceed either, 1st, from an accidental separation of some portion of the *placenta* from the body of the *uterus*; or, 2^{dly}, from the unavoidable detachment of some part, when the cake adheres at the neck, or over the orifice of the womb.

1st, Floodings from the former of these causes may be often checked by proper management, and are seldom dangerous before the seventh month of pregnancy; after which period, however, there is always considerable hazard. But as it is sometimes necessary to deliver even in these cases, the constant attendance of the practitioner is requisite, and the utmost judgment to catch the proper time of proceeding. There is hazard in attempting delivery too early, while the *os uteri* is close and rigid. When the woman, from loss of blood, is somewhat sunk, the mouth of the womb is more relaxed and dilatable. This can only be known by constantly *staying* with her, and examining the state of the *os uteri* from time to time. In so critical a situation, the neglect of half an hour, or less, may be fatal to the mother and child.

The best practice in this case is, first, to wait on; giving opiates occasionally, and keeping the woman quiet and cool. If possible, delivery should never be attempted till the membranes begin to protrude. They may then be broken by pushing a finger, or the catheter, through them; the water gushing out, the womb contracts and stops the bleeding. We can now safely wait for six, twelve, or twenty-four hours, if necessary, till pains comes on, and then deliver according to the presentation. But if the flooding should continue, or recur, or if the position of the child be unfavourable, the hand must be passed into the *uterus*, the feet of the child taken hold of and brought down. The
womb

womb now contracting soon stops the flow of blood, or prevents an excessive discharge; therefore, after the feet are brought down, the body of the child should be extracted by very slow and gradual efforts, lest, from too suddenly emptying the womb, fatal faintings or convulsions might ensue.

2. Flooding from the *attachment of the after-birth at the orifice of the womb*, will be sufficiently indicated by its alarming appearance and rapid increase, and by the soft pappy feel of the cake to the touch; though, when there is little dilatation of the orifice of the womb, it will be necessary to introduce the whole hand into the *vagina*, in order more certainly to be able to feel the *placenta* with a finger introduced within the womb.

In these unhappy cases, there is no method of saving the woman, but by *immediate delivery*.

We are sometimes obliged to pass the hand at an opening made through the substance of the *placenta*; but, if possible, the hand should rather be insinuated at the side of the cake where the least portion is attached, to go into the *uterus*, break the membranes, search for the child's feet, bring them down, and deliver.

In some instances, before the orifice of the womb can be sufficiently opened to admit the hand of the operator to pass, the whole cake will actually be disengaged and protruded; and the birth of the *placenta*, previous to that of the child, is for the most part fatal to the mother.

Much of our success in these flooding-cases will depend on *staying with the woman*, and trying the dilatability of the orifice of the womb from time to time; for, after she is sunk to a certain degree, the womb loses its power of contraction, the flow of blood increases, and, if neglected, she soon dies; so that the *presence of the operator* can only save her *.

When a long attendance is necessary, two surgeons should be called, or two midwives and a surgeon.

Though we thought it our duty to consider this subject fully, and to give the best directions which an extensive practice enabled us, as the necessity of operating may from time to time occur, when a male practitioner is out of the way, and there is no time for delay; it must not be concealed, that in such circumstances delivery is difficult and hazardous, and the event always precarious. Female practitioners should therefore avoid it, when possible. The woman's family or relations ought immediately to be apprized of her danger, and the earliest assistance of a skilful surgeon should be procured.

The navel-string prolapsed.—A pressure on the navel-string, perhaps for ten minutes, by interrupting the circulation, will be sufficient to destroy the life of the child. A coldness and want of pulsation in the chord, is the most infallible sign of the child's death; therefore, if a portion of the chord be protruded before
any

* See a valuable Treatise on Uterine Hemorrhage, by E. Rigby surgeon in Norwich, 3d edition.

any bulky part of the child, there is hazard of the loss of the child, unless the labour be soon over. The danger can only be prevented by replacing the chord, and retaining it above the presenting part of the child, till it by the force of the pain be so far advanced as to prevent the return of the chord; or, the child must be turned and delivered by the feet, (for the *forceps* cannot be used till the head be well advanced in the *pelvis*). But it is often difficult to reduce the chord, and much more so to turn the child; and, if the pains be strong and frequent, such attempts are not to be hazarded, as the consequences may be fatal to the mother.

If the child be of an ordinary or small size, and the *pelvis* be well formed; if the labour goes on quickly, and especially if the woman had formerly good times; the child may yet be born alive. If, on the contrary, the child exceeds the ordinary size, and the *pelvis* comes short of its usual dimensions, *turning* would prove a dangerous operation to the mother, and there is little prospect of saving the infant by it.

The best practice, therefore, is to take the earliest opportunity that the mouth of the womb will admit of, to reduce the chord, by placing the woman in a proper position, so that the hand of the operator may be carried up in the absence of pain into the *pelvis*, and the chord entirely reduced. If this attempt fails,—and it cannot be done when the pains are strong and frequent, or the head wedged in the *pelvis*,

a skilful surgeon should *immediately* be called.

Plurality of Children.

ALTHOUGH women commonly produce one child only at a birth, yet the womb is capable of containing several.

Cases of *twins* often occur, of *triplets* seldom, of *four* children very rarely; and there are few instances of *five fætuses* at one birth, notwithstanding the fabulous histories which have been related by credulous authors.

It is very difficult to judge of the existence of twins or triplets from appearances before delivery; for all the signs enumerated are fallacious.

When there is reason to suspect that there is any other child, it ought to be ascertained by passing a finger within the *os uteri*; or, if that is insufficient, by the introduction of the hand into the *uterus*.

The symptoms chiefly to be trusted after the birth of one child are,

1st, The diminutive size of the child, and the waters being disproportioned to the distention of the gravid womb.

2^{dly}, The navel-string, after it is divided, continuing to bleed beyond the usual time.

3^{dly}, The recurrence of regular labour-pains.

4^{thly}, The retention of the *placenta*.

5^{thly}, The woman's belly not sensibly diminished between the stomach and navel.

All these symptoms are seldom united, and

several of them are by themselves fallacious ; for the *placentæ* of twins are often distant from each other in the womb, and so loosely connected to it, that one may entirely separate before the second child be born : so that labour-pains will sometimes cease for two or three days, and there is the same interval between the births of the children.

It is necessary, therefore, to attend to the usual diminution of the belly ; and, in doubtful cases, to introduce the hand into the womb.

The position of twins or triplets is commonly that which is most commodiously adapted to the *uterus*, and which will occupy the least space. One child often presents naturally ; the other, or others, by the feet or breech ; sometimes both, or all, present naturally ; at other times the position is cross : so that the delivery must be regulated by the presentation.

With regard to the management, opposite sentiments have been entertained.

In some instances, natural pains, after the delivery of the first child, soon come on. The membranes will then be quickly forced down, and the presenting part of the child may be readily felt through them : but if the presentation of the child should be doubtful to the touch, the midwife ought immediately to place the woman in a proper position, and gently insinuate her hand by the side of the membranes into the *uterus*, and examine how the child lies. If the head or breech present, it is only necessary to break the membranes, withdraw the
hand,

hand, and leave the child to be expelled by the natural pains. If the feet are felt through the membranes, let them be broken, the feet taken hold of, and brought into the passage. The delivery must be otherwise managed, as directed in footling-cases, carefully observing not to neglect the proper turns in extracting the body.

If any other part than the head, breech, or feet should present, the latter must be searched for through the membranes, and brought down into the passage. The feet may, by a dexterous operator, in most cases, be brought down without breaking the membranes; but if they should be ruptured in the attempt, the feet must then immediately be taken hold of, gently brought down, and the delivery finished as formerly directed.

When the womb is very much distended, it, in some degree loses its power of contraction. It is from this cause that the pains are often less strong and forcing, and the labour is more tedious in twins and triplets than when there is but one child: hence a considerable length of time, as several days, in some instances, intervene between the birth of the different children. In this interval, the woman is apt to suffer from impatience and anxiety. Floodings frequently come on, and the labour is more painful and hazardous, in proportion as the time of delivery is protracted. It may therefore be recommended as a general rule, if labour-pains do not naturally recur in two or three hours
after

after the birth of the first child, for the midwife to place the woman in a proper position, gently pass her hand into the *uterus*, break the membranes, and manage the delivery according to the presentation.

As this subject has given rise to a variety of opinions among authors, we shall add, for the instruction of young practitioners, a few rules, which inculde the whole directions necessary for the management.

Rules for Delivery, in cases of Twins, Triplets, &c.

1. IF a second child be suspected, let a ligature immediately be made on the end of the umbilical chord next the mother, lest the two *placentæ* being connected, the chord should continue to bleed.

2. Having waited the usual time, as if for the separation of the *placenta*, and it appears to adhere firmly, let a finger be passed up by the side of the chord, to examine whether there is another set of membranes.

Some part of the former water may be retained within a fold of the membranes, and protruding at the orifice of the *uterus*, may be mistaken by an inexperienced practitioner for a second set of membranes; but the distinction may readily be made by moving the finger round and round the protruding bag; or, if it be still doubtful, the hand must be passed into the *uterus*.

3. When it is ascertained that there is any other child in the womb, the midwife should
stay

stay with the woman, as if waiting for the coming of the after-birth, and carefully observe lest a flooding should occur.

4. A gentle compression ought to be made on the belly; which must be gradually tightened as the bulk of the belly subsides.

5. If pains soon come on, and the child presents in a position in which it can advance without manual assistance, let it be expelled by the natural pains. If it comes double, or by the feet, when the breech is advanced as far as the *os externum*, let the proper turns be carefully attended to.

6. If labour-pains do not occur within the space of a few hours after the delivery of the first child, it will then be advisable to place the woman in a convenient position for delivery, to pass the hand into the *uterus*, break the membranes, and otherwise manage the delivery, as already directed. For if pains do not soon come on, the woman may go on undelivered for several days, unless the membranes be broken. When the waters are evacuated, the *uterus* contracts, and the child quickly advances.

If the pains be trifling, and have little effect in protruding the child, the same management will be necessary.

7. If, from the very small size of the first and second child, there may be reason to suspect that any other yet remains; after having waited about half an hour for the separation of the *placenta*, without effect, let the hand be again passed in-

to

to the *uterus* ; and if a third set of membranes be discovered, let them be broken, and the delivery managed as already directed. If there be no other child, let the *placentæ* be disengaged and extracted. But if they adhere firmly, it is better to keep the hand in the *uterus*, till by its contraction they are gradually separated and disengaged, rather than to attempt it by force.

8. The after-births of twins and triplets are often connected, and adhere at the edges, though each child has its distinct membranes and water.

When they adhere at the sides, they separate, and are expelled together after the birth of the last of the children. But when they are attached in different portions to the *uterus*, the *placenta* frequently follows the birth of that child to which it belonged, before the second labour ensues.

9. When another child is discovered, no attempt ought to be made to remove the *placenta* before the delivery of the remaining child or children : such attempts would expose the woman to the hazard of flooding, which might end fatally before the womb could be emptied of its contents.

10. The after-births of twins, or triplets, generally separate easily, provided that time be given for the contraction of the *uterus*. Each chord should be cautiously pulled, sometimes alternately, sometimes pulling by both, or by all at once, desiring the woman to assist gently by her own endeavours of bearing down.

When

When the bulky mass advances as far as the mouth of the womb, the resistance occasioned by the contracting orifice must be removed, by passing a finger or two within the *os uteri*, and bringing down the edge; the substance of the cake is then to be grasped firmly, and the whole entirely extracted.

When the after-births adhere in distinct portions, they must be separated, one after another, and removed.

II. If flooding should occur, or any of those obstacles to expulsion formerly explained, the hand must be conducted into the *uterus*, and the separation and extraction of the *placentæ* accomplished, agreeably to the directions already given.

* * * *

The present work might be deemed incomplete, if we should neglect to offer some advices for the management of the mother after delivery, and of the child after birth. Therefore a few concise directions on these subjects are subjoined.

PART

P A R T III.

THE MANAGEMENT OF WOMEN AFTER
DELIVERY, AND THE TREATMENT OF
CHILDBED DISEASES.

THOSE means that are necessary for assisting women in their delivery, have, in the preceding pages, been very fully considered. In this detail, we have endeavoured to show, that, in most cases, the efforts of *Nature* may be safely trusted; and that the interposition of *Art* is only requisite where these are either interrupted, or prove inadequate to the end. The diseases incident to childbed women, and the management during that period, is an unquestionable proof of the assertion; for our errors, in this respect, to which thousands of women have fallen a sacrifice, have chiefly originated from the high opinion we have entertained of our own skill, and the little attention hitherto paid to the operations of *Nature*. Every refinement in this way has only served to carry us from the paths of truth, and involve us in the most inextricable labyrinths. It may indeed appear surprising, that medical practitioners, possessed of a degree of penetration which might enable them to discover these errors, and of resolution sufficient to break
O through

through an improper method, however established and sanctified by custom, should have permitted themselves to be misled by prejudices, which have proved so fatal in their effects. The complaints naturally incident to lying-in women are few; while those which may be called the *children of art* are various, and often fatal.

The management of lying-in women is by no means so difficult a matter as many have represented. A few plain rules, suggested by common sense, and a careful attention to the dictates of nature, are in most cases sufficient. But since no diseases are more fatal than those of lying-in women, when neglected or improperly treated, an early attention to the complaints incident to that state is of the utmost consequence; for on the seasonable application of the proper remedies the life of the woman frequently depends. Much is therefore in the power of the midwife; who, in her daily attendance on lying-in women, ought carefully to watch the first symptoms of threatening disease. By a skilful and prudent management many diseases may be prevented. When others unavoidably occur, the midwife should neglect no opportunity of having early recourse to proper advice. She ought to consider herself in the character of the friend and nurse of her patient; and should never presume to give an opinion in cases which appear to be out of the line of her own province. Such prudent and becoming conduct will recommend her to the

esteem and approbation of the public, and promote that happy disposition of mind to which those of an opposite character are entire strangers.

We shall first offer a few advices with regard to the simple management where no particular complaint happens; and afterwards, as far as is consistent with our present design, explain the nature, and direct the treatment, of those accidents or complaints that most commonly occur in the puerperal or childbed state.

C H A P. I.

OF THE SIMPLE MANAGEMENT AFTER DELIVERY, WHERE NO PARTICULAR COMPLAINT EXISTS.

IN the management of child-bed-women, it is necessary to attend, *first*, to the regulation of the body; *secondly*, to that of the mind.

§ 1. *The Regulation of the Body.*

I. IMMEDIATELY after the extraction of the *placenta*, a warm cloth ought to be applied to the *os externum* and *pubes*; and the woman should be allowed to rest a little till she recovers from the fatigue of delivery. The wet clothes below and about her are then to be cautiously removed; and others that are clean, dry, and warm, to be substituted in their place.

place. The belly should be made moderately firm, by the application of a table-napkin folded like a compress, and secured by pinning the broad bands of the skirt or petticoat over it; but painful pressure, by tight swathing, according to the vulgar and erroneous practice, should be carefully avoided. In cool weather, or when the woman has been accustomed to it, warm flannel may be applied to the stomach and belly.

2. As the child can suffer no injury from the delay, the mother ought always to be attended to in preference to it, by shifting her when necessary, changing the bed-linens, and adjusting the bed. Her head-clothes should also be changed when they become wet from sweating; but if she be in danger of flooding or fainting, in that case it is better to let her lie quiet till the child be dressed, only observing to apply a dry warm folded cloth immediately under her.

3. Women are liable to some degree of faintness after delivery, which has introduced the custom of giving heating things, as spiceries, caudles, negus, hot drinks, &c.; and among the vulgar it is still the practice to give a glass of plain spirits, which is very improper. Fever, flooding, or inflammation of the womb, are the common consequences of such treatment.

In general, when the woman is faint, it is better to give something cold, as a little simple cinnamon-water, or bread dipped in cold

wine. If wine is apt to sour on her stomach, and she earnestly wishes for a little spirits, it ought to be given very sparingly, as by dipping a bit of sugar in it.

When she has rested a proper time after the fatigue of delivery, bread-berry, or gruel, with a small proportion of wine, may be given; or if she has suffered much in her labour, is languid or faintish, a small quantity of warm negus will be necessary.

4. Before the midwife takes her leave, it ought to be a rule with her to show the *placenta* to the women present that it is complete, and nothing remaining behind. This will prevent them from charging her falsely, if any unfavourable circumstance should afterwards happen to interrupt or prevent her patient's recovery. The necessary directions should also be given respecting her regimen and management.

5. The diet at first should be light; as beef-tea, chicken broth, veal broth, or the like, for dinner: but if the woman be delicate, averse to fops, or has been accustomed to a full rich diet, boiled fowl or chicken, a bit of light pudding, or the like, may be given from the beginning. Some regard ought to be paid to her inclination, as well as to her former habit of life. Women who give suck, and who have large *lochia* evacuations, may be safely indulged with greater freedoms in diet, than when the milk is repelled, or the discharge of the *lochia* is sparing.

6. Gruel of oat-meal or groats, barley-water,

toast and water, cow-milk whey, &c. are the most proper drinks. In summer, the drink should be taken quite cold: Cool water from the spring, lemonade, orangeade, &c. are the best drinks. But in winter, or in cold weather, or when the woman is delicate or weak, the drink may be given lukewarm.

When the milk is to be discouraged, drink of every kind should be sparingly used. Instead of which, ripe fruit, as oranges, or any other cooling fruit in season, may be taken with advantage.

