

Practical observations on the disease of the joints, commonly called white-swelling : with remarks on caries, necrosis, and scrofulous abscess, in which a new and successful method of treating these complaints is pointed out / by Bryan Crowther.

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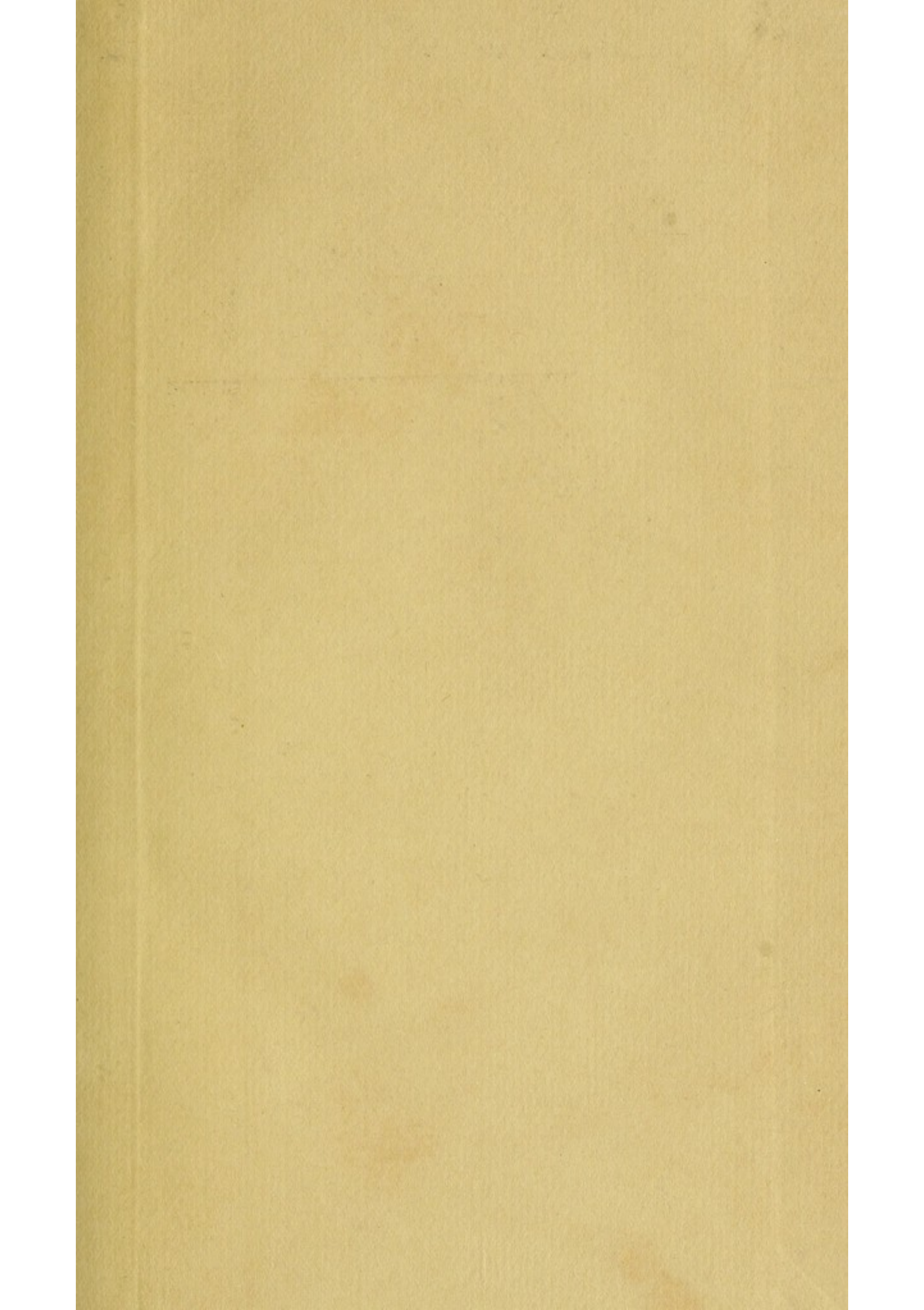
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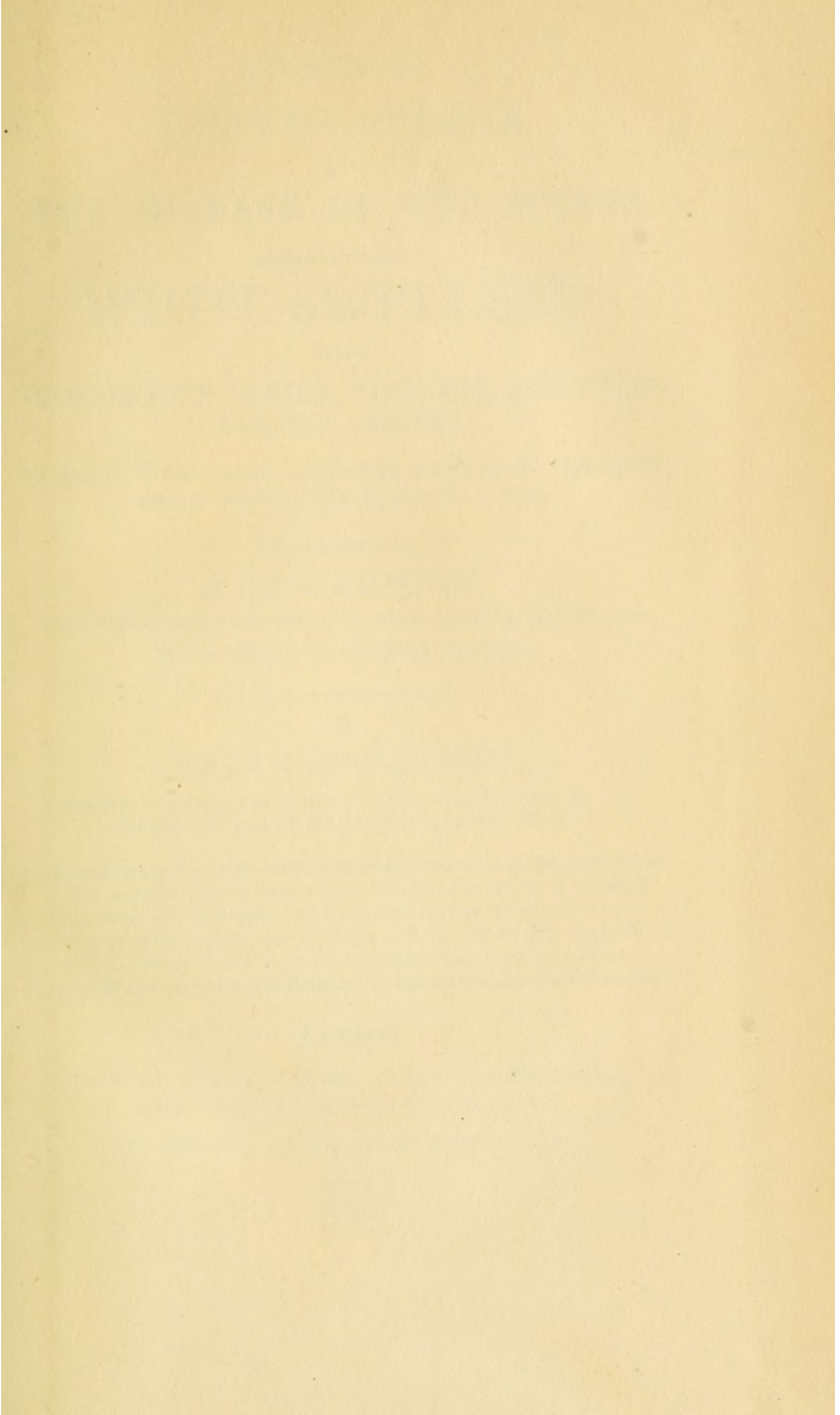
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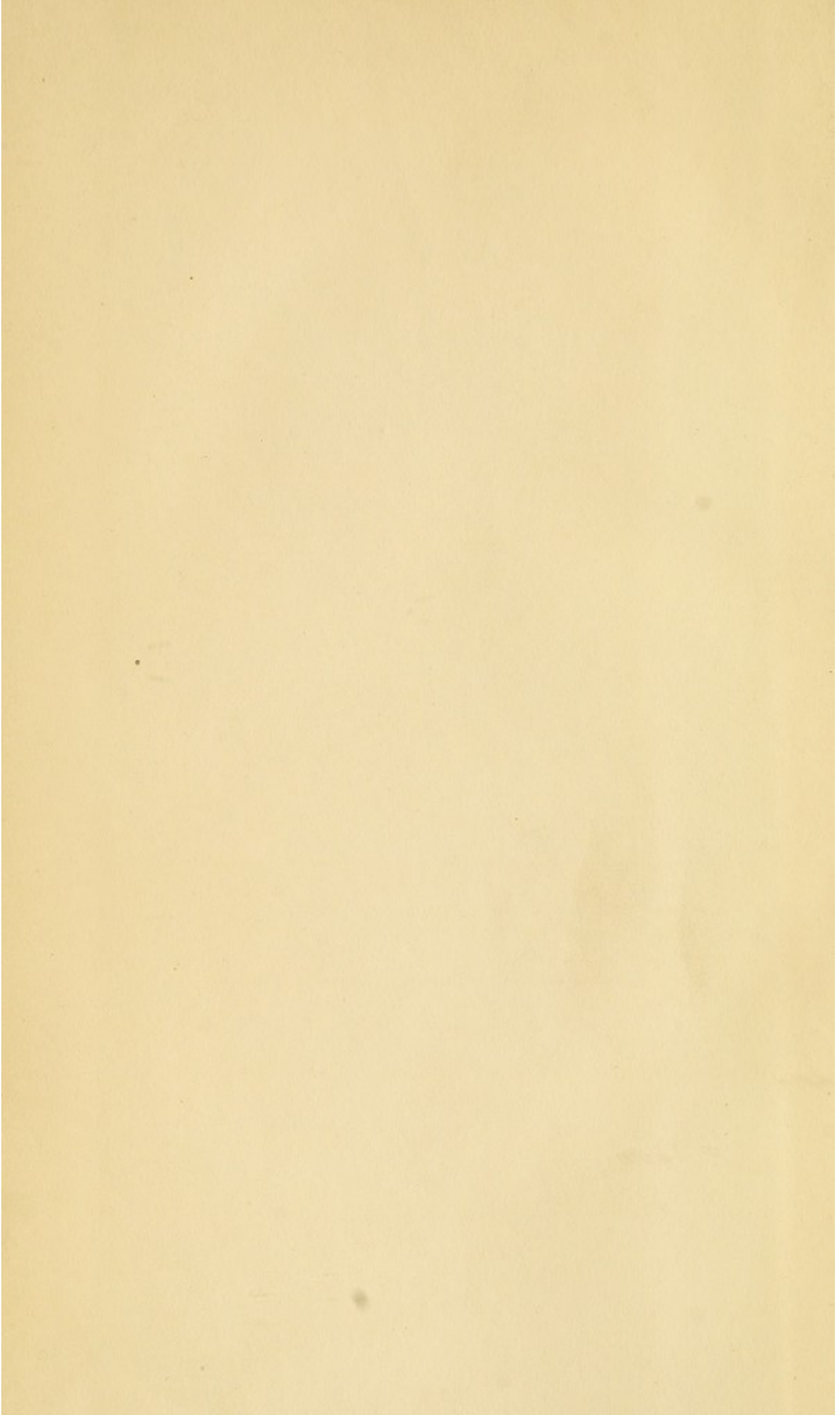