7. When the mother proposes to give suck, the child should be early put to the breast, that is, within twenty-four hours after delivery. By this means a gradual flow of milk will be encouraged, and the bad effects be prevented, which are sometimes occasioned by the accumulation of that fluid. For painful swellings, or inflammation from obstruction, seldom happen, unless from neglect of applying the child to the breast in proper time, or from irritating and fretting the breasts by coercive efforts employed to draw them. Care must, however, be taken, that the attempts be not continued long at once, or repeated frequently at first. The mother should be gently raised with pillows, and supported in a posture somewhat between sitting and lying, while the child sucks; and every precaution used to avoid cold or fatigue.

But if the milk be put back, the breasts for some time will be greatly distended, and occasion

sion a considerable degree of pain and uneasiness, and sometimes a pretty smart fever. This, however, is of short duration, and generally terminates in twenty-four or thirty-six hours, with a sourish-smelling sweat, by a gentle looseness, or by a copious discharge of the milk freely evacuated by the nipples.

Many remedies have been proposed with a view to repel or discuss the milk. It has for some time been the custom to have the breasts drawn or suckled for a few days or longer, from the dread of the hazardous consequences of a sudden repulsion: And some women, especially after their first pregnancy, allow the child to suck now and then for a month. But in general, where no particular complaint occurs, little other precaution seems necessary, but to cover the breasts with thin flannel, and keep the woman dry when the milk finds a free and easy passage. If the breasts should be much distended, very hard and painful, rubbing them simply with fine olive oil, warmed, every morning and evening, is the safest and best application. The uneasy distention seldom continues above a day or two; and the painful consequences are generally increased by the practice of forcibly drawing the breasts, which is now less common. Late observations show, that this practice, founded on prejudice, however established by the authority of great names, or supported by fashion or custom, is seldom necessary, generally improper and hazardous, and very often productive of disagreeable

greeable consequences, by teasing the woman, fretting the breasts; and may therefore be omitted with safety and advantage.

8. In the child-bed state, as well as during pregnancy, women are subject to costiveness: therefore, in the evening of the second, or in the third day after delivery, some gentle laxative should be exhibited; as a laxative pill, magnesia, or a glyster; and it ought to be repeated every second day while necessary. But in those cases where the milk is repelled, one, if not two stools every day, for a few days, should be solicited.

9. The propriety of a frequent change of dress, as once a-day if the cleansing be copious or the woman disposed to sweat, is sufficiently obvious.

A prejudice for many ages prevailed against the frequent use of clean linen, from an *absurd opinion* that it weakened; than which nothing could be more ridiculous: on that account it was customary to confine the lying-in woman in the same dress and bed-linens for a week, ten days, or longer, till the lochia became putrid, and the smell of the discharge was alike offensive to herself and those about her. It is now usual to take her up, and have her bed properly adjusted, by the fourth, or at latest the fifth day after delivery; and the shift, skirt, &c. should be changed once a-day, or oftener. The evening is generally preferred for the purpose of getting out of bed; because, from the fatigue of rising, she will be afterwards better

better disposed to rest: but if she be weakly, and apt to be sick on rising, she may be taken up before dinner. At first she should sit up no longer than till the bed be commodiously adjusted; next day she may sit an hour or two, provided she can do it without fatigue: after this she may sit up longer and longer every day.

But she ought to be cautious of exposing herself to fatigue very early, lest the *uterus*, not yet sufficiently collapsed, should be forced down, and occasion a prolapsus or falling-down of the womb; a complaint of a very disagreeable nature, and very difficult to cure.

10. The bed-chamber of the lying-in woman should be large and airy, and fresh air should be freely admitted, only observing that it does not blow on her in a stream; some portion of the bed-curtains should be left open; the bed-clothes should be nearly the same in quantity as before delivery. A gentle perspiration is natural and beneficial; but sweating is always dangerous in the lying-in-state, and ought to be discouraged; it weakens the woman, is frequently followed with disagreeable eruptions, and exposes her to the hazard of fever or weeds. If she sweats unavoidably, the bed-linen, as well as her body-clothes, should be frequently changed.

11. In summer, no fire in the bed-room ought to be allowed, nor should the chimney be closed with any chimney-board; the aperture from the vent, unless it be placed very
near

near the bed, makes a useful ventilator, by which a free circulation of refreshing cool air is regularly supplied. In winter, or cold damp weather, when fire becomes necessary, it ought to be equally kept up. •

12. During the whole time of lying-in, there should be little noise, and less confusion, in the room. The loss of blood brings on a degree of weakness which requires the support of food; but it should not be too frequently administered, and interruptions in the night should be carefully avoided. Rest and quiet are as necessary to recruit the strength as cordials; and nothing but cool diluting drink should be allowed between the regular meals. The clothes should be changed as often as they give uneasiness; but the feelings of the woman should determine the time, rather than the impertinent officiousness of the attendants. The nurse should be allowed to sleep, except when extraordinary circumstances demand her care, either in a chair or couch in the same room, or in a bed very near it. She will be ready on every necessary occasion, and should not intrude when her assistance is not requisite.

§ 2. *The Regulation of the MIND.*

THE state of the mind in child-bed women is of great consequence to be attended to; and, on the proper regulation of it, recovery will in a great measure depend.

1. Soon after delivery, when the woman is dressed, she ought to be laid quiet, and kept as much

much as possible in a state of perfect tranquillity. Every thing that may flutter her spirits should be carefully concealed; and even the child, when it can conveniently be done, ought to be removed, especially in time of dressing, that the mother may not be disturbed with its cries. Every thing which interrupts the usual train of ideas should be avoided, as in the very irritable state of the mind all such interruptions are attended with danger; restlessness, fever, delirium, even convulsions, and death itself, from time to time prove the consequence.

2. All disagreeable and sudden impressions, even those of light and noise, ought to be carefully guarded against; bells and knockers should therefore be tied up; the hinges of doors lubricated with oil; the street next the windows, if it be public, should be strewed with straw; or, if these should not be sufficient to prevent noise, the woman's ears should be stuffed with cotton, and the laps of the night-cap pinned over them. But, particularly, any affection of the mind, from circumstances in which the woman herself, or any of her friends or near relations, are immediately concerned, should be carefully concealed.

3. After a tedious or painful labour, an opiate, as a grain opium pill, or thirty-five drops of laudanum, may be given in a little cinnamon-water or ordinary drink, and repeated at bedtime, for a few nights successively, to prevent restlessness or after-pains in those who are subject to them; but, unless with that view, medicine

dicine of every kind is unnecessary, and in this part of the country unfashionable.

4. When opiates are indicated, but disagree with the woman, occasioning sickness, giddiness, or head-ach, a dose of fine Russian castor, from 25 to 30 grains, fresh powdered, may with great advantage be substituted in its stead.

After the fourth or fifth day when the red *lochia* abate, and the hazard from the milk is over, a draught of porter or mild strong-beer after supper may be taken with safety, especially by those who have been accustomed to such liquors, and who intend to suckle the child. Their good effects in opening the belly, and procuring rest, are well known.

5. In the childbed state, company ought of all things to be avoided. Women, soon after delivery, finding themselves without any particular complaint, freely indulge their favourite passion for talking, without considering the dreadful consequences with which such early fatigue is frequently attended. Their spirits are often fluttered by it, besides the hazard of suffering from the tittle-tattle and blabbing of the officious or thoughtless visitors. All impertinent intruders ought to be shut out; and if at any time the woman inclines to talk a little, as it might be disagreeable to restrict her to a constant silence, a prudent cautious friend to sit by her is the most proper person, who must be carefully enjoined not to carry this indulgence too far.

CHAP.

C H A P. II.

ACCIDENTS AND DISEASES INCIDENT TO
THE CHILDBED STATE.

HAVING finished the simple management of lying-in-women, we proceed to give a short detail, *first*, of those accidents which from time to time happen from the delivery of the child; and, *secondly*, of those diseases which arise from a flow of blood to any particular part, from improper management, or too great sensibility of the nerves.

S E C T I O N I.

Accidents in consequence of Delivery.

1. **S**WELLINGS of the external parts.—These are common after the most natural and easy labours; but they soon subside after delivery, and seldom require either the application of fomentation or poultice, unless when the habit of body is bad. In that case, inflammation, suppuration, or mortification may ensue.

2. *Laceration of the perinæum.*—The tearing of the *perinæum* is an accident which may readily happen in a first labour, when the parts stretch with difficulty; or in very quick labours, when the head of the child advances rapidly through the bony passage; or, in advanced life, where the parts are narrow, rigid, and contracted, if
the

the assistance necessary for supporting it be neglected.

Though a simple laceration of the *perinæum*, where the gut and bladder are not affected, under proper management, heals kindly, the tearing of the *perinæum* is, in some instances, a shocking accident: for the rent often communicates to the gut, sometimes to the bladder; in consequence of which these parts lose their retentive faculty, and a complete cure can but seldom be obtained, so that the woman will be miserable during her life.

3. *Inflammation, abscess, or gangrene of the genital parts.*—From the long confinement of the child's head in the passage, in lingering labour; or, from the bruises in a painful or laborious labour, all the soft parts from the *pelvis*, downwards and forwards to the *os externum*, are exposed to the hazard of swelling and inflammation, which frequently terminate in supuration, abscess, or in gangrene. They readily communicate to the *vagina*, and destroy the parts between it and the neighbouring organs, so that stools and urine always pass through it; for these ulcers are seldom cured.

The same consequences are often occasioned by the officiousness of those who endeavour to stretch the parts, or touch the woman frequently, before the passages be moistened and dilated by the progress of labour.

In tedious labours, the confinement of the child's head is alone sufficient to produce swelling and inflammation, which often terminate
in

in the disagreeable consequences now mentioned; but it is difficult to say what degree of pressure, in some instances, may occasion it. In some women, three whole days from the commencement of labour may be required before delivery be accomplished; and yet, under proper management, it will end well. In others, however, or where the management has been unskilfully directed, swelling, inflammation, and afterwards gangrene, will ensue, though the labour should only be protracted to thirty-six or forty-eight hours. Midwives should therefore be very tender of their patient, and avoid touching or handling too frequently.

It is generally in our power to prevent these accidents. The consequence is always to be dreaded when the bladder is much distended with urine, and the strait gut with hardened fæces. In tedious labours, therefore, the state of the bladder ought constantly to be attended to, and the woman should be urged to make water frequently, before the child's head descends so low as to press on the neck of the bladder, and occasion a total suppression. That inconvenience may then be diminished by the woman taking little drink; or for a time removed by raising or cautiously pushing back the child's head; and, in the interval, her own endeavours to make water may be successful. If this method fails, or is impracticable, the catheter must be employed.

The distention of the *rectum* should for the same reasons be prevented or removed by repeated

peated injections. Little else, for the most part, can be done but to expedite the delivery when the natural efforts prove inadequate, and there is hazard that the woman may suffer from longer delay. This is the business of the accoucheur.

4. *Ruptured vagina*.—The *vagina*, in some instances, actually tears, either from the repeated bruises of the child's head in laborious labours, or when the pressure has been so long continued as to occasion gangrene before delivery.

Lacerations of the *vagina*, from either cause, are frequently mortal.

The disease is readily discovered by the introduction of a finger within the *vagina*, and by the discharge of stools from the *os externum*.

When any uncommon accident supervenes upon delivery, or whenever there is reason, even from the symptoms of a smart soreness of the parts, heat, and excoriation from the urine, &c. to suspect any injury, it is the duty of the midwife carefully to examine, both by the touch, and by inspecting the parts, that the assistance of the surgeon may be early had recourse to.

5. *Laceration of the orifice, neck, or body of the womb*.—In laborious labours, the womb is exposed, not only to the hazard of inflammation, but of laceration also. When the thin edge of the orifice only is affected, it frequently heals without any other inconvenience, unless, from a coalescence of the sides of the mouth of the womb,

womb, the woman be prevented in future from having children.

When the laceration extends to the neck or body of the womb, the consequence is, almost in every instance, fatal. Shiverings, faintings, or convulsions ensue, and the woman rarely survives the third day after delivery.

Lacerations of the womb, sometimes, though more rarely, happen merely from the awkward unfavourable position of the child, especially in those cases where the womb is much distended; as in cases of very large children presenting cross, or in twins, triplets, &c. where the texture of the womb is weakened by excessive stretching, or from the unequal pressure of the child.

Such accidents have also been often occasioned by too early attempts to dilate the orifice of the *uterus*, with an intention of turning the child; or by violent exertions in pushing back the part of the child which presents, that it may be turned; or by pulling down the limbs in an improper direction; or by ignorantly endeavouring to pull down the body of the child, by passing a finger at the groin when the breech presents, before the womb be sufficiently dilated; or, what is still more inexcusable, by the blunder of the practitioner mistaking the shoulder for the breech, and pulling violently in that direction.

6. *Inversion of the womb.*—The *uterus* is frequently inverted, in the manner already explained

plained*. It is a common effect of rashness and inexperience, and is generally attended with clammy sweats, convulsions, and death. Of five instances, where this happened from the ignorance of the practitioner in hurrying the extraction of the *placenta*, one Lady only survived the dreadful accident. Her recovery is the more extraordinary, as the womb could not be restored to its natural state; and though replaced within the *vagina*, it still continues inverted.

SECTION II.

Diseases incident to the CHILDBED STATE.

THE state of childbed women, in those days in which luxury and dissipation bear an uncontrouled and universal sway, is often precarious. This may indeed be reasonably expected, when the plain and simple path of Nature is forsaken; when ignorant practitioners so often officiously interfere, in spite of the fatal effects of their intrusions, and persist in an erroneous treatment, in spite of so many awfully striking admonitions.

The puerperal state may be divided into three stages; each consisting of five days, and each stage requiring a different management. Of these the first merits our chief attention, for most of the dangerous diseases in childbed occur within the first five days; and unless from some glaring irregularity or mismanagement,

ment, those commencing at a later period after delivery are seldom fatal.

Some refer the diseases of childbed women to three general sources.

1st, The want of the usual support of the full womb.

2^{dly}, Irregularities of the childbed evacuation, called the *Lochia* or Cleanings.

3^{dly}, The changes produced from the determination of milk to the breasts, and its consequences.

Without any regard to such distinctions, we shall give a concise view of this subject, nearly in the order of time in which these complaints commonly occur.

§ I. FAINTINGS.

SOME women suffer a degree of faintness after the most natural and easy labour. A considerable pressure is suddenly removed, a quantity of blood is suddenly evacuated; and there is often a quick transition from intolerable pain and anxiety of mind to a state of ease, or even of transport. Either of these causes is sufficient to account for a slight degree of faintness, which is of no long duration, never attended with any bad consequence, and is readily removed by giving now and then a little of any simple cordial, keeping up a free circulation of cool air about the woman, and when cold and wet, applying a warm dry folded compress of soft linen under her, till she can be gently raised, properly shifted, and dressed.

There is no hazard from faintings to be dreaded where the pulse and breath are distinct and regular, where there is no uncommon coldness over the body or of the extremities, no anxiety or palpitations, no excessive flooding, and where there is no suspicion of any injury having been done to the womb, either from delivery or the extraction of the *placenta*.

In opposite circumstances the fainting is very dangerous; for the woman seldom survives a few hours. A surgeon should therefore be immediately called; and in the mean time let her be supported by giving warm cordials and light nourishment, while they can be swallowed; let actual warmth be promoted, by applying warm flannels to the breast, belly, and extremities, bottles with warm-water to the feet, and using such other methods as the judgment of the practitioner may suggest; but we ought to be exceedingly cautious of endeavouring to rouse the woman by the application of volatiles to the nose, as smelling salts, hartshorn spirit, &c. according to the common practice; for while she is in a languid irritable state, any stimulating substance rashly snuffed up would endanger suffocation; or by occasioning violent coughing or sneezing, might induce excessive flooding, which in a few minutes may be fatal.

§ 2. FLOODING.

EXCESSIVE floodings immediately after delivery, attended with faintings, feeble interrupted

rupted pulse, and coldness of the extremities, are always dangerous, often mortal.

The most common causes of immoderate or profuse flooding after delivery, are,

1st, Improper treatment in time of labour; as overheating the woman with confined air, crowds of company, stimulating food, hot drinks with wine and spiceries, &c. 2^{dly}, A very quick delivery. 3^{dly}, Violence in extracting the *placenta*; as rashly pulling by the rope before time has been given for the contraction of the *uterus*; or tearing the after-birth from the womb by pieces. 4^{thly}, Want of contractile power in the womb from previous distention; as in case of twins, &c. or from general weakness. 5^{thly}, Agitation of the mind.

In situations so critical and alarming, there is no time for trifling; for either death advances with hasty strides; or, if the woman survives delivery a few hours, she will afterwards be secured from future danger.

The danger, however, is not always to be estimated by the appearance of blood lost, but by the symptoms: while the pulse beats distinctly, while there are no faintings or coldness in the extremities, no hazard is to be dreaded, however apparently alarming the flow of blood is. In opposite circumstances, the danger is proportionally great.

When there is hazard of flooding after delivery, the woman's belly should be swathed pretty firm; she should be laid with her head low, in a horizontal posture, kept very cool,

and an opiate should be given to compose her spirits.