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PRACTICAL *Johnson*
OBSERVATIONS
ON
THE DISEASE OF THE JOINTS,

1835

COMMONLY CALLED
WHITE-SWELLING;

WITH
REMARKS ON CARIES, NECROSIS, AND SCRO-
FULOUS ABSCESS,

IN WHICH A NEW AND SUCCESSFUL METHOD OF TREATING
THESE COMPLAINTS IS POINTED OUT.

A NEW EDITION,

WITH CONSIDERABLE ADDITIONS AND IMPROVEMENTS, ILLUSTRATED
WITH SEVEN COLOURED PLATES.

BY
BRYAN CROWTHER,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN LONDON, AND
SURGEON TO BRIDEWELL AND BETHLEM HOSPITALS.

The operative part of Surgery is far from being the whole of it; and I cannot help thinking that, by attending a little more to what is called common or practical Surgery, our art might still be considerably improved, practitioners rendered more expert, and mankind much benefited.—POTT.

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1808

TO

SIR CHARLES BLICKE,

SURGEON OF SAINT BARTHOLOMEW'S
HOSPITAL.

DEAR SIR,

Had I been anxious to prefix to these pages a name, which, by its justly deserved professional celebrity might have conferred a sanction on the work, the public will agree with me, that I could not have selected a more proper one than your own : I wish however, to avail myself of this opportunity, in order to execute a duty, which is always most pleasing to my mind, that of acknowledging favors received. I beg you

therefore to accept this public testimony of the grateful sense that I shall always retain of the numerous marks of kindness for which I am indebted to your friendship.

I remain, dear Sir,

With great respect,

Your faithful and obliged Servant,

B. CROWTHER.

INTRODUCTION.

THEORETICAL reasonings of writers on the nature of scrofula, have not afforded, as far as I know, any improvement in point of surgical practice ; neither has the investigation of the supposed causes of the disease appeared to throw much light on the subject.

By these means mens' minds have been diverted from what should have been their proper pursuit—that of removing the effects of a disposition known to arise from what is called a scrofulous taint.

It would probably have been well for

mankind, if our attention had been thus confined; and if, when unable to penetrate into the nature of a disease, we had satisfied ourselves with attacking its symptoms in detail.

In the following pages I disclaim all theoretical disquisition. I shall forbear to enquire whether scrofula ought strictly to be called a hereditary disease or not; of the following facts, however, I am quite certain, that most of the patients, whom I have seen afflicted with white swelling, were of a strumous habit, and were descended from parents of a similar constitution. Many members of such families have been destroyed by pulmonary consumption; and if one parent be healthy, and the other of a scrofulous habit, one child produced by such an union shall escape quite free, while the remainder are miserably attacked with the complaint; and

the children will bear a strong resemblance in features to that parent, whom they resemble in constitution.