If the evacuation be excessive, no medicine can be relied on. It can only be checked by those means which cool the body, retard the motion of the blood, promote the contraction of the *uterus*, and favour the disposition of the blood to coagulate. With these views, a free and bold exposure to the cold air, and cold applications to the *pubes* and *os externum*, are most powerful; such as stripping the woman almost naked, admitting the cold air from the door and windows to blow freely upon her, throwing cold water by surprise on the belly and *os externum*, and applying large thick folded compresses of linen dipped in cold vinegar and water to the belly, *os externum*, and loins; which must be often renewed, as their sole virtue consists in their coldness.

Cold acidulated drink should be given freely; and nothing of a cordial heating nature ought to be allowed, either with a view to recal the vital heat, or to rouse the woman from that languor and faintness which are of so much service in diminishing the force of the circulation, and giving time for the blood to coagulate; by which an immediate stop is put to the flooding.

When the woman is very weak and much exhausted, beef-tea, chicken-water, or any other light soup taken cold, hartshorn-gellies, sago, or panada, with a small proportion of Rhenish or claret wine; and, in a word, such food as
affords

affords nourishment without heating the body, or increasing the motion of the blood, are the most proper.

If the method now mentioned should fail, cold vinegar and water should be thrown up into the *uterus* with a bag and pipe, and repeated often, till the womb by contraction diminishes the diameters of the open vessels; and by that means lessens, or entirely puts a stop to the flux.

When the woman bleeds profusely, and the womb seems to have lost its power of contraction, and if all other methods should fail, one expedient may yet be employed; which is, for the operator to pass the hand within the cavity of the *uterus*, and gently stimulate with the fingers, in order to promote its contraction.

If the womb be perceived to close upon, or grasp the introduced hand, from that moment, the diameter of the blood-vessels being lessened, the bleeding will abate, and the woman will be rescued from threatening death: But if no such effect be produced, she will unavoidably very quickly die.

Such modes of practice, however, nothing but the extreme urgency of the case can at any time justify in a female practitioner.

§ 3. AFTER-PAINS.

ALL pains of the belly, or parts contained in that cavity, coming on soon after delivery, are, by the ignorant or inattentive, indiscriminately styled *After-pains*; but it is of great conse-

quence, that pains occurring in the childbed state be accurately distinguished from each other.

After-pains, strictly so called, are 'those grinding pains occasioned by the expulsion of clots of blood.' The blood escaping from the mouth of the blood-vessels, chiefly at that part where the *placenta* adhered, is thrown down in the form of clots on the orifice of the *uterus*. From this stimulus it gradually opens; and a spasmodic effort, somewhat similar to what happens in real labour, is excited in the *uterus* till the grumous blood be expelled. The mouth of the womb then closes, and the woman is at ease till the same effect be again produced from the same cause; so that the expulsion of these clots is occasional.

Some women suffer much uneasiness from this circumstance; but as the pains arise from the slow contraction of the womb, giving an opportunity for a quantity of blood being collected in its cavity, they may either be entirely prevented, or moderated, by a proper management of the labour, and particularly of the *placenta*. In a first child, or where time is given for the spontaneous contraction of the *uterus* to separate the *placenta*, after-pains seldom occur, or at least are seldom troublesome.

Frequent pregnancy and parturition impair the powers of contraction of the *uterus*: hence the oftener labour is repeated, the womb contracts the more slowly, blood is more liable to
be

be lodged in its cavity ; and therefore women must be more subject to after-pains.

After-pains are never dangerous, though sometimes so severe as to resemble those of labour ; and in some irritable habits, are attended with a degree of fever, with nauseating sickness, or with vomiting. They come on soon after delivery, and frequently continue less or more till the red *lochia* cease.

They are mitigated or cured by whatever promotes the contraction of the *uterus*. Actual warmth gives relief, as dry warm flannels applied to the belly, or fomentations with wet flannel, or bladders half filled with warm-water. If violent, an opiate should be given ; as thirty or thirty-five drops of laudanum, repeating it once in eight or twelve hours till easier ; and the belly should be kept open with emollient glysters.

After-pains are sometimes confounded or complicated with pains from irregular contraction of the womb ; and with cholic, from wind in the bowels, which distends the belly, and occasions a considerable degree of swelling. In both cases, glysters with *asafoetida* and *laudanum* often give immediate relief.

§ 4. Inflammation of the WOMB.

It may occur at any time from delivery to the fifth day, though sometimes it attacks at a later period.

It is attended with pains not unlike those of labour ;

labour; and is distinguished from *after-pains* by the pain being constant.

Its common causes are,
Difficult or tedious labour.

Artificial efforts to deliver the child or after-burthen.

An over hot regimen during labour or lying-in.

Cold, applied to the woman's body when in a free perspiration, or admitted into the womb while the *lochia* flow.

But the most frequent cause is the bruises which the womb suffers in laborious labours; for when the *os uteri* dilates slowly, that part of the womb which is forcibly squeezed between the child's head and bones of the *pelvis*, will be exposed to the hazard of swelling, inflammation, and their consequences.

Inflammation of the womb is generally preceded by a chillness or shivering, followed by intense heat, quick pulse, and the other symptoms of fever. The pain is entirely confined to the region of the womb, and gives the sensation of fulness and weight, with frequently a burning heat and throbbing in the part. According to the particular part affected, the pain will be confined to the *pubes*, extend upwards towards the navel, in the direction of the ligaments; or it will strike backwards towards the gut, from the groin down one or both thighs; and if that part of the womb connected with the bladder be the seat of the disease,

ease, it will constantly be attended with pain, difficulty, or suppression of urine. If it occurs at the time the red *lochia* usually flow, they will soon be sensibly diminished, or the discharge will entirely cease.

Every practitioner in midwifery ought to be informed, that “ a fixed pain any where about
“ the under part of the belly, coming on soon
“ after delivery, especially after a tedious or
“ painful labour, is an alarming symptom,
“ and indicates considerable danger.” When it occurs later, as after the fifth day, there is less hazard. But since the woman’s recovery will depend much on proper management, the earliest opportunity should be taken to put her under the care of a skilful surgeon.

Inflammation of the womb, like all other inflammations, often ends in the formation of matter, sometimes in mortification; the latter is generally fatal, the first frequently so, as the passage for the matter is uncertain.

The principal remedies are, cooling regimen, a very mild, light diet, consisting chiefly of vegetables and fruits, plentiful dilution with cool, acid drinks; and an open belly, by means of very gentle laxative medicines, as cream of tartar and magnesia; lenitive electuary, or laxative glysters; bleeding, when there is violent pain and much fever; and fomenting the belly, evening and morning, only avoiding applying the flannels too hot, or continuing them so long at once as to force out sweats.

If from the treatment now advised, an universal

versal perspiration appears on the surface, with a sensible remission of the painful symptoms, there is reason to expect that the inflammation will soon be dispersed, and the woman obtain a complete recovery. But if, notwithstanding every treatment, the pain becomes more acute and throbbing, with a proportional increase of the feverish symptoms; if there is nauseating sickness, or frequent vomiting, along with watching or threatening *delirium*; the inflammation will then terminate either in suppuration or gangrene. The most favourable outlet, in case of suppuration, is by the *vagina*. When the matter is discharged in that way, which is known by its appearance on the cloths, a happy recovery may generally be expected. To prevent any bad consequences from the acrimony of the discharge, warm-water should be frequently injected into the *vagina* and *uterus*, the Peruvian bark should be given in substance three or four times a-day, the woman should be strictly confined to a light vegetable and milk diet; she should sit up as much as she can, and take the earliest opportunity of using exercise; which is not only essential to the recovery of her general health, but for promoting the discharge of the matter.

When the inflammation is communicated to other parts, matter is sometimes discharged by an abscess in the groin. The cure in that case is a slow tedious process; and a considerable lameness is often for a long time left behind.

§ 5. Irregularities of the LOCHIA.

THESE consist either, *first*, in its excess; or, *secondly*, its deficiency.

The *lochia*, or cleanings, is that evacuation which follows the delivery of the child and *placenta*. It is distinguished by the names of bloody, and serous or watery *lochia*. The first is commonly called the *reds*; the latter, the *green waters*, though the term is improper; for it rather resembles coffee-grounds.

The *lochia* is nothing more than a discharge of blood from the vessels which formerly opened into the cavity of the *uterus*, and chiefly at that part where the *placenta* adhered. Till the diameter of the vessels be diminished by the collapse of the *uterus*, the fluid evacuated will be pure blood; but as the vessels contract, the discharge will become more and more pale and watery, till at last it loses the bloody appearance entirely.

Something like a slight degree of suppuration affects the internal surface of the womb a few days after delivery; partly from the dissolution or sloughing of the membranes lining the womb, supposed to be cast off along with the cleanings; and perhaps also, partly from the access of the air admitted into the *uterus*. In this way the purulent appearance of the serous *lochia* or green waters may be accounted for.

The bloody *lochia* will be in greater or less quantity

quantity as the womb was formerly much distended or the contrary, and as it contracts quicker or slower after delivery. The quantity will also depend much on the constitution of the woman, and still more on the management of the *placenta*; so that no exact measure of the discharge can be laid down.

As much blood was prepared during pregnancy for the nourishment of the child, the draining of the *lochia* may be considered as a necessary evacuation; and in particular, where the flow of milk to the breast is to be discouraged. But there is nothing morbid or impure in the discharge, as was formerly imagined.

The recovery of the woman, however, does not, in general, depend on a great flow; for those who have little, for the most part, recover as well as those who have it in great quantity.

Experience even shows, that an excess of the *lochia*, by its debilitating effects, like any other profuse evacuation, retards the recovery; and that such women are more liable to weeds and nervous complaints, than those who have it in moderate quantity.

The red or bloody appearance commonly continues for four or five days, though in general it begins to change its colour after the third day; but in some the red colour disappears, and recurs now and then till the discharge entirely ceases, and the *uterus* be reduced to its original size and compactness. This
change

change in the uterine system, though, as already observed, liable to considerable variety, according to management, and as the milk is encouraged or repelled, commonly requires from eighteen days to the end of the month, when the courses again appear in those who do not suckle, the usual establishment afterwards takes place, and the woman's health is confirmed.

From this view, it is obvious that the excess or deficiency of the *lochia* evacuation ought only to be considered and treated as a disease when it is accompanied with morbid symptoms; for in many cases Nature supplies the deficiency, by increasing the milk or perspirable matter; and corrects the excess, by suppressing other evacuations.

1. *Redundant or excessive lochia*.—This constitutes what we call a *puerperal flooding*. When it occurs immediately after delivery, and is profuse or excessive, it is then strictly called a flooding, and often proves fatal. Its nature has already been explained, and the treatment directed under the article Flooding *.

If the red lochia should continue to flow beyond the ordinary time, though the quantity be not excessive, it is then said to be *immoderate* or *redundant*.

The protracted duration, or immoderate discharge of the lochia, may proceed from debility, or from a bad habit of body; and is often occasioned by mismanagement in time of labour,

* See page 228.

bour, or after delivery, especially by too early fatigue in the puerperal state.

The treatment will depend chiefly on the cause, and must be regulated according to the constitution and particular circumstances of the case. The chief object to be attended to, is to endeavour to brace the system, and by suitable regimen to restore general health. The Peruvian bark is one of the best remedies: it may be given in substance or in decoction; and to each dose fifteen drops of elixir of vitriol should be added. In slight cases, a dose of the elixir of vitriol, three or four times a-day, in a cup of rose-tea, will be sufficient. But the treatment, where there is any fault in the habit, or where the disease does not yield to simple remedies, is the province of the physician; for nervous or hysteric complaints frequently accompany or follow excessive or interrupted discharges from the uterus.

2. *Deficient or obstructed lochia.*—At the menstruating age, weakliness of constitution very commonly occasions retentions or obstructions. In like manner, diseases occurring in the puerperal state very generally affect the *lochia*, tho' the effect is often mistaken for the cause. It cannot, however, be denied, that obstruction of the *lochia* is frequently an original disease; and when suddenly occasioned by cold, irregularities, passions, or mismanagement, is attended with alarming symptoms and fever. In this case, a physician should immediately be consulted.

When

When the discharge is *purulent*, that is, having the appearance of matter like that discharged from a wound, or when the discharge has an offensive smell, the midwife should be very careful to direct the parts to be kept clean by bathing with a sponge and warm-water, or throwing it into the *vagina* twice or thrice a-day with a bag and pipe. Very disagreeable consequences often ensue from the stagnation of the putrid *lochia* confined within the folds of the *vagina*; such as inflammation, excoriation, or sores; coalition of the mouth of the womb preventing the possibility of future conception; or even a coalescence, or growing together of the edges of the *labia, os externum*, or *vagina*.

Women in the lying-in state ought to be very careful to keep these parts clean, by frequent bathing with a sponge and warm-water while the *lochia* continue to flow; and should afterwards take a proper opportunity, when their health will permit, of applying cold-water, or of using the cold bath, when the season and other circumstances will admit of it.

The advantages of observing a scrupulous cleanliness at these times, and after *menstruation*, though little attended to in this country, are sufficiently obvious, and do not require any other arguments to enforce it.

The practice of ablution was first known among the ancient Jews, and constituted a part of their religious ceremony. It was probably first suggested by delicacy, and afterwards

established on account of health. It still prevails in the Eastern countries; and the *Biddean* of the Italian and French Ladies deserves the imitation of those of Britain; who, in general, surpass most other nations in delicacy of sentiment, if not in politeness of manners.

§ 6. *Determination of Fluids to the BREASTS, and its Consequences.*

FROM the third to the fifth day after delivery is a very important period; for in this interval the red *lochia* cease, and the discharge is only compensated by the milk, which generally flows in full streams. Diseases may therefore arise from its being too full, or too sparing.

Some women, especially after a first delivery, notwithstanding every precaution, are liable to complaints about the time of the accession of milk to the breasts.

When the colour of the *lochia* begins to change, pains in the lower part of the belly, like those of painful menstruation, come on, attended with a pretty smart fever; at last the breasts become enormously distended, and occasion the most violent pain, weight, and throbbing. This febrile commotion and painful tension continue from 24 to 36 hours, and are commonly terminated by a critical sweat, looseness, or a free discharge of the accumulated fluid from the nipples.

Women of a sound constitution, who suckle their children, who have good nipples, and

apply the child to the breast early, either escape the milk fever entirely, or have it in a very slight degree. But those who are unwilling, or unable to attend to those circumstances, are subject to milk fever, to the consequences of the confinement and accumulation of that fluid, and to inflammation and suppuration of the breasts.

The management of the breasts will be very different as the woman proposes to give suck, or to discourage the milk prepared.

In the former case, the child should be put to the breast generally within 24 hours from delivery; and as the great object is to promote a gradual accession, and guard against the inconveniences of a sudden flow and excessive distention, the attempts at first ought not to be carried far at once, nor often repeated. While the breasts are small and flaccid, there will be little necessity, either of having very early recourse to suction by the child, or of repeating it frequently. But all this must be regulated by the health of the woman, by her constitution, by the nature of her delivery, and by those appearances which usually precede the coming of the milk.

In some women the nipples are so much drawn in and buried in the substance of the breast, that considerable force is necessary to draw them out and preserve them, so as to enable the woman to give suck. This may frequently be done by glasses of various kinds, or by suction by the mouth of a young child accustomed

to suck, of an adult, or sometimes of young puppies.

If the particular situation and circumstances of the mother, her state of health, or any defect in the breasts or nipples, should prevent her from suckling the child, she must endeavour to repress her milk with as little inconvenience to herself as possible.

Discutient applications are now out of use; and the modern method of drawing the breasts for some time frequently produces inflammation in them, and weeds, from the fatigue. When the milk is to be discouraged, little more seems to be necessary than to regulate the regimen, by directing, for a few days, till the troublesome symptoms be removed, an abstemious diet, with little drink; keeping the belly gently open, rubbing warm oil on the breasts two or three times a-day, (as mentioned under the Treatment of Lying-in-women), and letting the milk go back into the circulation, to be carried off by the common outlets; or permitting it to be spontaneously evacuated by the pores of the nipple, without teasing the woman, or fretting the parts, by any unnatural coercive means of promoting it.

The structure of the breasts of women is more nice, more delicate, and more complicated, than in any other class of animals. The numerous lactiferous tubes, or milk vessels, at last terminate in ten or twelve, which perforate the nipple, forming as many apertures or pores, from whence the milk flows out in as many
distinct

distinct streams. From this construction, and the convoluted direction of the vessels, so different from that of other animals, for in brutes they are larger and more strait, the milk cannot easily flow involuntarily, and the breasts are subject to many diseases.

In the lying-in state, a sudden accession of fluids to the breasts, its sudden repulsion, improper attempts by coercive efforts to draw out the nipples, or the stagnation of the accumulated fluid, after it is secreted, prove a frequent cause of fever, with inflammation, and of tumour and suppuration in the part affected.

The painful distention of the breasts, and milk-fever, with which it is attended, seldom continue above 36 or 48 hours; but if it should be protracted beyond that period, and the symptoms be violent, the case is alarming, and requires the immediate attention of a skilful practitioner; for the most dangerous fevers incident to the lying-in state frequently commence about that period.

The symptoms, when slight, will for the most part yield to the simple treatment of fomenting the breasts twice or thrice a-day with flannels squeezed out of warm-water, or a decoction of chamomile flowers, afterwards rubbing warm olive oil on the part affected, and covering it with soft flannel or fur. If this should happen while giving suck, the breast should be emptied by frequent suction; a spare cooling diet should be used, and the belly kept moderately open. The nipples should also be bathed now and then with warm-water,

lest the milk be prevented from flowing by the obstruction of the terminating pores of the milk vessels; and the nipples should be gently drawn out by proper glasses.

But if the swelling and inflammation increase, along with hardness, pain, heat, throbbing, and fever, a soft poultice of bread and milk, or of lintseed which in some cases may be preferable, must be applied, sufficiently large to cover the affected part. The breast should be supported by a handkerchief suspended from the neck, and the poultice ought to be renewed as often as it may be supposed to be cold; as three or four times a-day, when the season or nature of the weather require.

If the inflammation can be dispersed, the poultice is the most proper mode of fomentation; or, a poultice prepared with crumb of bread, soaked in a dilute solution of sugar of lead, may be sometimes more effectually employed for the purpose. If not, the bread and milk poultice is the best means of promoting suppuration. The sore may afterwards be dressed with a soft pledgit of basilicon, or spermaceti ointment, spread on sharpee; and while pain, inflammation, or hardness continue, the poultice should still be applied.

Abscesses of the breast are of two kinds; those that are seated deep in the glandular substance of the breast, and those that are most superficial.

1. The former are tedious in their progress to suppuration, exceedingly painful, and attended with a considerable degree of fever, which

which often impairs the constitution, and leaves great debility for a long time after it.

The fever must be checked by the most cooling methods, and the woman may be saved much pain by opening the tumour early; but this is the surgeon's business. It must not, however, be concealed, that suppurations often return in other parts of the breast two or three different times.

2. The latter soon come to suppuration; as, in a few days, the symptoms are proportionally milder; the woman suffers no great inconvenience, and commonly suckles her child during the cure; for the abscess bursts spontaneously, the matter obtains a free exit, and the sore heals kindly.

§ 7. Sore NIPPLES.

NURSES are sometimes subject to sore nipples. Many women suffer so much from this complaint as to oblige them to relinquish nursing, though otherwise well qualified for it.

Sore nipples are of two kinds; either, 1st, A simple excoriation, a kind of sponginess or rawness of the part; or,

2^{dly}, Deep ulcers, called fissures or chops.

The nipples are a composition of nervous filaments, of a spongy texture, and covered over with a very fine delicate skin. Round the *basis* of the nipple is a circular disk, beset with a number of small glands, whose use is to furnish a quantity of viscid mucus, or smear, which protects the skin from being scalded by the friction

friction and moisture to which it is exposed in giving suck.

From this structure, it is evident that inflammation, excoriation, and ulceration, or fissure, will frequently occur, especially in women of a delicate texture; and when the disease once commences, it is difficult to stop its progress; for the tender state of the parts being continually kept up by the friction of the child's mouth in sucking, and the acrimony of the milk, renders every remedy ineffectual for some time, and exposes the woman to the greatest distress.

Women are chiefly subject to sore nipples in their first or second child, less so in future, because the nipples lose much of their sensibility by use. It is the action of the child's mouth which occasions it; therefore, taking the child from the breast, or saving the nipples, by first favouring the one, then the other, is the most certain method of obtaining a cure. The nipples may be favoured by procuring the assistance of a nurse to suckle the child all night, and thus lessening the fatigue to the mother till they become less sensible.

In the first species of the disease, where there is only a simple erosion, or excoriation from the irritation of sucking, and perpetual moisture, little more is necessary than to keep the nipple as dry as possible, and wash the excoriated part frequently with any gently drying or astringent lotion, as brandy suitably diluted, alum-water, a weak solution of sugar of lead in
rose-

rose-water, or an infusion of Japonic earth in boiling-water. The milk ought to be prevented from running out by applying broad pap-glasses, which also answer the purpose of drawing out the nipple: or to preserve the nipples when drawn out, and prevent their retracting, rings of wax, ivory, box-wood, or of lead, may be employed. They should be so constructed as to allow the nipple to protrude through them. Those of lead, which are commonly used in this country, are well adapted for keeping the nipples cool as well as prominent, and defending them from injury from the woman's linens.

2dly, Deep ulcerations, or fissures, sometimes affect the nipples; and if the woman persists in giving suck, the whole substance of the nipple may at last be destroyed. This species of the disease is much more difficult of cure than the former. Every remedy frequently fails; and there is no infallible cure but to remove the child from the breast.

A complete or palliative cure may be attempted by favouring the diseased breast as much as possible, by supplying the want of the natural smear, when the part is dry and inflamed, with rubbing cream, or a softening liniment with oil of almonds and spermaceti, before the child is put to the breast; and by suitable dressing applied to the fores.

These fores or fissures require a very particular management; and in many cases, where the mother is anxious to suckle her child, and

a cure cannot be soon obtained, the disease may be rendered supportable, and the pain considerably lessened, by proper dressings, till time gives a more favourable turn, and lessens the sensibility of the parts.

The art of dressing consists in applying a small strip of sharpee, wet in the astringent lotion, to the fissures or chops; then covering the whole with a pledgit of a cooling soft liniment composed of white wax, spermacei and oil of almonds, or the common spermacetti ointment. The dressing should be continued as long as possible, only removing it two or three times a-day, and gently washing the part with luke-warm milk and water, softly poured from a small tea or milk pot, before the child be allowed to suck.

Women who have been subject to sore nipples, should endeavour to harden the nipple in future, and thus prevent a return of that distressing complaint. For this purpose, they should use astringent applications to the parts for several weeks before delivery; as cloths dipped in alum-water, in strong spirits, or in the brine of salted meat boiled up, which many recommend as an infallible specific for the purpose.

When little sores appear in the surrounding brown circle or disk of the nipple, and correspond with similar appearances in the child's mouth, or other parts of the body, as copper-coloured spots or blotches about the private parts of the child, a surgeon should be immediately called in. The case is more alarm-
ing,

ing, if hard swellings in the glands of the nurse's arm-pits have already begun to appear.

§ 8. *Fevers of LYING-IN WOMEN.*

IN the pregnant state, the course of the blood is much enlarged, the heart and arteries generally act with increased strength, the blood has a buffy coat, and the coagulable part is less firm. From the pressure of the womb in the advanced months, the belly is also bound, which gives occasion to the absorption of much putrid matter. From these circumstances, the nature of the fluids is somewhat altered, and the system rendered more ready to be affected by any occasional cause.

In this state labour commences, the womb is suddenly emptied, and enormous pressure is removed, the blood again takes a new course; and from these frequent changes of determination, added to the natural delicacy of females, there appears a great share of irritability, or a tendency to be affected by the slightest causes. Vulgar prejudice has, on these occasions, introduced a most unnatural and absurd method of treatment; for during labour, the woman is generally supported with cordials of a heating and inflammatory kind, the room is kept quite close, with a number of people crowded in it, great fires, &c. After delivery, she is covered up with clothes, laid in a horizontal posture on a soft bed, with the curtains close drawn, and kept in a sweat; by this means the putrescent *effluvia* from the surface

surface are retained; and from the neglect of frequently shifting the linens, skirt, and clothes, the *lochia* stagnating about the *vagina* turn putrid, and are in that state absorbed, that is, carried back into the system.

From all these causes, considerable debility is induced, and a disposition to fever and to take cold from the slightest causes. These are the most probable causes of the feverish disorders which occur in the lying-in state, and which might generally be prevented by a proper management during pregnancy and after delivery; but when once commenced, they with difficulty yield to the most approved treatment: For every smart fever, occurring a few days after delivery, preceded by shiverings, followed by intense dry burning heat, and not relieved in 36 or 48 hours by a plentiful flow of milk or *lochia*, or by an universal moderate sweat, is extremely alarming, and always indicates great danger.

Fevers, in childbed-women, assume a variety of appearances in the beginning; some of the symptoms are so similar, that they frequently resemble each other, and they are with difficulty distinguished; but the distinction is of so much consequence in directing the proper treatment, that the life of the woman often depends upon it. The knowledge and treatment of these fevers, except those slight affections called weeds, or such as coincide with the time of the milk, are entirely out of the line of female practice.

We

We have already mentioned inflammation of the womb and milk fever; so that we proceed to treat of the *weed*, the *miliary*, and the *childbed-fever*.

I. OF THE WEED.

WEEDS—are fevers in the childbed-state occasioned by mismanagement or accidents, which at other times might be insufficient to produce fever, but which the very irritable state of women then renders important. They differ from other fevers also by the violence and duration of the cold fit, and are generally terminated in 24 hours; for they seldom continue less than 18, or more than 36 hours.

Women are chiefly disposed to weeds from too great evacuations, or too early fatigue; but they are immediately brought on by passions, cold, or irregular diet.

They are seldom dangerous, but leave the woman liable to future attacks.

We shall direct the cure in the order of the symptoms.

1st, In the cold fit we must endeavour to warm the patient, but should avoid an overload of clothes, or the use of cordials and spirits; for the hot fit is the common consequence, and their united effects may be violent delirium, or a more obstinate fever. Diluent drinks, moderately warm, should be freely drank; such as orange-whey, with or without wine, according to circumstances, barley-water, gruel, cow-milk whey, and the like. If the
trembling

trembling should be violent, warm flannels may be applied to the stomach, belly, and feet, or bottles with warm-water to the latter. No real advantage can be derived from oppressing the woman with an additional load of blankets; these are in fact of little use in promoting warmth; but from their great weight frequently bring on or increase the troublesome symptom of difficult or oppressed respiration. If at any time they may be thought necessary, they should be confined to the legs and feet only; and even these, and every other means of promoting heat, ought to be removed the moment the febrile heat commences; for with it the former stage terminates, and the method of management must then be altered: For,

2dly, During the hot fit the drinks should be given, if not chilly cold, at least not sensibly warm; and every endeavour should be employed to promote that natural easy perspiration, on which the crisis of the disease depends. This is chiefly to be done, not by an overheated air and regimen, or by stimulating drinks and medicine, but by a strictly cooling regimen, by plentiful dilution with cool drinks, and promoting a free circulation of cool air. With this view, draughts of cold spring-water may be given with the utmost safety; the woman should be lightly covered with bed-clothes, and her arms may be freely exposed without them. When the febrile heat is excessive, and the celerity of pulse in proportion, sweat or perspiration is with difficulty excited, and there

is great hazard of topical inflammation affecting the brain, or some of those parts essential to life, or of the fever terminating in hardness and inflammation of the breasts. To bring on that universal sweat, or gentle perspiration, by which the weed is to be cured, and its bad effects prevented, it is absolutely necessary to lessen the animal heat and frequency of pulse; which can only be done by a strict observance of the cooling regimen. For this purpose, the saline, or the nitrous mixture, are the best remedies; and cold drinks and cool air, along with ripe fruit, the most proper cordials.

From this treatment the most beneficial consequences may be expected; the dry burning heat and drought will gradually abate, the quickness of the pulse will be greatly lessened, a gentle breathing perspiration will then appear over the surface, the patient will be immediately relieved from the uneasy sensation she laboured under in the two former stages of the disease, and under proper management will soon recover perfect health. But,

3dly, In this last stage much will depend on a careful and judicious management; in many instances, even the life of the woman. The degree and duration of the sweating must be proportioned to the nature of the disease, constitution, and particular circumstances; for if it be protracted too long, or too suddenly or imprudently checked, the effects may be alike hazardous. It should constantly be remembered, that in childbed-women, excessive or
long

long continued evacuations are always dangerous; and that from too much sweating, nervous complaints and miliary fevers often arise. If therefore, after about eight hours, the sweat should not stop, or continue very moderate, we should give drink in smaller quantity, less warm, and less often; shift the body-clothes and bed-linens, and substitute dry, well aired, but not warm toasted, clothes in their place.

During the cure, food should be given cautiously; that which is light and of easy digestion is the most proper. But where a disposition to nervous irritability evidently prevails, and in those accustomed to a rich, full diet, it should be proportionally more solid and nutritious; along with which the moderate use of wine is necessary, and the Peruvian bark as a strengthener should be afterwards given.

Costiveness should be obviated by means of emollient and gently laxative glysters.

If nauseating sickness or vomiting occur in any state of the disease; or if, from the history of the case, there may be reason to suspect that the stomach is disordered from surfeit or improper food, which frequently bring on weeds; gentle vomits, small doses of rhubarb, and a light spare diet, are the best remedies.

In the irritable state of childbed-women, passions of the mind prove a frequent cause of weeds. Opiates are then the best remedies; and which are also useful for promoting a gentle sweat.

Many

Many women are subject to weeds from interruptions in their nights rest by the fatigue of suckling the child : the means of curing or preventing which are sufficiently obvious ; for such women are very unfit for the office of nursing.

II. MILIARY FEVER.

THE miliary fever frequently occurs in the lying-in state : it is then attended with the most violent and alarming symptoms, and indicates considerable danger.

The miliary fever may be defined, ‘ A fever attended with considerable anxiety, generally terminated by the appearance of red spots, with or without a whitish vesicle on the top; the immediate eruption of which is shown by a sour smell and pricking of the skin.’

It is confined to no stated period after delivery, and is generally preceded with a slight degree of chilliness. The pulse is at first small and creeping, the extremities are cold, the skin is pale, the eyes are remarkably dull, the patient is gloomy and dejected, the sleep is disturbed with frightful dreams, the urine is pale and watery ; and it is only after the second, third, or fourth day, that the symptoms mentioned in the latter part of the definition come on. But however slightly it has begun, the debility and anxiety soon arise to a considerable height ; *then* the pulse begins to grow fuller, a sudden and violent sweat comes on,
R the

the acid smell, prickings of the skin, and at last the eruption.

The eruptions are generally confined to the neck, breast, and arms; more rarely the face is affected; but they soon spread over the greatest part of the body.

The duration of the eruption is uncertain, though it usually continues three, four, or five days; and a considerable debility is always left behind after the eruption and feverish symptoms are gone.

Miliary eruptions are of two kinds; white, when the pustules are filled with a whitish fluid; and when red, commonly distinguished by the name of *Rush*. From the resemblance of the pustules to the millet-feed, they obtained the name of *Miliary*.

It is much disputed whether the disease be original, like the small-pox for example; or symptomatic, for many people never sweat without a slight eruption appearing. It is unquestionably of the latter kind in childbed women, and appears to be the consequence of a hot regimen; for it is generally very certainly prevented by an opposite course.

Childbed-women, we have shown, are much predisposed to putrid diseases. If in that state a sweat is urged, the putrid matter existing in the system will be driven to the surface; and when the quantity is unusually large, and the quality preternaturally acrid, it will not only be poured out in a greater quantity than the pores of the outer skin can admit to pass, but,

but, stagnating under it, will induce an inflammation and eruption.

The disease, in its mildest state, appears to be of a nervous or putrid nature; and the danger will be according to the former management of the woman, the number of the pustules, and the present symptoms. The danger is increased as the disease is complicated with other complaints; when the eruption strikes in suddenly; or when relapses become frequent: for in some instances, as one crop of pustules disappears, another, after some interval, is produced, even to the third or fourth succession.

The nature of this disease, till lately, has been little known, and is still in some degree undetermined even among physicians. Its cause has been as little understood. We have given a concise history of the eruptive fever as it chiefly occurs in childbed-women, and enumerated the most remarkable symptoms, because it is probably to be prevented entirely by proper management; but when, by imprudent treatment, it has been brought on, the situation of the woman is exceedingly critical, and all the attention of the most skilful practitioner will be necessary to direct a proper treatment, and prevent the threatening consequences.

The means of cure will be very different in different constitutions, in different circumstances, according to the former habit and state of the patient, and the occasional cause of the

disease; some variety of treatment will also be indicated in different stages of the disease.

During the anxiety, we must assist the operations of nature, and endeavour,

1. To open the several excretories, particularly those of the skin. But after the eruption appears, we must next endeavour,

2. To regulate the determination, and carry it on as slowly as possible.

1st, The remedies usually employed in the former of these states are, vomits, bleeding, laxatives, and fomentations.

The effects of vomiting in determining to the surface are well known.

Bleeding is a dangerous remedy; and, except in very particular circumstances, should never be practised.

Gentle laxatives are very useful; for in the beginning of the disease, there seems to be an almost total stoppage of the several excretories.

Fomentations, in some cases, are of service, especially when the eruption suddenly recedes, or any degree of delirium threatens. The method generally practised, of applying flannels wrung out of warm water to the legs and thighs, is preferable to any other. But they must not be used too hot, nor continued so long as to force out profuse sweats.

2^{dly}, When the eruption appears, the pulse becomes more full and strong; so that the cooling regimen is most proper. The nitrous mixture, cool acid drinks, a light diet, ripe fruit, &c.
and

and particularly a free application of cool air, will then be necessary. But if the woman has been kept very hot before, the change should be gradually made till the degree of heat be much moderated.

When there is great debility from frequent attacks, or when putrid symptoms come on, the Peruvian bark, and a more nourishing diet, with the moderate use of wine, will be necessary.

If, from neglect or mismanagement, the eruption suddenly strikes in, the first indication will again be necessary, and proper cordials may occasionally be given.

III. PUERPERAL OR CHILDBED FEVER.

A fever, supposed to be peculiar to the childbed-state, sometimes occurs: its particular nature, till very lately, has been little understood, and of consequence the treatment improperly directed.

It is called *puerperal* or *childbed fever*, by some *lochia fever*; and has been confounded with inflammation of the womb and adjacent parts, with obstructions of the *lochia*, with the milk fever, miliary fever, and with after-pains. From all which, however, it appears to be perfectly distinct.