In the very valuable posthumous production of M. POUTEAU, chief surgeon of the Hotel Dieu de Lyon, we find this author deprecate the notion of adopting the phrase of hereditary diseases; in which respect he has certainly anticipated Mr. JOHN HUNTER; not that I think the subject of such importance, that the friends of either of the deceased authors should at all feel themselves interested in determining this question, especially as it is unconnected with practical utility.—POUTEAU says, “Rien n'est donc plus erronné généralement que l'axiome tant répété, que le germe des maladies passe des peres aux enfans, *abeunt in natos patrum cum semine morbi* ;” and again we remark in this author his excellent conclusive idea of the impropriety of adopt-

ing the term, hereditary disease. “ Bornons-nous donc simplement à avertir que les enfans ont plus que tous les autres de fâcheuses dispositions aux maladies dont leurs parens ont été entichés ;” This may be considered as a proper view of the subject ; but there is no merit attached to this conception of it. For I will venture to affirm, that when a surgeon said the disease was hereditary in the child, he neither adverted to a lameness of the parent in consequence of a disease in the hip, which occurred in his infancy, nor to a strumous affection of the glands of the neck ; all that could be meant was that the parent was scrofulous, and that the child partook of a similar constitutional disposition.

Another ill-founded opinion too generally prevails that this disease arises out of, or is essentially connected with debility, and this opinion has introduced a mode of treat-

ment which in many instances I deem highly objectionable.

Were this notion well founded, how happens it that the practice, deducible from such a theory, is not found by experience proportionably successful? that it is not I am fully persuaded, and I appeal to the practitioners of London for the truth of my assertion.

From my own observation, however, I must aver that such an uniformity in the appearance of scrofula, dependent on a debilitated state of constitution, does not exist with us in England; for many are to be found with strumous affections, who in other respects are healthy and strong.

To such the cordial and invigorating mode of treatment, I have observed, has not only been of mischievous tendency, but

has doubtless accelerated the progress of the complaint to its most formidable termination, the suppurative period of the disease.

In patients of reduced and weak habits, affected with strumous diseases, evacuations of every kind have been avoided, excepting such as regard the health abstractedly considered: support given in these cases has been by nourishing diet, assisted by a class of medicines appropriated to debilitated constitutions.

In a manuscript of the late Dr. MONRO, of Edinburgh, on diseases of bones, when speaking of diseased joints, I find he condemns the application to the surgeon as useless, and recommends the care of these cases to a good-natured old woman.

If the surgical practice now adopted were like that handed down to us by some of

the earlier writers, I confess that the old woman should be preferred; but improved as our present treatment of scrofulous affections is, I consider, with great deference to physic, that the majority of strumous complaints come directly within the province of surgery: and I venture to affirm, that there are no complaints of so calamitous a nature, which admit of greater relief from the hands of the judicious and experienced surgeon. The idea that scrofula depends upon acrimony of the lymph has passed from one author to another without proof, and without leading to any useful practical purpose. It has served as a cloak for ignorance, and to impose upon feeble minds the semblance of scientific information. But the mischief has not stopped here; for, in consequence of this hypothesis, a class of remedies, which have been supposed to be antidotes to scrofula, but which appear to possess little or no efficacy, have been recommended.

This theory has also made an erroneous impression on the public mind, which cannot be too soon removed; viz. that, until the habit be corrected, it is in vain to expect a cure from any surgical application. That this opinion is void of foundation will, I presume, be made sufficiently manifest in the ensuing pages.

I entreat the medical reader not to misconceive me, nor to suppose, that I would insinuate that the advice of physicians in the complaint under our consideration, is unnecessary: I have been assisted by their interference in this, as in other cases of surgery, and shall always consider their assistance useful and respectable; but there is a distinction between medical practice and medical quackery, which a practical surgeon should ever bear in his mind.

The communication with which Mr LAW-

RENCE has favoured me, of bones not suffering enlargement, when scrofulously affected, will not cause the slightest change with respect to the curative indications proper to be observed in the treatment of white-swelling.

I feel much honoured by the obliging mention, which Mr. ABERNETHY has made of me in his lectures, on account of the unabating perseverance I have exerted for such a length of time in this pursuit. I have been enabled to give so close an attention to individual cases, principally from my choice of patients, for I have selected them even from the streets: during my attendance on many of these cases, I not only supported the object of my treatment, but, occasionally the whole of the family.

Pecuniary aid probably rendered my attendance more acceptable, and prevented

reflections which might have distressed my feelings and weakened my exertions.

To Mr. WARD, surgeon of the Manchester Infirmary, my obligations are also due : I consider his communications a valuable addition to my publication.

For the imperfections and inaccuracies of the following sheets, as to composition, I entreat that indulgence, I received from the generosity of the public in the year 1797.

I consider myself called upon to annex additional observations and cases to those I have already published, from a sense of their real importance ; of the practical information they convey, and more especially from the conviction impressed on my mind, of the advantages, which will accrue, from the adoption of the plan of treatment, which I have recommended in cases of white-swell-ling of the joint.

I embrace also this opportunity of calling upon a late writer of dissertations on white-swelling, to shew, with what pretensions to practical knowledge, he could assert, "There is an universal want of success in the cure of white-swelling," unless it be the meaning of Dr. HERDMAN to confine this remark to the circle of his own experience. For my own part, as far as an individual can be authorized in making any general deduction from the results of his own practice, I can with truth affirm, that I have witnessed such a great proportion of scrofulous joints terminating favourably, as fully justifies me in the notice I have taken of Dr. HERDMAN's assertion.

If I have omitted hitherto paying the proper respect due to the memory of my late father, with whom I served an apprenticeship, my mind nevertheless has been duly sensible of the acknowledged ex-

cellence of his surgical practice, and the worthiness of his character, to which I feel indebted for the kindness which the Governors of Bridewell and Bethlem Hospitals manifested in my favor, by appointing me his successor. It may be some gratification to those friends, who supported me on that occasion, to know, that if my practice has been serviceable to the community, they contributed not a little to the event, by the kind support afforded me on the demise of my father.

PRACTICAL OBSERVATIONS,

&c. &c.

SECTION I.

DISEASES OF THE BONES.

On White-swelling of the Joints.

IT will surely be admitted, that the science of surgery would have made greater progress towards perfection, had writers on the subject satisfied themselves with first pointing out the leading features of a malady, it's symptoms and termination: but, instead of this, they too frequently have endeavoured to establish a theory, which had not practical information for its support, and have disregarded noticing the usual and unerring distinctions of a complaint; thus sacrificing experience, in favor of a weak, delusive, and speculative doctrine.

Theory, justly deduced from a practical acquaintance with disease, will, when acted upon, become and assume the form of practice, which will remain immutable as fact itself.

Mr. POTT, in his remarks upon amputation, observes, “ that a history of this disease is very much wanted; and he wished some man, who had leisure and capacity, and who had seen business, would undertake it.”* This incomparable writer, and excellent surgeon meant by a history of white-swelling, I am persuaded, a clear, just, and accurate account of the appearances, symptoms, and conclusion of the disorder.