“ The childbed-fever generally comes on
“ about the second or third day after delivery,
“ attended with considerable debility, a fore-
“ ness of the head, chiefly confined to the
“ forehead, and frequently with vomiting;”

though it more commonly occurs about the evening of the second day, it in some instances comes on so late as the fifth or sixth day.

This definition will distinguish it from every childbed-disease, except perhaps the miliary fever; the nature of which, in doubtful cases, will be soon apparent from the particular anxiety which precedes miliary eruptions, the pricking of the skin, the peculiar smell, and afterwards the eruption itself.

The childbed-fever is generally, though not constantly, preceded with a short rigor or chilliness. This is succeeded by a hot fit; and frequently a free perspiration ensues, which seems to relieve all the symptoms: but it is often a delusive appearance; for a second attack soon comes on, and the slight remission is only a prelude to a violent increase of the former symptoms.

The milk soon abates, and is at last stopped; the breasts are flaccid; but in some instances the secretion of the milk has been little affected. The lochial discharge is sometimes deficient, and what flows is remarkably fetid. But it is frequently little altered either in quantity or quality. The belly swells; and is sometimes so exquisitely acute, that the weight of the bedclothes can scarcely be suffered.

Sickness, and complaints in the stomach and bowels, either occur in the beginning or about the second or third day; and are soon after followed with frequent copious putrid stools.

The

The duration of the disease is various: it has in some instances proved fatal in a few days; but the eleventh day is most frequently critical.

The immediate cause of this fever is still involved in much obscurity. It frequently occurs after the most easy and natural delivery, and where no particular cause can be assigned.

The most common occasional causes, probably, are improper management during pregnancy, in time of labour, and after delivery.

The puerperal fever, though somewhat peculiar in its appearances, is probably not entirely confined to childbed women; but may, and does, from time to time, occur independent of that state.

The particular circumstances of childbed women, it must, however, be acknowledged, render them subject to fevers of a putrid nature; and their situation, and improper manner of management, are sufficient to account for the variations.

The childbed fever is remarkably infectious; and, when epidemic, capable of being propagated from one person in the puerperal state to another; and its event is generally so fatal, that, like the plague, few escape of those affected.

Fortunately it is little known, in this country, but in public hospitals, and where a number of women are crowded together. It raged in the public hospitals of Paris, London, and Dublin, communicating from one person

to another with astonishing rapidity, and its ravages were equally striking. In the year 1774 it appeared in the Lying-in-ward of the Edinburgh Infirmary; and its event in most cases was fatal. But it has never occurred there since, and is very little known in private practice.

If any means can prevent it, they will chiefly consist in a strict observance of cooling regimen, free air, and cleanliness; as particularly pointed out under the Management of Lying-in women.

When the disease shows its presence, we must proceed in the treatment on the general principles of putrid fevers. The putrid tendency must be corrected, the exertions of Nature, in her endeavours to evacuate the morbid matter, must be gently assisted, and the strength of the patient supported.

It is needless to add, that in such cases, the skill and experience of the most sagacious physician will often be insufficient to direct a successful treatment.

HAVING explained the nature of conception and pregnancy, concisely pointed out those causes which in the unimpregnated state may prevent conception, or, in the pregnant, influence delivery; having directed how to deliver the child in natural, easy, and in lingering and preternatural labours, as far as it is the province of female practitioners; and how to manage the mother after delivery; we might
here

here conclude: But as this work might have been deemed imperfect, had we omitted those directions so necessary for the treatment of the mother, and which are so essential for her preservation, since it is much easier to prevent than to cure; it may yet be thought incomplete, if we should leave the child without that attention which the extreme delicacy of newborn infants, and the accidents to which they are subject, demand. A few directions, with these views, are therefore subjoined.

PART

P A R T IV.

MANAGEMENT OF NEW-BORN
INFANTS.

THE experience of WOMEN, from their more constant attendance on children, fully informs them of the *helpless state of infancy*. That keen sensibility, by which light and noise, when sudden, or when their violence is very little increased, become not only distressing but injurious, is the frequent subject of their observation. They see, too, that the tenderness of the skin subjects children to the fretting of wet clothes; that accidental moisture soon brings on colds and croups; that the slightest indigestions may induce dangerous colics and dreadful convulsions.

It is an useless task, therefore, to spend the little space which remains in general observations on this subject; and perhaps equally superfluous at this time, to attempt to show that the mortality of infants, which astonishes and distresses every humane and intelligent inquirer, has, in a great degree, arisen from mistaken views.

Though, however, there are several deficiencies resulting from the natural state of infancy, which require attention, lest they prove
the

the source of disease, these are compensated by many advantages which children possess over adults; and it only requires care and attention to guard against those inconveniences to which the extreme delicacy and irritability of children expose them.

As it is not less the object of the practice of physic to prevent than to cure diseases, we shall first consider those articles of management which the extreme delicacy of children require; and then give a short detail of the particular diseases.

C H A P. I.

GENERAL MANAGEMENT OF INFANTS.

CHILDREN, though born in a healthy state, require an early attention to

1. Cleanliness,
2. Clothing,
3. The evacuation of the excrementitious matter contained in the intestines,
4. Nutrition,
5. Air, exercise, &c.

1. *Cleanliness.*—Children are generally born with their bodies covered with a quantity of slimy glutinous matter, which forms a scurf over the surface. This is nothing more than the sediment of the waters with which the child was surrounded while contained in the womb. It adheres most tenaciously about the hairy

hairy scalp, neck, arm-pits, and groins; and ought to be cautiously removed before the child be dressed. Some use plain spirits for the purpose. In many countries, warm wine-and-water is employed; others prepare a wash of warm small beer with butter, or rub a little butter or pomatum where it is thickest, and afterwards remove it by washing with warm water. But it is of little consequence whether it be entirely taken off the first day or not; the delicate skin may be readily inflamed or fretted, if these attempts be carried too far. The furring becoming dry, and forming a kind of crust, will easily be removed by the next or subsequent washing, or by gently wiping with a soft linen cloth. A little soap, dissolved in warm-water, is perhaps preferable to any other wash, when the matter is viscid and adhesive.

It is also a common practice in this country, to continue rubbing the child's head and body with spirits every day for some time, from the idea that it strengthens. But there is no such virtue in spirits. The child's body is porous, and absorbs part of the spirits; hence effects may be produced nearly the same as if taken into the stomach. Besides, the spirits frequently running down from the child's head, get into the eyes, and occasion painful inflammation and its consequences.

Children should be regularly washed every day, from their birth till they be several years old. After the first week, the water should be
used

used cold from the spring; and the same practice ought to be continued summer and winter. A pail should be provided for the purpose; and the child ought to be boldly plunged every morning over head and ears for two or three times.

To this practice, so friendly to health, may be ascribed that vigour and robustness of constitution peculiar to those children who are early inured to it.

Cold-bathing cleanses the skin from many impurities, which are the foundation of cutaneous and other diseases in children, braces and invigorates the system, supplies the place of exercise in early infancy, prevents colds, and is the most powerful preservative against rickets, and all those diseases arising from a relaxed weakly constitution.

2. *Clothing*.—The clothing of new-born children should be light and simple, and suitably adapted to the climate and season.

The sudden change which the child suffers from a warm moist confined situation, to a free open airy exposure, must give some pain to an irritable frame. Analogy, as well as experience, show the propriety of warmth at first, and of bringing the child to a thinner lighter clothing by degrees. The dress should be prepared in such a manner, that it may be easily and readily applied. All stricture by rollers and swathing should be carefully avoided; the child should be left perfectly at ease, and have free liberty to move and stretch its
little

little limbs at pleasure. The restraint of tight pressure must not only be painful, but hazardous: By that means the circulation is interrupted, a sudden check is given to the growth in some parts, and an improper direction in others. Happily those bonds and ligatures, formerly so generally employed, have now, in polished life, no place in the dress of children. Tape should be used instead of pins; the linens next the child should be often renewed, and every necessary precaution taken to prevent wet and dampness.

3. *The evacuation of the meconium.*—The excrementitious matter contained in the intestines of new-born infants, is called *meconium*; so styled by the ancients from its similitude to opium.

This was formerly supposed to be of so malignant and poisonous a quality, that if not immediately evacuated, its retention would occasion colic, vomiting, fits, and the most fatal consequences. Hence the practice of giving new-born infants purging medicines as soon as born; a practice which is scarcely yet exploded. In general, however, it may be observed, that even the retention of this substance beyond the usual time, will produce less inconvenience than what is occasioned from the acrimony of those remedies the child is usually constrained to swallow. Nothing, with that view, is so proper as to apply the child early to the breast. If any thing else seems necessary,

necessary, which is more requisite when the mother does not give suck, it should be of a mild gentle nature, as magnesia, manna dissolved in warm-water, and given to the quantity of a tea-spoonful, from time to time, till it operates; or, what sometimes answers the purpose sufficiently well, the simple syrup of sugar and water.

When the child shows an aversion to the breast, and symptoms occur indicating nauseating sickness, or inclination to vomit, it may be encouraged by complying with the vulgar practice of giving a tea-spoonful or two of a solution of salt and water.

4. *Nutrition.*—Milk is the natural food of children in early infancy; and in general the mother's milk, when her constitution is sound and healthy, is preferable to that of a stranger. The important advantages derived from nursing, both to the mother and child, are so universally known, that it would be needless in this place to give a detail of them, especially since that subject is so fully treated by the late Dr Gregory, in his elegant Comparative View, and by Mr Nielson in his Essay on the Government of Children. To them we refer; for they contain many important advices, highly interesting to mankind in general, and to parents in particular.

Women are to be considered but as half mothers who wantonly abandon their children as soon as born, and are strangers to that secret
en-

endearing pleasure which those enjoy who suckle their children.

It is difficult to bring a child to stated times of sucking, as many recommend. And in fact, it is observed, that those children are most healthy and thriving who are least restricted, and allowed to take the breast at pleasure. The mother ought, however, carefully to avoid the opposite extreme of becoming a slave to the child, as many unguardedly, or from an excess of affectionate tenderness, do. The child should never be allowed to sleep at the breast, or accustomed constantly to overcharge the stomach till the superfluity be discharged by vomiting.

While a mother gives suck, fatigue, indolence, and inactivity, irregularities of every kind, abstinence, and over-feeding, should equally be guarded against.

Nurses should never eat or drink at irregular times, or in a quantity which the appetite does not demand. The diet need not be restricted to any particular food; but in general, what is very high seasoned or rich, which produces wind, or is not easily digested, should be avoided. Vegetables furnish a sweet and plentiful chyle, and should have a large share in the diet of nurses. In other respects, the usual manner of life should be nearly observed. The regimen and management most conducive to health will afford the sweetest and most plentiful milk.

Although Nature seldom demands any other
3 nutrition

nutrition in early infancy, besides that of the mother's milk; yet with a view of introducing a change of diet by degrees, the practice of beginning the child, when about six weeks old, with a little pap or panada, appears rational; for when it is neglected till the time of weaning approaches, the habit is with difficulty established, and there is great hazard that the child may suffer from the sudden change of regimen.

At first, one meal is sufficient; in a few weeks after, two will be necessary; and before the term of weaning, food should be given three times a-day.

In general, a child should be kept on the breast from nine to twelve months. Different countries adopt different practices with regard to the time and manner of weaning children: But it is influenced by so many circumstances, that no precise rules can be given. The health of the child and of the mother, the period and manner of teething, the season of the year, &c. must be attended to. Too early weaning, and too late, should be equally guarded against. The cutting of the teeth is a critical period in the life of a child, and the effects should be carefully observed. Children ought either to be weaned before the period of teething commences, or not till the danger from teething be over.

It has been a question with many, Whether it is safest to deprive the child of the breast at once, or by degrees? The latter is

unquestionably preferable, when it can be done. By this means the hazard from a sudden change of the child's diet is prevented, and also the inconveniences that often ensue from a sudden repulsion of the mother's milk. But this method can seldom, for obvious reasons, be practised when the child is suckled by a hireling.

There can be no harm in giving the child a little weak white-wine whey, diluted brandy punch, or even a tea-spoonful or two of syrup of poppy, for a few nights after weaning, to prevent restlessness and fits of crying, till the breast be forgotten. Great care should however be taken that the practice be not continued longer than necessary; for it is not only getting into a bad habit, but may be attended with disagreeable consequences.

Lest, at first, any inconvenience should result from the change of regimen, the belly, for some time after weaning, should be kept moderately open with rhubarb, or rhubarb and magnesia.

Nothing can be more ridiculous than an opinion some have entertained, that milk of other animals is preferable to that of the child's mother; or that an infant can be reared by any other food better than by that provided by Nature. When, however, it is inconvenient or impracticable for the mother to suckle her own child, a milk-nurse, properly qualified, must be adopted.

A thousand qualities might be mentioned,
which

which an adopted nurse ought to possess; but appearances are so fallacious, that it is exceedingly difficult to make a proper choice, and therefore hazardous to recommend. A nurse may have every favourable appearance, and yet turn out a bad woman.

Good health, a good constitution, a breast well supplied with milk, the breasts equal, and nipples prominent, are the best marks of a good nurse. Her character should be unexceptionable, her disposition cheerful. She should also be of a proper age; and her body should be carefully examined, to observe that there are no marks of scorbutic or scrophulous disease, or of any cutaneous eruption.

The milk should not be too gross or thick, or in any way disagreeable to the taste, in which it nearly resembles milk and water a little sweetened. When put in a glass, it should stain it of a bluish colour. But every appearance of the woman and milk is precarious; and we can only judge of her upon trial. Hence we ought to be cautious of recommending any for the purpose of nurses, unless those who have already appeared with advantage in that character.

The *regimen* of nurses is of great consequence, though little attended to. They should be confined, as nearly as possible, to their usual diet and manner of life. One great motive that induces poor women to submit to the drudgery of becoming nurses for others, is with a view of living better. But women,

suddenly transported from misery and wretchedness to high life, that is, from poverty and activity, to luxurious living and indolence, are very improper for the office of nursing. It ought therefore to be a rule to confine them as near as possible to their usual diet and manner of life, or to introduce a change very gradually.

It is uncommon and unnatural for a woman to menstruate while giving suck. It may, however, happen once, and not in future; and in some, the courses are regular, without any detriment to the child. The child, in such cases, suffers a slight indisposition for a day or so before the menstrual flux of the nurse appears, is griped or affected with cholic; but afterwards no inconvenience seems to follow. It is only when that appearance occurs from the change of diet and manner of life in the nurse, from the staleness of the milk, from nervous weakness, or in consequence of some indisposition, that a change becomes necessary; for in all these circumstances the milk is both scanty and poor.

Lastly, *Air and Exercise*.—A free pure air, and exercise suited to the tender age and active spirits of infancy, are of the utmost consequence for the preservation of health and prevention of disease.

Rocking in cradles is a mode of exercise of very ancient date, but should be used with caution and prudence. In general, it may be entirely omitted: It is at least beginning a
bad

bad habit, and seems most allowable in great towns, or in bad seasons, when there is little opportunity of carrying the child abroad in the open air. Children, in early infancy, pass the greatest part of their time in a torpid state. During this tender period, much tossing in a cradle, or any violent agitation, would prove hurtful; hence exercise should be well timed, gentle and easy, and never carried so far as to heat the body, or endanger sickness and vomiting.

Children should be as much as possible in the open air when awake. The nursery should be large, open, and airy; and every precaution should be used to prevent the child from being over-heated in the night: for much sweating is not only of itself weakening, but disposes to the hazard of readily taking cold; from whence cough with wheezing, fever, croup, thrush, and the most fatal consequences, frequently ensue.

It would conduce much to the health of children and prevention of disease, if at least, immediately after weaning, little beds were provided for them to sleep by themselves. The construction and make of the bed ought to be commodiously suited to the circumstances of the child, that there might be no hazard of its suffering from the bed-clothes shifting to a side, being tossed over, or from any other accident.

Having thus finished the few hints we proposed to suggest by way of management,

where no extraordinary accident occurs, we proceed to give a short detail of the disorders incident to new-born children, as far as it is consistent with our present views.

C H A P. II.

DISORDERS INCIDENT TO NEW-BORN CHILDREN.

THIS subject naturally divides itself into two parts.

1. Accidents occurring at birth or soon after.

2. Actual diseases.

§ 1. ACCIDENTS.

THESE include original malconformations, or accidental injuries from birth.

I. Nature is not always perfect in her operations; for children are sometimes brought into the world with deficient or supernumerary parts, parts misplaced, natural passages closed, and with various species of marks, mutilations, and monstrous appearances. These it would be entirely foreign to our purpose to enumerate particularly; they are the objects only of the surgeon's attention, and sometimes admit of no relief from his art: but since many of them can readily be removed or redressed, the midwife should carefully inspect the infant's body, and give early notice as soon

soon as any uncommon appearance or disfiguration can be observed. Some of these are too conspicuous to escape the notice of a discerning eye; but others are so obscure, that unless from a very minute scrutiny, they are only discovered by their effects. For example, The *rectum*, or end of the gut at the fundament, is sometimes closed up by a thin membrane, which prevents the passage of the natural evacuation; a similar obstacle prevents that of the urine in the female, or the passage may be impervious in the male. It is the business of the midwife, therefore, to examine every part of the infant's body after it is washed, and to inquire, at the next visit, whether the child has purged and passed water freely.