I have no theoretical notions to support; and however imperfectly these sheets might have met the wishes of Mr. POTT, so benevolently expressed by himself, I shall take especial care to avoid the affectation of possessing a species of knowledge, which medical science can never supply.

* Pott's Works, vol. III. Earle's edit.

The reader, I hope, will pardon these observations, and credit the assertion, that, however disinclined to indulge in hypothetical notions on subjects, which regard anything so important as the health of my fellow-creatures, I promise I will never shrink from the consideration of any practical question connected with the subject of my present enquiry.

Although the mode of cure, which it is my purpose to recommend, depends almost solely on the application of remedies to the integuments, I think it right to premise a general view of the change of structure and appearances which the bones assume, in cases of white-swelling of the joints.

The bones, in this complaint, are affected in two ways: in the one, they are affected primarily from disease originating in their interior structure; in the other, secondarily, by their articulating surfaces becoming diseased, in consequence of a previous affection of the internal surface of the joint.

In the carious state of a bone, it has been said, that to expedite a cure, exfoliation should be promoted; but experience tells us, that exfoliation rarely occurs, and when the complaint does not seem to require it, may we not infer, that it should never be encouraged? * It is very probable, that if means had not formerly been employed to promote exfoliation, it would have been found an unusual occurrence. The supposed necessity of exfoliation in scrofulous joints, formerly gave rise to an unnecessary, painful, and mischievous practice, such as the making use of the knife, caustics and cauteries: the last of these remedies were employed to dry up, what was termed the rottenness of the bones, and to destroy the hypersarcosis or the exuberant fungus with which the surgeons of those days were frequently troubled. †

* *Curatio ad os præcipue dirigi debet et nisi persanato osse curatio nulla est.* — *Annotat. Mercklini in Pandolphini, cap. i. Le Clerc on diseases of the bone, cap. iii.*

† *Observ. Medico Chirurg. Petri de Marchettis de spina ventosa, p. 119.*

Spinæ ventositas, quam nuperi dixerunt spinam ventosam. Primus de eo morbo, et bene egit (Rhases.) Mali causam in

At the same time tents of different kinds were in use to make a passage to, and keep

ipso osse esse, et vicinam carnem omnemque articulationem intumescere, malum in ambulatione augeri. Si ferro aperueris facile sanescere et si os corruptum fuerit non curari, nisi os extraxeris.—Halleri Bibliotheca Chirurgica, vol. i. Haller's edition of Rhases, 1542.

Ventositas spinæ est ad modum doloris: sed materia in dolore articulorum erit in carne et musculis: sed in vitio spinæ hæc materia erit in osse, et parte ejus corrumpitur caro vicina ei: et juxta modum acuitatis ipsius materiæ erit malitia et velocitas ulcerationis ipsius. De cognitione quotiens videris articulum ingrossari cum durabilitate, non deficit vitium sicut deficit vitium articulorum: sed quoties perdurat in dispositione ipsa fiet acutius ambulando, quare minutio fiat in primo de proximiori loco illinitio, fiat cum eo quod confortat locum et solidat articulum: purgetur corpus de fluitatibus calidis, generetur sanguis humidus modicæ acuitatis: supponantur locis semper emplastra ad corroborandum, ad prohibendum manationem superfluitatis ad ea; et toto studio infrigeditur locus; quoniam hoc regimine prohibitio fiet quod non corrumpatur os, et remanebit in ipsa dispositione per tempus longum absque ulceratione: quod si aperis illud cum ferro velociter, non de levi fiet glutinatio ipsius, quoniam os aptum est ad corruptionem: et jam corrupta est pars ipsius et hic *non* glutinabitur nisi extrabatur os, et totum id quod fuerat corruptum ex corruptione ipsius ossis, vel alterius difficilis erit sanatio ipsius etiam quando aperitur ad extrahendum os, noli dimittere quod non custodiatur de corruptione ossis: alterius cum rebus confortativis, infrigidativis, et prohibitivis.—Rhasis, edit. 1486, cap. v. lib. xv. in Museo Britaunico.

exposed the carious bone, together with an occasional touch of the actual cautery to facilitate its removal.

The old writers were sensible of the difference in structure of the epiphyses and the internodial parts of a bone; and by their notions of the use of the actual cautery, it might evidently be inferred, that until they brought the bone to a state of dryness, they conceived that no exfoliation would take place.

Since it has been the practice, as far as I have known, or seen, not to dilate the sores to the extent formerly done, no such diseased fungous matter has risen, as the surgeons at that time experienced. It has been thought, and with much apparent justice might be apprehended, that Mr. SERJEANT* WISEMAN, by the treatment we have just represented, added to that caries it was his intention to remove. Indeed, from the account he himself gives of this practice, we could not form any considerable hopes of

* Wiseman's Chirurgical Treatises, fol. edit. p. 298.

success ; he tells us in particular of a case of white-swelling of the knee, in which, after he had applied a caustic to make an opening to discharge the matter, the actual cautery was made use of to expedite exfoliation ; yet he allows that, “ while he attended the exfoliation of the bone, the caries increased, and the patient languishing, died at last tabid.” Those pieces of bone, which I have known to come away, have exfoliated, not from the articulating part of the bone, which is called epiphysis, but from the body of the bone : indeed, as Mr. BROMFIELD* says, desquamation, in strictness of terms, happens not to all the bones, for instance, the bones of the carpus and tarsus, or the spongy extremities of the cylindrical bones : in these, as he observes, when proper openings are made, the carious part will insensibly crumble away and be discharged with the matter. It would appear improper to dwell any longer on a circumstance, which, if allowed to take place, is not the consequence of the disorder, but of the officious, and unskilful hand of surgery.

* Bromfield's Surgery, vol. II.

If the reader's curiosity should incline him to consider the subject further, he is referred to the commentary of KORTUM,* on scrofulous disease: he, therein will find ample reference to an immense number of authors, whom I should have considered it a duty to notice, had their notions been just respecting the complaint, or coincided with those of English surgeons. This work I have perused; but I rather consider it as forming a collection of the opinions of others, than containing any thing new of the author upon the subject. As a book of reference, KORTUM is certainly intitled to praise, on account of his indefatigable research into the writings of other authors; and to gentlemen called upon to write an inaugural thesis on scrofula, it will be useful, as affording abundant matter for reflection.

Mr. JOHN HUNTER remarked, that a diseased bone and a dead bone were very different, and had surgeons, instead of theorising, adverted to the fact, that the

* Kortum de Vitio Scrofuloso, tom. II. p. 292.

ends of the bones do not exfoliate in this complaint, much pain and mischief would have been saved their patients at this period : some practitioners do even still speak, and act, as if such an occurrence could take place.

The spina ventosa, or scrofulous caries of the bones of a joint, is a malady to which young people are most liable.*

Writers have supposed, that the peculiar texture of the epiphyses, or the ends of a bone, caused them to be more subject to be strumously affected, than their middle or harder part.†

We must admit the fact, though we are at a loss to account for it, that the harder parts of a bone are more susceptible of the venereal virus, than the softer parts, and that the extremities, or heads of a bone are much more frequently liable to scrofula ; still, instances do occur, which prove that

* Joannis de Gorter Chirurgia Repurgata, p. 49 et 50.

† Le Clerc on Diseases of the Bones, cap. iii.

every part of a bone is subject to venereal as well as to strumous affection.

I noticed in my former edition, published in the year 1797, that the bones became enlarged when affected by scrofulous carries; and whatever may be my reasons for changing my opinion with respect to this circumstance, I have to offer in vindication of having published it, that every author to my knowledge, had spoken of the complaint in the way I did; but this statement should never have formed an excuse to my mind for committing a practical error, did not the actual examination of the disease lead me, as it has done others, to the conclusion, that the bones in some cases of white-swelling did really suffer expansion. I shall repeat what I then offered on this subject, “that unless a patient apply to a surgeon in an early stage of this disorder, it is in some cases very difficult to speak with certainty as to the exact state of the joint; for under certain circumstances, white-swellings very much resemble each other in external appearance.”

I have shewn to my medical friends, some diseased joints, in which, upon examination, it was impossible to decide with accuracy, as to the state of the parts: some of the cases, they, as well as myself, considered only as an enlargement of the bone; but, after the application of leeches, and an artificial drain being kept up from the integuments, covering the joint, there did not appear the smallest enlargement of the heads of the bones. In other instances, in which it was imagined that the complaint was merely an affection of the soft parts, it turned out on recovery, that the bones also had suffered enlargement. I freely confess, that the idea of enlargement of the extremities of the bones, rested upon the most attentive examination I could give to the patient's case, as well as the authority of most surgeons who have written upon the subject; but I have been unable to produce a single specimen of the bones being really spread. It is always a pleasure with me to correct an error, which I may have unwarily promulgated; and I scorn to shelter myself under the impression, that, because other practi-

tioners of the greatest celebrity, have really committed the same mistake, I am therefore more excused. The profession of surgery is differently circumstanced from other professions, as the errors committed in our's, if persisted in, may affect the dearest interests of mankind; and the sooner detected or acknowledged, the earlier will the science of surgery reach perfection, and our fellow-creatures be benefited. In this recantation, I beg it to be observed, that, in the statement which I have given to the public, respecting my examination of diseased joints, while attached to the person of the patient, I have not a single sentiment to retract. The supposition of enlargement, and the caries of the bones, which were formerly thought to be necessarily connected with this expansion, have often, I am apprehensive, inclined surgeons to resort to amputation. But if surgeons would make it a rule not to think of removing a limb, but with the view to save the life of the patient, the correction of this opinion would not be of that practical importance. To those however, who practise more from what they

read, than any actual knowledge or experience of the subject, it is very necessary to state, that, however appearances may justify in some cases of white-swelling, the notion of enlargement of the ends of the bones, yet that they really have not been found enlarged, but in several instances are in fact reduced in their size by the effect of caries.

Mr. POTT,* in his remarks upon amputation, speaks of bones in white-swelling becoming enlarged, and he first maintained this opinion, with regard to the bodies of the verterbræ affected by scrofulous caries: but this writer, as every fair and candid practitioner ought, embraced the earliest opportunity of correcting this mistake, in his second publication on curvature of the spine, wherein he says, “ In the first edition, “ I had described the bones, on which the “ disease had seized, as being enlarged “ and spread; upon repeated enquiry and “ examination, I am convinced that they “ are not.” It is now more than four years since Mr. LAWRENCE, Anatomical Demon-

strator at Saint Bartholomew's Hospital, enquired of me, whether I had seen instances of the bones in white-swelling being enlarged, for, if I had, it was a circumstance new to him, as not a single specimen was to be found in the museum of the Hospital, or had ever occurred to him, notwithstanding the constant and repeated opportunities which have been afforded him, in collecting and dissecting diseases. My own practice has given me some opportunities, after the removal of the limb, to investigate the actual condition of the joint, and the cases, as far as external examination could determine, would have led any one to imagine the bones were spread; they certainly seemed to be so, yet, upon accurately investigating them, after dissection, they were not in fact the least increased in bulk. I believe this gentleman to be the first person who has made this important remark, which I conceive it the more necessary to notice, as I fear that the idea of the tumified state of the bones, in cases of diseased joints, might, if not contradicted, induce some practitioners to have recourse to amputation: the public there-

fore, and myself particularly, are obliged to Mr. LAWRENCE, for this important and valuable practical observation. I would willingly do justice to every writer, as well as practitioner; and hope to manifest such a disposition, by remarking, that Mr. COOPER, in a work lately published,* thus expresses himself: “ I have been in the habit of
 “ frequently inspecting the state of the
 “ numerous diseased joints, which are an-
 “ nually amputated in Saint Bartholomew’s
 “ Hospital, and though I have long been
 “ attentive to this point, my searches after
 “ a really enlarged scrofulous bone have
 “ always been in vain.” This is strong confirmation of Mr. LAWRENCE’s opinion; but it is singular, that Mr. COOPER should allow to the spina ventosa that expansion which he has denied to white-swelling.† Did this gentleman not know, that the spina ventosa of the joints, has been considered as scrofulous caries of the ends of the bones? My memory serves me sufficiently well, to

* First Lines of the Practice of Surgery, and a concise Book of Reference to Practitioners. By Samuel Cooper.

† Page 117.

have noticed in an edition of MOTHERBY'S Medical Dictionary, that the scrofulous caries of the spine might with propriety be called the spina ventosa of the vertebræ. WISEMAN, the best of the early English writers upon surgery, considered scrofulous affection of the bones and spina ventosa as one and the same complaint. Every surgeon acquainted with white swelling must have regarded the distinction with respect to the diseases which affect the bones connected with the articulation in the manner which I have before spoken of them.

It is proper to observe, that when Mr. LAWRENCE favored me with this practical truth, that he, as well as myself, in considering the subject, was aware that the spina ventosa of joints and scrofulous caries of these parts were diseases of the same nature. HEVIN, a very late writer, has made the following remark:

“ Le spina ventosa attaque plus ordinairement les enfans que les adultes, parceque

“ leurs os approchent davantage de la na-
 “ ture des parties molles ; il peut occuper
 “ toutes les parties des os ; mais il arrive plus
 “ particulièrement aux, épiphyses et aux os
 “ spongieux.”*

Mr. BENJAMIN BELL, speaking of the
 spina ventosa, observes,† “ but when the
 “ disease fixes on any of the large joints,
 “ although it seldom fails to terminate in
 “ sores at last, yet it commonly proceeds
 “ to an ulcerated state in a more gradual
 “ manner, nor does any remedy, with which
 “ we are acquainted, prevent its progress.
 “ In this situation it lays the foundation of
 “ what is usually termed a white swelling.”

This author does not speak of the spina
 ventosa as accompanied with a swelling of
 the bone, although he observes in another
 part of the same volume,‡ “ when joints

* Cours de Pathologie et de Therapeutique Chirurgicales,
 troisieme edition augmentée de Remarques et Observations
 importantes. Par Prudent Hevin, 1793. Vol. II. p. 376.

† Bell, vol. I. p. 307.

‡ Ibid. vol. I. p. 258.

“ affected in this manner are dissected,
 “ either after death or after amputation of
 “ the member in the first stages of the
 “ disease, the soft parts seem not to be
 “ much injured; but in all, even the slightest
 “ that I have seen, the whole ends of the
 “ bones, or their epiphyses, are enlarged.”