Sometimes the *urethra*, or passage from the bladder, is choaked up with a kind of *mucus* or glary slime, which prevents the urine from flowing. This may, in most cases, be readily removed by bathing with warm milk and water, rubbing warm oil on the child's belly; or if that method fails, by passing the end of a small probe within the passage: but unless where it proceeds from such slight causes as now mentioned, the skill of the midwife, and often even of the surgeon, will be insufficient to obtain a cure.

Sometimes, though rarely, infants are prevented from sucking by a thin membrane under the tongue, which extends forward towards its tip, and prevents its motion, and consequently the child from sucking: this is

called *tongue-tying*; a defect which can readily be removed by raising up the tongue with the fingers, and gently snipping the membrane with a pair of scissars. This operation is, however, much less necessary than has been generally imagined. Perhaps of 500 children born, scarcely more than two or three require it. If the child sucks the finger when put into the mouth, or is able to put the tip of the tongue without the lips, there is no disorder of this kind. Many circumstances may prove an impediment to the child's sucking, as weakness of the jaw, thickness or swelling of the glands under the tongue; in the mother, the breasts too full, bad nipples, &c. all which ought to be attended to.

Infants are sometimes brought into the world with the tongue actually inverted; or the same accident may happen from suction; convulsions immediately ensue, and soon after suffocation.

The disease is discovered by putting a finger into the child's mouth; and the fatal event can only be prevented by tickling the throat to provoke vomiting.

II. Children are exposed to various injuries from birth.

In lingering or laborious cases, they are liable to swelling and alteration of shape of the head; in face-cases, to inflammation of the eyes, swelling of the nose, lips, mouth, &c.; in preternatural births, to swelling and in-

inflammation of the genital parts, fractures, and dislocations of the joints.

1. The external swellings in the first case yield to time, and rubbing with warm spirits; but when they continue above a few days, require a surgeon's assistance. When the brain is injured, convulsions and many other disorders ensue. Convulsions in the earliest period of life are often removed by suffering the navel-string to bleed a little; sometimes by washing out the stomach, when that organ seems to be disordered; but if they yield not to these simple means, a physician should be consulted.

2. When the face presents, the child is often brought into the world with the eyes inflamed, the nose flattened, the lips swelled, the features distorted, and the colour of the countenance livid. These appearances, though frightful and alarming, generally go off in a few days, when no violence has been done by officious hands; but the eyes of children, in such positions, are often put out by the fingering of unskilful practitioners.

3. In breech-cases, the genitals of the child are exposed to the hazard of tumefaction and inflammation; the danger of which is always increased in proportion to the freedom used in touching. Those occasioned merely from the manner of presentation, are seldom of hazardous consequence, and commonly yield to the simple treatment of bathing now and then with warm-water, more rarely poultices of bread
and

and milk, or the application of a linen compress wet with a dilute solution of sugar of lead in rose-water may be necessary. But when the presenting parts are fretted, or bruised by frequent touching, or by the efforts used to push them out of the way in order to turn the child, they frequently terminate in gangrene, and the event is often fatal.

4. Fractures, or dislocations of the limbs of the *fœtus*, sometimes happen in preternatural labours. Such accidents are generally the effect of the rashness, impatience, or ignorance of the practitioner, occasioned by pulling down the legs or arms in improper directions, or by attempting, in a fit of passion, as it were, to disengage or bring them down with a jerk. Although the method of treatment is easy, some art is necessary to accomplish a cure, especially if the legs be fractured; and since incurable lameness or distortion may be the consequence, female practitioners ought to avoid incurring reflections, and prudently have recourse to the surgeon's assistance.

III. These are the principal accidents which occur at birth; but other external disorders from time to time soon after supervene; as ulceration or protrusion of the navel, ruptures, swelling of the breasts, sore eyes, runnings behind the ears, excoriation of the neck, arm-pits, groins, &c.

Ulceration or protrusion of the navel.—That portion of the chord which belongs to the child being passed through a hole made in a
soft

soft linen compress, is to be laid upwards on the belly; the two ends of the compress are then to be folded smoothly over it, and the whole retained by a flannel roller, or belly-band, which should be applied moderately firm, but by no means tight. About the fourth, fifth, or sixth day, according to the season and other circumstances, the chord shrivels and drops off. Much being left is inconvenient, as the putrid mass may communicate to the belly, and induce inflammation and mortification; of which I have known several instances. Every time the child is dressed, the navel should be carefully examined; and when separated, it is common to apply a bit of singed rag, with compress and belly-band to be continued over all for a few weeks.

Sometimes, whatever precaution be used to prevent it, a tenderness and rawness round the edges, or a degree of ulceration, are left behind, and prove exceedingly difficult of cure. A variety of dressing, in different circumstances, may be necessary. When the edge appears open and much inflamed, and the common method of dusting with starch powder, &c. fail, a juicy raisin split, and freed of the stones, applied over the part, makes a very proper dressing. If raw and excoriated, it may be washed with any gently astringent lotion, as alum-water, or a dilute solution of sugar of lead, and afterwards dressed with cerate.

Ruptures—sometimes happen at the navel. But a starting of the part, from looseness of the skin, may be mistaken for rupture; therefore

fore pressure on the part should be made with caution.

Ruptures in the groin, and of the scrotum of boys, are no uncommon appearances ; but they are seldom attended with danger. Little, therefore, is to be done in the way of treatment, unless keeping the belly gently open, and directing the part to be prudently supported with the hand while the child cries. Bandages seldom do much good ; and unless constructed with judgment, and skilfully employed, are always hazardous.

Swelling of the breasts.—New-born infants are subject to painful swellings of the breasts, from an accumulation of milky fluid. The uneasy tension seldom continues above a few days ; and bathing with warm-milk and water, or rubbing warm olive oil gently on the part, morning and evening, will in most cases soon be sufficient to remove it. Poultices of bread and milk are rarely necessary, except when the swelling and inflammation are considerable. A milky fluid often spontaneously runs out from the nipples ; but the unnatural, though common method of forcibly squeezing the delicate breasts of a new-born babe, by the rough hand of the nurse or midwife, ought in no instance to be practised. Inflammation, suppuration, abscess, and their consequences, often ensue ; and besides the hazard of disagreeable marks in the bosom of girls, the woman by that means may be prevented in future from ever being able to give suck.

Sore

Sore eyes.—Sore eyes in young children are often occasioned from exposure to a glare of light, or from toasting the child over the fire. This complaint may also arise from cold. Whatever be the cause, the disease is with difficulty removed. But the swelling and inflammation, however apparently alarming, unless from some glaring mismanagement, seldom terminate in loss of sight. Bleeding, blistering, and physic, in few instances, do much good; and in general, there is nothing better than keeping them clean, by frequent bathing with a bit of soft sponge and warm milk and water, to prevent gumming. Little light should be admitted into the room; but covering the eyes is rather hurtful.

Runnings behind the ears.—These are frequently occasioned from the carelessness of the nurse neglecting to keep the parts clean, and to dry them well after washing. Unless there is tendency to eruptions or breakings out in other parts, they ought never to be encouraged, whatever has been advanced to the contrary; for if habit be once established, it is dangerous to dry them up till some other drain or outlet be substituted. Washing with dilute solution of sugar of lead, and, if necessary, afterwards dressing with cerate, and keeping the belly open with small doses of rhubarb and magnesia, are the chief remedies.

Excoriations of the neck, arm-pits, groin, &c. arise from the same cause, and require a similar treatment. Dusting with finely levigated cala-

calamine, or tutty stone, or with white lead, when the child is dressed, will, when slight, be sufficient to remove them. But the latter of these must be used with caution, as all preparations of lead, if long continued, are hazardous, and may by being absorbed induce gripes, colic, and even fits.

§ 2. ACTUAL DISEASES.

BESIDES original imperfections and accidental or other injuries from birth, or soon after, disorders from internal causes frequently arise; the knowledge and treatment of which is the immediate province of the physician.

The causes of the diseases of children are many, and their nature frequently difficult of investigation, even to those intimately acquainted with the animal œconomy: hence, without a general knowledge of the practice of physic, no rational method of treatment can be attempted.

Children, soon after birth, are affected with red or yellow gum; they are liable to sickness, vomiting, colic, and thrush; and, at a more advanced period, to the consequences of teething.

The red gum—is an eruption of small red pimples like a rash, which, in many children, appears all over the body soon after birth; it frequently disappears suddenly, without any inconvenience to the child, and comes and goes while on the breast. It is distinguished from

from the measles by the absence of measles symptoms and time of attack.

Little management is necessary, further than to attend to the state of the belly, and take care that the room or clothing of the child be not too warm.

The yellow gum—is a disorder of a very different nature from the former. It depends on the increased secretion of bile from the change in the circulation through the liver. The bile not finding a ready passage from the gall bladder into the intestinal canal, stagnates, and is absorbed into the circulation: hence, in proportion to the quantity carried into the system, the yellow colour will be more or less deep. It is a real jaundice, therefore, and frequently fatal. It requires a similar treatment as in adults, with gentle vomits and laxatives. In young children, magnesia with rhubarb may be used; Castile soap may be mixed in the nurse's milk, or the milk may be changed entirely.

A slight appearance of yellow colour is only from some fluids being effused under the skin, and requires no particular treatment.

Sickness, vomiting, gripes, and colic—are frequent complaints in early infancy; and from their symptoms, are more readily discovered than many others. They evidently depend on the state of the stomach, whatever remote cause may give rise to them.

Milk, though the natural food of children, contains much air. There is also air swallowed
ed

ed in sucking, which frequently produces the most painful symptoms: These are, however, of no long duration, and are readily removed by gently shaking and agitating the child, by rubbing the belly with warm flannel, by giving a few tea-spoonsful of brandy punch, by sugar of anise injected, or taken by the mouth, or by glysters suited to the nature of the complaint.

If these remedies fail, there is reason to suspect a foul or habitually weak stomach.

We judge of childrens complaints from the symptoms of quick or oppressed breathing, from the violence and duration of fits of crying, from the appearance of the eye and countenance, much more than by the frequency of the pulse. Colic shows itself by the suddenness of its attack, by the state of the belly, frequently by exciting sickness and vomiting, and by the well-known symptoms in children of pulling up the feet and legs towards the belly.

* A variety of treatment in different circumstances will be necessary.

Most of the disorders of children, especially where the stomach and bowels are affected, have been supposed to originate from a prevailing acid in the stomach. When this exists to a considerable degree, its presence will be perceived from the appearance of the stools and vomiting; as sour-smelling green stools, a sour breath, and frequently throwing up curdled milk. Gentle vomits, small doses of
rhubarb

rhubarb, magnesia, or, if the belly is already sufficiently lax, prepared crabs-eyes or chalk, are the chief remedies. The nurse's diet should also be regulated, and she ought to lessen her proportion of vegetable, and increase that of the animal, food. To give immediate relief when the child is much pained, the warm-bath ought to be used; the water should rise above the navel, and the child should be kept in it from ten minutes to a quarter of an hour. Opiates also in these cases frequently afford immediate relief: two or three drops of laudanum is a sufficient dose for an infant from birth to three months; and from the first quarter to six or seven months, six or seven drops may be safely given. Injections also are valuable remedies. If the purging be thin, sharp, and acrimonious, scalding or excoriating wherever it touches, the glyster should consist of rather less than a gill of thin starch or rice gruel, with two or three tea-spoonfuls of fine oil, and eight or ten drops of liquid laudanum, dropped from the mouth of a small phial. If the stools be natural, simple warm milk-and-water with oil, as above, will be sufficient; or if it be required of a purgative quality, a little brown sugar may occasionally be added.

Thrush, vulgarly called *sprue*,—is a disease frequently attendant on early infancy, though incident also to a more advanced age. Its nature seems little understood, and its treatment so injudiciously conducted, that many children

T

are

are destroyed by the officiousness of unskilful practitioners. We shall therefore give a short history of the disease, and suggest a few hints to direct the treatment.

The thrush appears in the form of white spots, as if little bits of coagulated milk or curd adhered to the mouth, tongue, and throat. When minutely examined, each spot is observed to be a distinct sore or ulcer. They begin in the mouth; gradually communicate to the lips, palate, throat, gullet; and are often continued through the stomach and whole track of the intestinal canal, till they sometimes appear externally at the fundament.

When the disease is mild, the spots are few in number, and the child suffers very little interruption in sucking: But when more malignant, the spots are so close and numerous, that they run into each other, forming one uniform tenacious crust, covering the whole mouth, palate, and throat. Hence the child becomes utterly incapable of sucking; and as the same crusts cover the internal surface of the stomach and intestines, little nourishment can be conveyed into the blood; so that the child is frequently starved.

Before the spots begin to appear, the child is generally seized with a remarkable lowness and depression; the pulse is then almost imperceptible, the extremities are cold, the child scarcely seems to breathe, and is apparently at the point of death. As the spots become observable, the pulse gradually rises, feverish
heat

heat and quick pulse succeed, with great restlessness; and the mouth becomes so tender, that the child is incapable of grasping the nipple, or of swallowing the mildest food; and in making the attempt, the mouth often bleeds immoderately, or the child falls into fits.

The colour of the spots is at first a dull white, and, in the progress of the disease, becomes yellowish. The intermediate parts between the spots are generally of an inflamed red colour. If it inclines to a purple, or livid, the danger is considerable; and if the spots change suddenly to a dusky gangrenous appearance, it is, for the most part, a fatal symptom. It is dangerous when a violent vomiting or purging occurs, and more so when the child is unable to suck or swallow. These little ulcers which constitute the disease, only affect the external membrane which lines the mouth, tongue, throat, &c.; hence will readily disappear from rubbing with any acrid or detergent substance. But such treatment is exceedingly improper, and ought to be reprobated in the strongest terms: for, in consequence of it, another series of deeper incrustations may be soon expected, and these will be again succeeded by a third; and so successively, as often as impertinent interruptions are thrown in the way; and as often as they recur, they become thicker, deeper, and more numerous. The disease is indeed always exaggerated by the gentlest efforts to remove it, till a change of appearance in the spots happens; for it must

go through a regular course, and will be protracted by every means of shortening it.

The cause of the thrush has been much disputed. Its immediate cause has been commonly ascribed to a disordered state of the stomach and bowels; the more remote causes to cold, especially moist cold, crude improper food, stale acedent milk, &c.

Treatment.—The vulgar imagine, that to remove external appearances, is sufficient to cure the disease; but they are egregiously mistaken, as the fatal event too often shows.

In the first, or early state of the disease, nothing by way of wash or lotion should be applied, unless such mild cooling demulcents as may keep the mouth cool and moist; as mel. rose, cream, or a soft mucilage of gum Arabic dissolved in boiling water; with either of these the mother's or nurse's nipples should also be anointed before the child sucks, to prevent the hazard of sore nipples; which will probably happen, if that precaution should be neglected.

When the colour begins to change, which may be termed the second stage, mel. rose, with a few drops of the acid spirit of vitriol, soft rob of elder, or decoction of the bark, with spirit of vitriol gently acidulated, may be had recourse to. Many other applications and remedies are recommended, and highly extolled by their favourites; as borax mixed with honey, to the quantity of half a dram, or thirty grains of the former suspended in an ounce of the latter, or mixed with as much
con-

conserve of roses ; a dilute solution of white vitriol, &c. But the decoction of bark, agreeably sharpened with spirit of vitriol, seems to answer every intention, and to be more efficacious than any other application.

Small beer, port wine, or claret, will make a very proper wash in slight cases: and the application of borax, rubbed with sugar, or mixed with melrose or currant jelly, will remove the spots at any time. But whatever substance is used for the purpose, it should be gently put by little and little into the child's mouth. It gradually spreads over the crusts ; and by mixing with the saliva or flaver, is swallowed into the stomach, and passes into the intestines. This is preferable to the unnatural and dangerous method of scraping, as it were, the spots from the mouth and palate, by a rag wrapped round the end of a spoon, wet with the acrid substances usually employed.

To correct acidities in the first passages, and prevent the consequences of the disease, absorbents, as magnesia, or prepared crabs eyes, should be given freely. Three or four stools a-day ought at least to be procured ; more than that would be injurious ; and if they should occur, they must be checked by opiates, as by giving from two to five drops of laudanum, according to the child's age, twice a-day. If there is frequent inclination to vomit, the efforts must be assisted by giving a few grains of powder of ipecacuanha. If the child gives over sucking, blisters must be had re-

course to, and thin panada (bread-berry) strained, should be given for nourishment, by way of glyster. If there is suspicion that the milk is faulty, either from its grossness, poverty, or deficiency, the nurse should be changed without delay.

Dentition or teething.—Though dentition can hardly be termed a state of disease, yet Nature in it strangely deviates from her usual course; for children suffer more pain, and are in greater hazard of their life, during the breeding and cutting of the teeth, than at any other equal period. Previous to the symptoms of teething, a child is generally healthy and thriving: but soon after that period commences, the natural sprightliness abates, or entirely ceases; he becomes addicted to frequent fits of crying, is restless in the night, and peevish and fretful, in spite of every amusement, in the day.

The time of breeding and cutting the teeth is liable to considerable variation in different children. It seems connected with the vigour of constitution and progress of growth; for weakly children are, in general, later of cutting teeth than those who are stronger and more thriving. The first of the milk-teeth commonly make their appearance from the sixth to the ninth month. The manner of cutting is also irregular; for the most part they appear first in the lower jaw, and come out nearly by pairs; but all this is uncertain. Sixteen milk-teeth are, however, generally completed between the eighteenth and twentieth month of a child's

child's age, viz. four incisors or cutters in each jaw, two eye-teeth in each jaw; and some time after two small grinders in each jaw. Nearly towards the end of the second year, the remaining four small grinders shoot out successively; so that a child two years old is commonly furnished with ten teeth in each jaw, called milk-teeth, because they must yield to, and be thrust out by ten successors, placed in either jaw immediately under, which appear in the sixth or seventh year, when four great grinders also shoot out, one at either extremity of both jaws.