KORTUM,* on scrofulous affections, speaks of the bones being expanded; but, it is very extraordinary that he should describe the complaint as proceeding from a scrofulous or rickety source, as I have never seen a case of scrofulous caries arise from a rickety disposition. A mistaken opinion was several years ago given on this subject by a surgeon of eminence; when a little boy was brought to him, with a disease of the knee, he told the friends it was only the rickets, which cold bathing, country air, and time,

* Equidem definitio spinam ventosam et pædarthrocacem per ossium, præcipue spongiosorum et minorum sæpe tamen etiam majorum, ad articulos potissimum et epiphyses inflammationem cum carie junctam, sæpe non tamen semper dolorificam, ulcera partium mollium fœda sibi adsociantem, difficilime sanabilem, et a causa scrofulosa vel rachitica profectam.—
 Tom. ii. p. 298.

would remove. In this boy's complaint the knee was enlarged; there was no fluctuation in the joint, and little uneasiness on moving it; and it was one of those cases in which the condyles of the femur appeared to be increased in their dimensions. I gave my opinion accordingly, and the relations were satisfied that my notions respecting the child were correct, and that it was in fact a white-swellings and not the rickets. In consequence of this opinion I have since been induced to examine particularly many children who have been brought to me, on account of scrofulous affection, and I have always remarked that they were totally free from any trace of rickets.

In rickety children we do not find one joint only affected, for the corresponding limb shews marks of the same disease.—Mr. CHESTON* says, “ It has indeed been
 “ commonly advanced, that the bones are
 “ almost always enlarged; this I never ob-
 “ served, unless in young subjects where it

* Vide Cheston's Pathological Observations and Enquiries, p. 118.

“ might have been complicated with the
 “ rickets, though I have examined a great
 “ number of them when injured by this
 “ complaint. I am inclined to think that
 “ this notion either arose from the deceit-
 “ ful feel through the diseased integuments,
 “ &c. or its being confounded with spina
 “ ventosa.” I have seen but a very few
 joints dissected after amputation, but in
 those affected with spina ventosa or scrofu-
 lous caries which I have had an opportunity
 of inspecting, the bones had not undergone
 any increase in size, although they were
 softened in their texture, and excavated
 from within outwards. In those cases where
 the bones are injured in consequence of
 disease occurring first within the cavity of a
 joint, although they are frequently deprived
 of their cartilaginous covering, and some-
 times even suffer loss of substance, yet the
 structure of the bone is not changed as
 happens in the scrofulous caries.

I have, on the authority of WISEMAN,
 regarded the spina ventosa of a joint as a
 species of white-swelling, and I am con-

vinced of the propriety of this arrangement; for surgeons, however accurately they profess to discriminate between the different kinds of this disorder, yet, in practice have found themselves frequently mistaken as to the parts of the joints which were diseased. The distinctions are not of much importance, for, as far as my experience and observations of the disease have extended, the proper treatment is essentially the same in all cases of white-swelling. RHAZES, AVICENNA, PANDOLPHIN, and most other authors have informed us that the spina ventosa is a disease of the bone; and MERCKLIN, a judicious commentator on Pandolphin's Treatise on this subject, says, that in this disease the bones are first and principally affected in their interior part, and that the disease of the bone always precedes that of the flesh: hence, if the disease of the bone and that of the flesh are discovered at the same time the former must have existed before the latter.*

* *Malum nostrum in ossis potius corruptione quam in exulceratione carnis consistere, hæc fere evincunt rationes, quia ossa et quidem interius primo ac primario corrumpuntur;*

Mr. SAMUEL COOPER, in discoursing on spina ventosa, says, “ when matter forms
 “ in the internal structure of a bone the
 “ disease has received this whimsical name.
 “ The complaint,” he farther says, “ is most
 “ frequently met with in unhealthy chil-
 “ dren, and it begins with a dull, heavy,
 “ deeply seated pain, the limb appearing
 “ outwardly quite sound. In general the
 “ disease is not ascertained before the af-
 “ fected bone becomes expanded; at length
 “ the matter arrives beneath the perios-
 “ teum, and a tumour, resembling a deep
 “ seated abscess, is produced.

“ As soon as the nature of the case is
 “ ascertained the matter ought to be eva-
 “ cuated through a perforation made into
 “ the bone by a small trephine: unfortu-
 “ nately it is difficult to know the early
 “ existence of the disorder with certainty.
 “ Exfoliation generally takes place after
 “ the termination of the case. Amputa-

*ossisque corruptio semper præcedit corruptionem carnis;
 atque hinc si ossis et carnis vitium simul apparet, illud semper
 hoc prius extitit.*—Annotat Mercklini Pandolphini, cap. i.
 p. 196 et 197.

“ tion ought not to be practised unless the
 “ immediate preservation of life should be
 “ at stake. Bark, wine, good air, and
 “ nourishing diet are peculiarly necessary
 “ in this tedious and debilitating sort of
 “ case.”

This gentleman's notions do not coincide with those I have formed on the subject; the disease has been supposed to have obtained the name from the pungent pains experienced in the part, and the inflated state of the superincumbent soft parts investing the bones; and I beg to observe, it is a title by far less exceptionable and ridiculous than many this author has been obliged to notice in his system of surgery.

The spina ventosa, when seated in the body of a bone, may require, and will admit of the application of the trephine, but this would be injurious in the same complaint if it attacked the extremities of the cylindrical bones; here there is no matter to discharge, and consequently no good end to answer by it; but, on the contrary, from

the use of the trephine, much mischief might be communicated to the cavity of the joint by the inflammation which would most probably be excited.

I shall arrange the several circumstances, connected with white-swelling, under the following heads:—first, I shall consider it as a disease originating in the substance of the bones connected with a joint; and secondly as an affection of the internal cavity of a joint, independent of any primary disease of the bones, and this latter head will be subdivided according to the character of the inflammation by which the disease is accompanied, which may be either acute or chronic.

Cases of white-swelling, originating in a scrofulous affection of the bones, have recovered, and I believe such instances would have been more frequent, had a remedy been known, capable of arresting the progress of the disease in the bone. For, unless this can be accomplished, the malady of the bone will go on, till it pervades the joint, and produce the same effects on the

ligaments and articulating surfaces of the ends of the bones, which occur in the white-swelling, where the disease first begins in the cavity of the joint.

Patients, in the most early stage of this species of white-swelling, suffer pain, which they describe to be in the bone itself. The joint in this case can be extended, or is capable of being bent with the most perfect ease and facility; the part will bear handling, without the patient manifesting any pain, and the integuments will admit of being pinched up and will be found unaffected.

As the disease advances, the soft parts participate in the malady; fluids are effused within the articulation and different parts about the joint; the distension increasing, the joint becomes painful to the touch, or on motion, inflammation at length supervenes, and ulceration follows. Should the parts now be exposed by dissection, the ligaments will be found in a thickened state, and sometimes destroyed; and in diseases

of the knee, the interarticular cartilages, I have also noticed to have been absorbed. The ends of the bones will be found carious, and their articulating surfaces more or less deprived of the cartilaginous covering. In those instances, in which the bones suffer only simple abrasion, they will not be found otherwise altered in their structure.