The third set are furnished from the tenth to the thirteenth or fourteenth year; when four more great grinders make their appearance; and after puberty, towards the twentieth year, the last four short grinders, called the *wise* or *wisdom* teeth, appear; making in all sixteen teeth in each jaw.

Each tooth is originally covered with a membranous substance, plentifully supplied with nerves, and this membrane must be actually torn before the tooth protrudes through the gums; a small nervous twig also enters at the point of each root, and is thus conveyed to the tooth. The gums, too, are supplied with nerves; and though they are less sensible than other parts, their sensibility is much increased when inflamed.

In consequence of this structure, the protrusion of the teeth must give much pain to an irritable frame; for the painful and dangerous

symptoms of teething are entirely to be ascribed to the stretching and tearing of the sensible membrane in which the tooth is enveloped, and its sympathy with the general system.

The first symptoms of teething are, heat, itching, and pain; these readily produce a constant flavering; the child starts in his sleep, rubs his gums against every hard substance that comes in his way; bites the nipple; the eyes are sore and gummy. If the flaver, instead of dribbling from the mouth, should be swallowed in considerable quantity, it will occasion sickness, vomiting, looseness, and all the symptoms of indigestion: When the inflammation is considerable, and the child weak, fever, convulsions, and death, frequently ensue; and every disorder during that period is more dangerous.—Inoculation, therefore should never interfere with teething, when it can be avoided.

Constant flavering, a gentle looseness, and proper intervals between the cutting of the teeth, are favourable circumstances. The later they appear, there is also, in general, less danger. It is obvious, too, that summer, for a variety of reasons, is more favourable than spring, autumn, or winter.

Costiveness, with fever, startings, and restlessness, excessive looseness, with crude ill digested stools, loss of appetite, and frequent vomiting, with wasting of the muscular strength, are the most unfavourable symptoms.

The management must be regulated entirely by the symptoms. Feverish indisposition must
be

be obviated by an open belly, and occasional bleedings. A seasonable bleeding is generally attended with the happiest effects in most of the acute diseases of children. The quantity must be proportioned to the constitution and age of the child. A single leech will be sufficient for the purpose, when the child is under three months old; two may be necessary from three to six or eight months. The foot or leg is the most proper place for the application of the leech: for, if it should not bleed freely, warm water can be used to promote it; if it should bleed too much, it can readily be restrained, by applying a linen compress over the part, and retaining it by bandage. Besides the advantages now mentioned, there is less hazard of cold and fatigue by applying the leech to the foot or leg than to the back, side, or other parts commonly practised. General bleeding is beneficial for lessening general fever; but if the gum be swelled or inflamed, or, from the circumstances of the case, there is reason to suspect that stretching from a tooth is the immediate cause of the symptoms, the protrusion of the tooth ought to be forwarded by cutting or scarifying the gum. The bleeding from the part often produces a good effect; and if judiciously practised, and the tooth follows, by that means painful symptoms are immediately removed, and the child is rescued from threatening death. The lancet in the hands of a skilful surgeon is unquestionably preferable to tearing the gum
with

with the nails, or bruising it with a thimble, according to the frequent, but cruel and hazardous, practice of the vulgar.

To remove sickness and vomiting, gentle vomits of ipecacuanha must be used; and small doses of fine rhubarb with magnesia should be given, to evacuate acrid slime, and to restore the tone and digestive faculty of the stomach and bowels. If the looseness be excessive and the stools crude, the rhubarb should be toasted, and prepared crabs eyes employed instead of magnesia.

When there is a tendency to feverish indisposition, with a bound belly, little food, beside the breast-milk, should be given; but if the child be much wasted with frequent fits of looseness, a change of diet should be gradually introduced. If the stools be crude and sour smelling, the food should be of a nutritious quality, sufficient for correcting the acidity of the stomach and first passages, and for strengthening the digestive faculties. With these views, it should consist chiefly of panada, rice-berry, chicken-water, or beef-tea, in which bread or boiled rice may occasionally be mixed, and jellies of calves feet or hartshorn. These should be given in small quantities, and frequently, gradually lessening the proportion of milk till the child be entirely weaned from the breast.

Any other symptoms occurring at this period must be treated according to their particular nature. Sudden fits, or breathlessness,
or

or croupy cough, ought to be relieved by immediate bleeding and blistering, by laxative glysters, by the use of the warm bath, &c. But on these, and many other symptoms connected with dentition, it would be entirely foreign to the intention of this work to enlarge.

During dentition, the child should be provided with something which can be safely applied to his mouth to press his gums against, as often as he is urged to it. By that means uneasy itching will be gratified, and a gentle flaving, which is always salutary, will be promoted. A bit of liquorice root, frequently renewed as it becomes dry and hard, will answer the purpose sufficiently well, and is to be preferred to coral, glass, and other hard substances; which not only endanger bruising the inflamed gum, but the thrusting out of those teeth already formed.

PART

P A R T V.

QUALIFICATIONS OF MIDWIVES,

W I T H

PRESCRIPTIONS FOR WOMEN AND
CHILDREN.

BEFORE we conclude this work, we shall, as an example to young practitioners, more fully point out what qualifications a midwife should possess.

She should have bodily strength, and a good constitution; for cases will occur in which the former will be absolutely necessary, and the daily fatigues of the profession render the latter indispensable: but though firm and robust, her hand should be as small as is compatible with strength; and her joints should be strong, firm, and flexible. Her mind should not be so weak as to be intimidated with possible dangers, nor so changeable as to be moved by small accidents; but she should equally avoid a careless disregard to alarming symptoms, and an obstinate perseverance in first opinions. She should be virtuous and prudent,

dent, sensible, affable, and well bred; not idly loquacious, nor reservedly silent. Her behaviour should be easy and engaging; it should inspire confidence rather than terror, and excite affection rather than apprehension. She should be well informed of every circumstance relating to her profession; and, though the want of science and philosophy may prevent her knowing the *reason* of some facts, she should be thoroughly acquainted with the *facts themselves*. With these views, she will be naturally diffident; but she should also acquire some confidence in her own powers, and carefully avoid betraying any appearance which may lead the *patient* to imagine that she distrusts herself.

Among her qualifications, I should also mention a quick discernment, a readiness of recollection and presence of mind, which will prevent her being alarmed by vexatious accidents, or the impatience and petulance of the patient or her attendants. She should be always cool, composed, and recollected; to the questions put by the anxious relations, she should give direct answers, and a ready opinion concerning the present appearances. To the patient she should always appear cheerful and humane; should avoid being particular; but when obliged to be explicit, she should set before her every encouraging circumstance.

When the labour appears to be tedious, she will spare her own strength and that of the
suf-

sufferer: She will occasionally sleep, and lull the patient to rest by her confidence and encouragement. She should never appear *hurried*, but give the *patient* the idea that her *whole* time is dedicated to *her alone*.

She should excel in every part of the nurse's knowledge, that she may be enabled to adapt contrivances to any emergencies that happen, and to instruct those who know not how to perform particular services. She should carry a small case constantly in her pocket, containing,

A box of pomatum,

A small phial of liquid laudanum,

A glass of fal. volatile drops,

Scissars and tape, or waxed threads.

A box of opium pills, grain and half grains,

A box of laxative pills,

A catheter, and

A glyster-pipe and bag.

She should know the composition and method of preparing those prescriptions, which she may, from time to time, have occasion to advise; and should also be well qualified for instructing the nurse in the manner of preparing variety of foods and drinks adapted to particular circumstances.

With these views, the following prescriptions are given.

FORMS of MEDICINE referred to in the preceding Treatise.

I.

For promoting the *menfes* in cafes of obftruction.

1. *Infufion of horfe-radifh root.*

Take of horfe-radifh root fresh, half an ounce;

Dried external bark of bitter orange, one-fourth of an ounce ;

Boiling water, an Englifh pint. Infufe for four hours, ftrain, and let a cupful be taken twice or thrice a-day for a week or ten days preceding the expected period. Or,

2. Take four ounces of red madder, (the dye fo called) ; infufe in an Englifh gallon of clear ftrong beer for three days ; ftrain, and let a beer glafsful be taken twice or thrice a-day, as above directed. Or,

3. Let the fame fubftance be taken in fine powder, a dofe three times a-day for a week or ten days previous to the expected period of menftruation. Fifteen grains will be a fufficient dofe for the firft two days ; for the next, 20 grains ; and thus increafing to the number of 30 or even 40, if it does not occafion ficknefs or vomiting. Or,

4. With the fame view,

Take tincture of black hellebore, a tea-fpoonful twice a-day in a light infufion of balm or pennyroyal. Or,

5. Com-

5. Compound tincture of castor; or, elixir proprietatis, may be taken in the same way.

In cases of debility and relaxation, steel is one of the most powerful remedies for removing obstructions. It strengthens the stomach and invigorates the whole system. It may be taken in substance, 10 or 15 grains of the filings of iron for a dose, or 10 or 15 drops of the tincture of steel, in a glass full of cold water, twice a-day.

If these fail, the warm or cold both, or electricity, according to the particular circumstances of the case, should be used.

II.

To obviate pain in sparing menstruation.

1. Half a grain of solid opium, or 15 drops of liquid laudanum, may be taken in the morning, and double the quantity when going to bed at night. Or,

2. If languid, troubled with nervous complaints or flatulency, double the quantity of sal volatile drops, or compound tincture of castor, may be added to the laudanum with advantage. The whole should be mixed up in the form of a draught diluted with cinnamon or simple water, and sweetened agreeably to the taste.

III.

To restrain flooding.

1. Elixir of vitriol may be given, 15 drops
in

in a glass of cold water, and repeated three or four times a day. Or.

Tincture of roses.

2. Take an English pint of infusion of dried scarlet roses; strain, and add as much of the acid spirit of vitriol as may render it agreeably sharp; let it be sweetened with refined sugar to the taste, and a cupful be taken often. But,

If the patient be very hot and feverish, or if the habit be full, besides bleeding, cool air, and a spare diet, the following form of medicine will be preferable.

Nitrous mixture.

3. Take of nitre, one dram; dissolve it in pure spring-water, half an English pint; add two table spoonful of vinegar, a quarter of an ounce of sugar, and let a table spoonful be taken as often as the stomach will bear it.

A full dose of laudanum or opium should be given at bed-time, and the belly should be kept moderately open with cream of tartar, magnesia, lenitive electuary, or emollient glysters.

When the flooding is abated, the Peruvian bark should be given as a strengthener and preventative. It may be taken in substance, a tea-spoonful three or four times a-day, or in the form of decoction.

Decoction of bark.

Take of fine bark in powder, an ounce;

Water, three English pints; boil to one;

Add of simple cinnamon water half a gill.

U

Strain

Strain it while warm. A cupful to be taken twice or thrice a-day.

IV.

For diminishing the discharge of the *fluor albus*.

INTERNALLY,

1. *Strengthening electuary.*

Take of finest bark, an ounce;

Japonic earth finely levigated;

Alum in fine powder, each $\frac{1}{4}$ ounce;

Grated nutmeg, one dram;

Common syrup, sufficient to make it into a soft electuary; the dose a large tea-spoonful three times a-day. Or,

2. If pills be more agreeable,

Take of extract of Peruvian bark,

Gum Kino, each one dram;

Alum, half a dram; rub the kino and alum into a fine powder; then add,

Rhubarb, in powder, two scruples;

Common syrup, sufficient to make it into a mass of pills, to be formed of an ordinary size; of which four or five may be taken evening and morning. Or,

3. If the stomach be much disordered, and an acid seems to prevail, the following method of giving bark will be preferable to any other.

Take finest bark powder, two ounces;

Lime-water, two English quarts: Let it be infused for several days, shaking it often; then

then strained, and a cupful drank three times a-day.

During the use of the above, the belly should be kept open with rhubarb or cream of tartar.

EXTERNALLY.

Either of the following liquors may be used as a wash, or injected into the *vagina*.

Tincture of roses; a strong infusion of green tea; the water of Moffat Hartfield Spa; water from a smith's forge. Or,

1. *Dilute solution of sugar of lead.*

Take sugar of lead, 30 grains;

Rose-water, half an English pint;

Distilled vinegar, a table-spoonful.

When the lead is dissolved, let the solution be filtered. It may be made occasionally stronger, or more dilute.

2. *Alum water.*

Take of alum, in powder, one dram; dissolve it in an English pint of boiling water; when cold let it be filtered.

To make it stronger or more astringent, the same quantity of white vitriol may also be added.

V.

Most convenient form of exhibiting laxative medicines.

1. *Castor oil*, when genuine, is more effectual than any other remedy in obstinate costiveness. Two tea-spoonful, mixed with a little of any spirit, may be given every three or four hours, till it produces the desired effect.

2. *Magnesia* is mild and inoffensive, but uncertain and precarious in its operation as a laxative. It is chiefly to be trusted when there are evident marks of an acid in the stomach. To render it active, fruit, as orange, &c. should be freely taken along with it. Two tea-spoonsful may be taken for a dose, once, twice, a-day, or oftener.

3. *Common or mild laxative pills.*

Take finest succotrine aloes, in powder, one dram;

Castile soap, half a dram;

With common syrup, make it into ordinary sized pills; one or two of which for a dose, may be taken at bed-time, occasionally.
Or,

4. *Very strong laxative pills.*

Take aloes, as above, a dram;

Refin of jalap,

Soap, each half a dram;

Oil of anise, or of juniper, 12 drops;

Rub the aloes and refin of jalap into a fine powder; add the other ingredients, and make the whole into a mass with syrup, to be formed into ordinary sized pills; one of which at bed-time will, in most cases, be sufficient for a dose; in the most obstinate habits two will very seldom fail. Or,

5. *Laxative electuary.*

Take lenitive electuary, an ounce;

Jalap, in fine powder, half a dram;

Cream of tartar, two drams;

Syrup sufficient to make it of a proper consistence.

sistence. The dose the size of a nutmeg in the morning, occasionally. Or,

If it should be required stronger, the double or triple quantity of jalap may be added.

6. Elegant form of a *laxative electuary*, which may be safely and successfully exhibited in the most delicate habits, without hazard of gripes or sickness.

Take lenitive electuary,

Pulp of cassia, each half an ounce;

Finest manna, an ounce;

Cream of tartar, in fine powder, 2 drams;

Jalap, in fine powder, half a dram;

Ginger or cinnamon, in powder, a scruple;

Syrup of roses, a sufficient quantity to make it into a soft electuary. The dose, at first, a tea-spoonful; to be gradually increased, or occasionally repeated, till it produces a proper effect.

To make it stronger, the double quantity of jalap may be added.

VI.

Forms of internal remedies for variety of purposes.

1. *Chalk drink* for looseness or heart-burn, when an acid prevails in the stomach.

Take an ounce of prepared chalk;

Gum arabic, the same quantity, or more; boil from three English pints of water to two; add half a gill of simple cinnamon or nutmeg water, sweeten to the taste, and let a cupful be taken three or four times a-day, shaking the bottle.

2. *Anodyne mixture*—to remove false pains, or promote those of labour.

Take liquid laudanum, 80 drops;

Simple spring-water, half a pint;

Sweeten to the taste with sugar; and give two table spoonsful once in three, four, or five hours, while the genuine pains are slow and trifling, or till the spurious grinding pains abate. Or,

3. *Elegant anodyne mixture*, when somewhat more cordial seems to be indicated.

Take of simple cinnamon-water,

Compound nutmeg-water; each two table-spoonsful;

Spring-water, ten spoonsful;

Sal. volatile drops, two tea-spoonsful;

Liquid laudanum, eighty drops;

Common syrup, two or three spoonsful.

Mix. To be given as above.

This mixture is also one of the most effectual for removing or relieving after-pains. The dose, two spoonsful at bed-time, and one, two, three, or four times a-day, when the pains are violent. Or,

4. For after-pains, when the pulse is quick, and the skin hot and dry.

Saline mixture.

Take lemon juice, fresh, one ounce and a half,
Salt of wormwood, one dram;

Mix in a tea-cup, stirring with a tea-spoon
till the effervescence be over; then add,

Simple cinnamon-water, two table-spoonsful,

Rose-

Rose-water, or common spring-water, eight table-spoonsful ;

Fine sugar, sufficient to sweeten it to the taste.

The dose, two table-spoonsful every two or three hours.

To a dose of the above, ten drops of laudanum may occasionally be added, when the pains are violent ; observing to desist if the opiate should occasion sickness or giddiness of the head.

The simple saline mixture, without laudanum, is an admirable remedy for removing nauseating sickness, stopping bilious vomitings, or lessening febrile indisposition. In these cases it should be prepared in small quantities, and given while fermenting.

It may be also given with great advantage in *weeds*, immediately after the cold fit. To promote perspiration, the volatile salt of harts-horn is preferable to salt of tartar or wormwood.

VII.

Forms of glysters.

1. *Common glyster.*

Take of warm water, three gills ;

Coarse or raw sugar, a table-spoonful ;

Fine olive oil, four spoonsful ; or

Fresh butter, the size of a small hen egg ;

Mix, warm, strain it, and give for a glyster, always putting the bag to the cheek to judge of its warmth before it be administered.

2. *Strong, or purging injection.*

Add to the above about half a table spoonful, or more, of common salt. Or,

If that should fail,

3. Let about half an ounce of fenna-leaves be boiled in the water; then add the other materials as above.

4. *Simple emollient injection.*

To three gills of warm water, milk and water, or chamomile tea, add four table-spoonsful of fine oil.

5. *Carminative glyster.*

Let carvi, anise, or coriander seeds be bruised, and boiled in any of the preceding, to the quantity of a quarter of an ounce.

6. *Anodyne injection.*

To four or six ounces of a mucilage made by dissolving gum Arabic in boiling water, or of starch, to the consistence of liquid gelly, add fifty or sixty drops of liquid laudanum.

If, with a view to remove violent pain, a much larger dose of laudanum, as 100 drops, may, by way of glyster, be given with safety and advantage.

In cases of violent colic with looseness, or where an opiate is indicated, and the stomach rejects it when given internally, this method should be had recourse to.

7. *Injection for effectually removing after-pains, when complicated with grinding-pains from flatulency in the intestines.*

Dissolve a quarter of an ounce of assafoetida in three gills of warm water; add three or four table-spoonsful of fine oil; liquid laudanum, sixty drops; or, if the pains be frequent and excessive, eighty.

It should be repeated every day, or even twice a-day, if necessary.

The belly must be kept open with laxative glysters.

DIRECTIONS for preparing Variety of DRINK and FOOD, adapted to the situations and circumstances of Lying-in-women.

I. OF DRINK.

Barley water.

Take of pearl-barley, two ounces ;

Water, four English pints.

Wash the barley with boiling water, which being poured off, add the above quantity of water boiling; boil slowly till one half, and then strain it.

Groat gruel may be made in the same manner.

Water gruel.

Take of oat-meal, two large spoonsfull

Water, two English pints; mix and boil for ten or fifteen minutes, constantly stirring; then strain, and add sugar or salt sufficient to the taste.

Rice gruel.

Take of ground-rice, two ounces ;

Cinnamon, a quarter of an ounce ;

Water, four English pints ;

Boil for about half an hour; strain, and sweeten to the taste.

Im-

Imperial drink.

Take of cream of tartar, a dram;

Outer rind of fresh lemon, or orange-peel,
half a dram;

Fine sugar, an ounce;

Boiling water, two English pints. When it
has stood in a stone or porcelain vessel about
half an hour, strain off the liquor.

Lemonade.

Take of the outer rind of fresh lemon-peel, a
dram;

Lemon juice, an ounce;

Double refined sugar, two ounces;

Boiling water, an English pint and a half.

After it has stood half an hour in a stone or por-
celain vessel, let it be strained.

Orangeade.

Take of the fresh outer rind of Seville orange,
a dram;

Orange-juice, two ounces;

Refined sugar, nearly two ounces;

Boiling water, two English pints.

After it has stood as above, let the liquor be
strained off.

White-wine whey.

Take of new milk, two English pints;

Water, one pint;

White-wine, a gill.

Put the milk and water into a well tinned
fauce-pan, and when it begins to boil add the
wine. Separate the whey from the curd, and
sweeten it to the taste with sugar.

It may be clarified by boiling, for a few mi-
nutes

nutes in the whey, a little of the white of an egg beat up. The whey must afterwards be strained.

The Irish Posset.

Take an English pint of new churned milk; pour over it a quart of sweet milk, boiling hot; cover it till it be completely possetted; then take off the top or curd, sweeten the whey to the taste, adding the juice of half a bitter orange, a little beat cinnamon, and a glass of white wine.

This is a pleasant cooling drink, and gently opening.

It may also be made thus; it is then called *Two-milk Whey*.

Pour sweet milk, boiling hot, over an equal quantity of new-churned milk; cover it till it be possetted, and separate the whey from the curd.

II. F O O D.

Brown Caudle.

Take of water-gruel, made a little thicker than usual by boiling;

Good mild beer, each an English pint. Boil about a quarter of an hour, constantly stirring; and, when strained, add grated nutmeg and sugar sufficient to the taste. A little wine may be occasionally added, lessening the proportion of the ale, and a sufficient quantity of thin toasted bread.

White Caudle.

Boil gruel as above, with three or four
cloves

cloves and a little mace, constantly stirring; add fresh outer rind of lemon-peel, and, when strained, white-wine, grated nutmeg, and sugar to the taste. It may be eat with toasted bread as above.

Boiled Custard, or very light Caudle with Egg.

Take the yolk of an egg and a little sugar; beat them well up together; then add about half a spoonful of flour, and gradually mix with it two spoonful of milk. Pour this gradually into a sauce-pan among half an English pint of sweet milk when it boils, constantly stirring it; let it boil for a minute; then add a glass of wine, and let it boil a minute longer; or it may be flavoured with cinnamon or nutmeg.

The chief art in making the caudle, is to prevent it from curdling.

Panada, or Breadberry.

Take of bread, not new baked, an ounce;

Water, an English pint.

Boil without stirring, till they mix, and the bread be soft and smooth; then add a little grated nutmeg and sugar, and two spoonful of wine or simple cinnamon-water.

Sago.

Take of sago a large table spoonful;

Water, somewhat less than an English pint.

Boil gently, stirring it constantly till the mixture be smooth and thick; then add a little nutmeg, or beat cinnamon and sugar, and two spoonful of wine.

Salop.

Salop.

Take of falop, finely powdered, a tea-spoonful;
Water, half a pint,
Mix the falop well in a cup of the water; add
the rest; put the mixture into a sauce-pan;
set it over a clear fire, and keep it continually
stirring till it acquires the consistence of a jelly.
Add a little nutmeg, a spoonful of wine, and
sugar to the taste.

Beef Tea.

Take of lean beef, carefully separated from
the fat, four ounces;
Water, an English pint and a half;
Salt, sufficient to season it.
Skim it for five minutes after it begins to
boil; then add a little mace; boil for ten mi-
nutes more; then pour it into a basin for use.
If cold, any fatty parts can be skimmed from
the surface.

Mutton Broth.

Take of the loin of mutton, a pound;
Water, three pints.
Put into a sauce-pan with a little salt; care-
fully take off the scum with a spoon as it rises;
then add a little onion and mace, if there be
no objection to them. Boil till the meat be
tender; pour the soup into a basin; and when
cold, carefully skim off the fat. The broth
may then be warmed and given when ne-
cessary.

Boiled rice may be added to this, or to beef-
tea, occasionally.

Chicken Broth.

Take half a chicken stripped of the skin and fat;

Water, two pints;

Salt, as much as is necessary to season it.

Boil slowly for about three-fourths of an hour, taking the scum off as it rises; then add a little mace, and a crust of bread; boil a little longer, and pour out the broth for use. Or,

Take the fleshy part of the legs of a chicken, without skin, fat, or bones; put it into a small sauce-pan, with a pint and a half of water, and a little salt; boil, taking off the scum as it rises; add a little mace and parsley, and a crust of bread; when they have boiled about half an hour, pour out the broth from the parsley for use.

Very light Soup, when Animal Food is forbid.

Take a handful of green pease when in season, or otherwise of dried pease; put them into three English pints of water; let them boil till they burst, together with a little thyme, winter savory, and pot marjoram, also two or three onions; when they are all sufficiently boiled, put it through a sarse, beating it with a spoon till the consistence be as thick as is wanted; then place it on the fire, putting into it a sliced lettuce, some turneps cut small, and a few pieces of the white of celery. When these are enough, season it with salt; and if there be no objection, a little pepper will add to the flavour.

Light Soup with Rice.

Take two ounces of rice; put it into four
Eng-

English pints of water ; let it boil till the rice is of the consistence of jelly ; then add boiling water till it be diluted to the consistence wanted ; add two or three onions, a little mace, a whole pepper or two, with a little thyme ; let it boil till it be sufficiently seasoned ; then pour it through a sence, to keep for use.

Salt is always taken for granted.

Soup Meagre.

Take carrots, turneps, celery, clean washed and picked, and cut in pieces, lettuce, a handful of green pease, two or three potatoes, and what else of seasonable herbs may be thought proper, together with three or four onions peeled and cut into quarters ; put all these into a close goblet on the side of a slow fire with three English quarts of water ; let it stov slowly for three or four hours, than dish it for use.

Pepper may be occasionally added, or not, according to circumstances.

The sole-crust of a loaf put into it when half boiled, will add to its strength and consistence.

Bread Soup.

Take the bottom crust of a penny-loaf, cut off thin ; put it into a quart of spring-water, with half a dram of mace and a little cinnamon ; keep it stirring on a slow fire till the crust is almost dissolved ; then pour it off, and add to it a spoonful or two of port wine, and sugar sufficient to sweeten it to the taste.

It is nourishing, and often given when the stomach

stomach loaths every thing else ; but is rather of a binding quality.

Another.

Take the upper crust of a roll dry, and not new baked ; cut it into pieces, and put it into a sauce-pan with a pint of water, and butter as much as the bulk of a nutmeg ; boil, stirring and beating it now and then till the bread is mixed ; then season the soup with a little salt, and pour it into a basin for use.

A little port or white wine may occasionally be added.

Bread Pudding.

Take of crum of bread, about half a pound ; new milk, somewhat less than a pint ; pour the milk boiling hot upon the bread ; let it stand covered up about an hour, then add the yolks of two eggs, well beaten, a little grated nutmeg, a spoonful of rose water, a little salt and sugar ; beat and mix the whole well together with a spoon. Tie it then close up in a clean linen cloth, and put it in boiling water ; boil near an hour, then take it out, lay upon a plate, pour over it some melted butter mixed with a little white-wine, and sprinkle some sugar over all.

Bread Pudding without Eggs.

Take a French roll ; pour upon it half a pint of boiling milk ; cover it close, and let it stand till the milk be soaked up ; tie it then up tightly in a cloth, and boil it a quarter of an hour ; pour it out, and let it also be eat with melted butter, wine, and sugar, as above.

Batter

Batter pudding.

Take of flour, three spoonsful; milk, a pint; a little salt, beaten ginger, and nutmeg; eggs, the yolks of three and white of one may occasionally be beaten together, and mixed with the above ingredients. Half an hour's boiling will be sufficient.

It may be eat as the former, with melted butter, wine, and sugar.

Pudding without eggs.

Take the crumb of a penny-loaf; pour over it an English quart of sweet milk boiling hot; cover it up warm, and let it soak about half an hour; grate the outer part of carrot and bitter orange; mix sugar and cinnamon; then beat all up with the bread, together with a glass of white-wine, and a spoonful of orange flower-water, and either boil or bake it. If boiled, it must be put into a pan, and stirred with a spoon till thick, then put into a linen cloth, and boiled for half an hour. When ready, it must be placed in a basin before taking it out of the cloth, and let stand for a few minutes. The cloth is then to be opened, the pudding turned over into a dish, and eat with lemon, or white-wine and sugar.

Light pudding, without either eggs or milk.

To half a pound good oat-meal, put three English pints of cold spring-water; stir with a spoon till the white substance from the meal gives the water the appearance of pretty thick cream. Pour this from the grounds, and put it into a pan with a stick of cinnamon. Let it

I X boil,

boil, constantly stirring till it loses the raw taste of the oat-meal, and becomes as thick as flummery; then add a glassful of white-wine, a spoonful of orange flower-water, the rind of a grated orange or lemon, with a little of the juice, and sugar to the taste; put it into a baking plate, and let it bake till brown on the top. Put grated sugar over it, and serve it hot.

It will not turn over in a shape, never being sufficiently firm for that, but is pleasant, light, and laxative, free of the binding quality of flour.

Rice pudding, without eggs,

Take of rice, two ounces; boil it with a pint of milk, constantly stirring, lest it should burn; when a little thickened, take it off, let it stand till it be nearly cool; then mix in it two ounces of butter, a little grated nutmeg, and sugar to the taste. Pour it into a proper dish, first rubbed over with butter, and bake it.

Hartshorn jelly.

Take shavings of hartshorn, half a pound;

Water, three pints;

Fine sugar, six ounces;

White-wine, a gill;

Orange or lemon juice, an ounce.

Boil the hartshorn and water, slowly, in a well-tinned vessel, to one pint; then strain out the liquor and the other ingredients, and boil the whole over a gentle fire to the consistence of a soft jelly, to be afterwards filtered thro' a flannel bag. Or,

If

If neither wine nor acids be allowed,
Take hartshorn shavings, half a pound;
Barley-water, four pints;
Boil to one half, then strain, sweeten to the
taste, and filter.

A little simple cinnamon-water may occasionally be added.

Calves-feet jelly.

Boil two calves feet from a gallon of water till a quart, then strain, and when cold carefully scum off the fat. The jelly should also be separated from any settling at the bottom. Put it into a sauce-pan, with a pint of white-wine, half a pound refined sugar, the juice of four lemons, and the white of half a dozen eggs; beat up with a whisk; mix all well together, set the sauce-pan upon a clear fire, and stir the jelly till it boils.

When it has boiled a few minutes, pour it through a flannel bag till it runs clear; let it then run, while warm, into a china-bason, with some lemon-peel in it cut very thin. It may then be put into proper glasses.

Forms of MEDICINE for NEW-BORN CHILDREN.

I.

For purging an infant newly born.

1. Take an ounce of finest manna; dissolve it in as much boiling water as will be sufficient to make it the consistence of syrup; strain it, and let a tea-spoonful be given every hour or two till it operates. Or,

X 2

2. Mix

2. Mix two tea-spoonsful of *magnesia* with a table-spoonful of simple cinnamon-water and as much common syrup*, and let it be given as above. Or,

In very obstinate cases,

3. Take of syrup of pale roses, and syrup of the berries called buck-thorn, each a table-spoonful; simple cinnamon-water, two tea-spoonsful. Mix; give a tea-spoonful every hour or two till it operates.

II.

To correct acid crudities in the stomach and intestines of infants, which is known by frequent green four-smelling or crude stools, with gripes or colic pains.

Mix, in sugar and water, five or seven grains of prepared crabs-eyes or chalk, for a dose, to be repeated twice or thrice a-day; and, once in two or three days, give four or five grains of fine rhubarb.

Simple tincture of rhubarb for children.

Take of finest rhubarb, in powder, thirty grains;

Salt of tartar, three grains;

Simple cinnamon-water, half a gill.

Infuse, by the side of the fire, covered for 6 or 8 hours; then strain and sweeten it to the taste with fine sugar. The dose, a tea-spoonful to a child under four months, and two tea-spoons-

* Common syrup is made by dissolving sugar in boiling water to the consistence of liquid jelly.

spoonsful from that period till after the first year.

This tincture is also the most proper form of a stomachic purgative for children after weaning. A dose may be given every second or third morning till the above quantity be exhausted.

In warm weather, two or three spoonsful of brandy should be added to prevent it from fermenting.

III.

Vomits for Children.

Two or three grains of *ipécacuanha*, very finely powdered, and mixed in a little compound syrup, will be sufficient for a new-born infant.

Five grains will generally operate from six to twelve months; and, from one year to five, ten grains will be sufficient.

IV.

For colic in children, attended with green scour.

Take simple cinnamon-water, peppermint-water, and common syrup, of each two table-spoonsful; liquid laudanum, fifteen drops. Mix; the dose, a tea-spoonful every hour or two till the violent pain or gripes abate.

Small doses of rhubarb should also be occasionally given; and crabs-eyes, or prepared chalk, to correct the acidities.

V.

For colic with dry gripes.

Purging glyster for young children.

Take nearly a gill of cow's milk ;

Two table-spoonsful of fine oil ;

Two tea-spoonsful coarse sugar ;

Mix for an injection.

It should be given less warm than for an adult.

If the child be distressed with flatulency, a few drops of oil of anise-feed, rubbed with sugar, may be dissolved in the liquid.

In sudden fits of violent pain incident to children, from whatever cause, injections have a good effect ; and if the child be not soon relieved, he should be put into a bath of warm water, as high as the stomach, for about ten minutes. Its effects in removing spasm, or lessening pain, are well known. But if the small-pox be suspected, the child should be freely exposed to the cold air.

VI.

For looseness in children, particularly about the period of teething.

Give small doses of rhubarb every other night, for a week. In the intermediate days, give the following mixture :

Take a quarter of an ounce of prepared chalk
or crabs-eyes,

Simple cinnamon-water,

Common syrup, of each two table-spoons-
ful ;

ful, Mix; and give a child's spoonful three or four times a-day, shaking the glafs.

If the child be very restless, and the purging frequent in the night, give from three to five drops of laudanum, according to the child's age, in the evening's dose of the mixture.

If the looseness be excessive, and does not soon abate, and the milk is stale, it ought to be changed.

The child's diet, besides the milk, should consist of chicken-broth, or beef-tea, with boiled rice, panada prepared of hard biscuits; and hartshorn jelly should be freely given.

If the purging be excessive, along with frequent and severe straining, the following injection should be administered evening and morning:

Take half a gill of thin starch;

Two or three tea-spoonsful of fine oil;

Five or seven drops of laudanum.

Mix; and give it moderately warm, soon after the fit of looseness or straining is over.

When nourishment cannot be given by the mouth, or is soon after rejected from the stomach, glysters of beef-tea, chicken-water, or strained panada, should be thrown up twice or thrice a-day; and a few drops of laudanum may occasionally be added, to prevent the glyster from passing too soon.