Much has been said respecting the state of the integuments, and more than, from any peculiarity of affection, they are generally entitled to. In injuries of the dura mater, the scalp becomes affected, and a puffy tumour is formed, which has been well described by Mr. POTT, as ascertaining the precise extent of injury the dura mater has sustained, and the place for the application of trephine. So do also the external parts sympathize with the disease going on within a joint; they manifest a puffy appearance, fluid is collected beneath them, inflammation takes place, and suppuration follows: the irritation and drain, which they produce, frequently destroy the patient, or oblige him to submit to amputation.

In the spina ventosa, or the true scrofulous joint, the sufferings of the patient are so slight, that the swelling of the joint is often the first circumstance which excites attention. The skin is peculiarly pallid, and when the integuments are pinched up they will be found thickened, though not œdematious. It is remarkable, that, in this indolent sort of white-swelling, the bones sometimes become carious, and the ligaments diseased, and all this is accomplished with little uneasiness; besides the health is not so materially hurt as might be supposed. But, as the complaint makes further progress, the joint becomes more considerably distended; a fluctuation of fluid is more evidently to be perceived, and the distention of the joint increasing, inflammation and suppuration occur. It is at this time, when the patient's health is in the greatest hazard, and suffers more rapidly than at any other period of the complaint. The pain, which is first observed, is always within the joint, and the integuments and tendinous parts suffer in consequence of the articulation being affected.

The elasticity, which writers mention, as perceptible to the touch, on examination, is very similar to the sensation that deep-seated abscesses give ; or what might be expected from feeling a fluid through parts, which are in a diseased and thickened state.

These parts are sometimes much distended by the fluid which is effused, and the whole joint feels so hard and tense, that the case might easily be mistaken for a mere enlargement of bone, as the smallest fluctuation is not to be felt. I have repeatedly seen an artificial purulent discharge, continued for a very short time, so effectually relieve the parts from their distended state, as entirely to remove the delusion.

If the complaint be suffered to take its usual progress, the ligaments and cartilages will be destroyed, the articulating surfaces of the bones eroded, and the patient will die hectic, from the irritation and great discharge, arising from the repeated suppurations, which always attend the latter stage of white-swelling.

In the spina ventosa, or the scrofulous caries of the ends of the bones, the integuments are sometimes differently affected, from the manner above-described, for, instead of ordinary inflammation and suppuration, fungous excrescences arise and elevate them, and the skin seems to be destroyed rather by absorption than any positive disease; for, in these instances the integuments neither slough nor ulcerate.

These fungi, by a probe, will be found to lead to diseased bone, and in some instances into the cavity of the joint. The interspace between these excrescences, from the inflated appearance of the integuments, might incline the practitioner to believe, that he felt fluid fluctuating underneath. This sensation is delusive; but, I would recommend, particularly in this state of the complaint, to avoid the use of the knife, as diseased parts will ill bear the attack of inflammation; and, I have observed, that they suffer less by openings, which the disease spontaneously makes,

Although I generally condemn the making openings to let out fluid, or matter situated externally to the joint, because it will be found most generally capable of being absorbed; yet, in some instances, in which matter is collected under the integuments, and in some cases under the fascia of the thigh, I have let it out by means of a trocar, for the purpose of preventing its diffusing itself, and destroying the cellular membrane. The puncture will be filled with coagulable lymph, which may, without exciting fresh irritation, be easily broke through, and the contents evacuated at the pleasure of the practitioner through the same aperture.

“ The swellings,” says WISEMAN, “ affecting the joints in this disease, are of two sorts; both of them are made by congestion, and increase gradually, yet differ in that, the one ariseth externally upon the tendons, and between them and the skin, or between them and the bone; the other internally, within the bone itself.

“ That which ariseth externally, affecteth
 “ the ligaments and tendons first, and some-
 “ times relaxeth them to such a degree, that
 “ the heads of the joints frequently separate
 “ from one another, and the member ema-
 “ ciates and grows useless; but for the most
 “ part, the humour overmoistening the liga-
 “ ments and tendons, produceth a weakness
 “ and uneasiness in the joint, raising a tu-
 “ mour externally, and in progress, the
 “ membranes and bones are corroded by
 “ reason of the acidity of the humour, yet
 “ it is much hastened, if, upon a supposi-
 “ tion of dislocation they consult the bone
 “ fetters.”

That fluids, as well as abscesses, arise be-
 tween the skin and tendons, I know very
 well, having seen such cases, which were
 taken for white-swelling; but, from the
 account which this surgeon has given, and
 I have quoted, it is evident to me, that
 he has taken an effect for a cause, and that
 the complaint was originally an affection
 within the joint, and not exterior to it; and
 that the external parts became in a swollen

diseased state, as the ordinary effect of the internal disease.

This writer appeared to be aware how fallacious to the touch these cases were, by giving the following caution.

“ But, if through want of such a treatment they grow excessively swelled, and the humour incapable of being pressed back or discussed, you may shrewdly expect the bones corroded; for, that swelling is for the most part raised by an hypersarcosis within, and ought not to be opened without a prediction of a caries; for, however it may, by a seeming fluctuation, be thought to have matter, yet, upon opening, it will only discharge a gleet, and the hypersarcosis will thrust out into a fungus. If, in some particular part, there do visibly appear suppuration, and upon aperture, there do discharge an albugineous matter, you may conclude the bone under it is rotten, especially if it be hand or foot, and the longer you delay

“ the opening, the more rotten the bones
 “ will be.”*

There is an evident puffiness of the joint in white-swelling, which might induce a young surgeon to imagine, that fluid was situated beneath the integuments; this feel is fallacious. We ought never to think of making openings but for the purpose of letting out matter, which now and then is collected under the fascia, and cannot be absorbed: if this be the case, a puncture is sufficient for the purpose, applying afterwards simple dressing and strict bandage from above downwards. The presence of symptoms attending the formation of matter, or their absence, will sufficiently guide us in discriminating between the production of pus, and that merely inflated state of the soft parts, which is the ordinary consequence of affection of the joint, or of a distempered bone.

In cases of diseased bones, the parts,

* Wiseman's Chirurgical Treatise, folio edit. p. 261 and 262.

which cover them appear affected, and they afford to the examiner the feel of fluid very perceptibly to the touch. I shall give such part of a case as is interesting, and applies to this part of our subject.

A man applied to me, on account of a tumour, occupying the whole extent of the frontal bone; it was thought it contained a considerable quantity of fluid, and if an aperture were made, the swelling would subside; but, upon the part being punctured, no evacuation took place, and the tumour preserved its elasticity. By the introduction of the probe I discovered that the bone was rough in some parts and denuded in its whole extent. I brought the lips of the orifice together, which healed by the first dressing, and sent him to the hospital. The surgeons were positive that the swelling did contain fluid, an opening was made into it, but not any thing fluid escaped. This case is mentioned, as a caution to practitioners, to be guarded in their prognostic, when they make openings into such tumours.

As we are on the subject of diseased bones, it may not be improper to mention, that I have, in cases of abscess, formed in the course of the tibia, let out the matter, at a distance from the bone, by pressing the tumour on one side, and then puncturing it: on the introduction of the probe, in such instances, the bone has been found rough and denuded. Simple dressings were applied, and over them a compress of linen pressed out of the saturnine lotion, and the cure was effected without exfoliation.

In a case of a venereal node, which a gentleman had on the shin-bone, this treatment happily succeeded, with a proper mercurial course; and this patient also recovered without exfoliation.

If absorption of the fluid or matter does not take place, the tumour had better be punctured, to preserve the skin and prevent the occurrence of sloughing.

In a compound oblique fracture of the tibia, the lower portion was drawn under

the upper, the pointed extremity of which projected; a fungus arose, which covered the bone and the space of an inch surrounding it: I introduced a layer of lint between it and the integuments, and then covered the surface with the same: the extremity of the bone was absorbed, and the patient was cured without exfoliation; the fungus shrunk up, and the sore healed by bandage and simple dressing. I regretted at first not having removed the end of the bone at the time of the accident; but, from the pleasing termination of this case, I am happy in having acted otherwise.

I lately amputated above the knee, under circumstances little desirable; the patient's health was hardly such as to justify the operation; it was performed at his own request; and the best amends for the anxiety I suffered on his account are that he recovered.

On my first dressing, although muscles and integuments were amply saved, I observed the parts to be flabby yet still in

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contact, they yielded abundant serous discharge, the soft parts investing the bone, I anticipated would not keep their situation, I therefore confined them by more slips of adhesive plaister, and directed bark and wine with a more nourishing diet.

The patient was afterwards seized with hysteria, which prevented him from taking sufficient food: the integuments and muscles retracted, and the bone protruded about an inch and a half. The success of the former case taught me not to be too busy with the exuberant granulation, which afterwards covered the bone; but the circumstance of having saved integuments sufficiently, and knowing I could recover them by proper attention, and the use of adhesive plaister, afforded me a little comfort. The end of the bone was absorbed, at least it never exfoliated, and the patient recovered with a well-formed stump. I am persuaded, that, if the fungus had been destroyed in either case, exfoliation must have unavoidably taken place.

I was many years ago present at an amputation above the knee, in a case of white-swelling; in which, the knife, in making the second circular incision through the muscles, had nearly divided the bone, so exceedingly soft was its texture. This circumstance induced the surgeon to detach the muscles further up, and saw the bone higher: the same occurrence happened; the knife was again let into the bone, and the removal of the limb was finished by the saw. No exfoliation took place, and the operator obtained the credit of having made a most excellent stump.

SECTION II.

ANCHYLOSIS.

PATIENTS, when the articulating surfaces of the bones are affected, have often been encouraged by practitioners to hope that the complaint may terminate in ankylosis, but this unfortunately is a very infrequent occurrence, and cannot reasonably be expected whilst the disease is suffered to proceed. Ankylosis is a process of health, and as such cannot be expected to occur until the progress of the complaint in the bone has been arrested. I shall not attempt to determine whether the reason I have already assigned will account for the infrequency of ankylosis in this disorder; yet, as a proof how seldom it does occur, I assert, that I have neither seen before, nor since my first publication, more than four cases of the knee, and one of the elbow, ankylosed by ossific union.

It is rather extraordinary that foreign surgeons should have regarded this salutary effort of nature in the light of morbid affection; it is therefore, as they have so considered the subject, not to be wondered at, that a variety of liniments, the use of warm-baths, fomentations, and exercise of the limb, should have been recommended.

Indeed it is curious that we should find, especially in the French authors, ankylosis treated distinctly from the cause which produced it: for, as far as a considerable share of experience entitles me to give a practical opinion, with respect to ankylosis of joints, I can affirm, with the strictest truth, that it should always be considered as the effect of disease.

Many objections to keeping the joint in a state of rest have often been urged by the patients or their friends, from an apprehension that the joint would become rigid, but I have hitherto never found rest produce such an effect. In every case under my care, of white-swelling of the knee, the

limb has been kept extended, in some instances for many months; and, in a few cases, two, three, or four years, yet the joints have never been rendered rigid or their motion impaired. It appears to me, that joints becoming rigid is rather a consequence of disease than arising from a position of the limb; and I am confirmed in this, by having seen several joints rendered rigid by the disease, completely set at liberty, merely by the effects of a purulent drain derived from the integuments surrounding the diseased joint.

On the subject of rest I have read M. DAVID's Prize Dissertation, translated by JUSTAMOND; it proves the efficacy of absolute quietude, but it also shews the miserable want of appropriate surgery. Whoever will give the work a perusal will probably think with me, that some lives were sacrificed; and I am sure considerable suffering on the part of the patient, in many cases might have been prevented by suitable remedies. Other instances of knees ankylosed by a conjunction of soft parts, have also occurred

to my notice; which joints, though incapable of flexion, yet admitted a degree of motion, just enough to prove, that ossific matter had not produced the union. Fortunately for these patients, the leg and thigh had been kept, during the cure in an extended state. Perfect quietude of the limb is requisite for the recovery of a diseased joint, but more particularly, if the part should be in a disposition to anchylose. If the disease is in the knee, too great attention cannot then be paid to keep the leg extended; if it be in the elbow joint, that the arm be kept bent; for inattention to a proper position of the limb has often rendered it useless, though the complaint has been cured.

So indispensably necessary is rest, in the cure of diseased joints, that when called upon to see, with others, a white-swelling, I have entreated them to forbear giving the limb any exercise, intimating at the same time, that the best means to avoid a stiff joint, is to cure the complaint, and to pre-

vent the occurrence of inflammation and its consequence.

A medical student has this summer seen a patient of mine at Sunderland, whom, above a year ago, I recommended to the sea, having previously established a large and permanent issue on each side of the knee. This gentleman's joint, I considered, from the inflammatory violence of the disease, would have continued rigid so long as he lived; but I was agreeably surprised, when it was communicated to me, that he had recovered the use of the joint, nearly as perfectly as the other, and that it is also reduced to its natural size.

I have experienced similar instances of such good fortune, but the one just recited, from all the circumstances attending the case, really astonished me. This instance, and others I have seen in the course of my practice, go a considerable way to establish the opinion I have before advanced as probable, that anchylosis is rather the effect of disease, than arising from the circumstance of po-

sition, or of the limb remaining at rest for a great length of time.

Had the knee been kept bent, a circumstance arises from such a position of the limb, which does not occur in the extended attitude, and which is, that the muscles become shortened; and by this means the difficulty of recovering the power of extension is rendered greater.

The distinction, which BOYER, in his lectures on the bones, has thought proper to make, with respect to anchylosis, is very singular and irreconcilable with our notions on the subject; for he distinguishes it into dry and suppurating; but the latter, he says, is a symptom of white-swelling. This writer observes, that " anchylosis is seldom " a primary disease, it almost always succeeds another complaint." The directions to place the limb in that position, which will render it, on recovery, the most useful, should be obeyed under every circumstance, whether joints are likely to become anchylosed by accident or disease.

The elbow and finger joints should be kept bent, while the knee should be preserved in a straight line.

When the finger-joints are diseased, and the ends of the bones are heard to grate, it is a proof that their cartilaginous surfaces are absorbed: I have known them to have been renewed, at least the part has recovered, without any of its motion being impaired. In the larger joints I have seen only one instance of recovery, and that was in a case of disease of the knee; the bones could distinctly be heard to grate, consequently the ends of the bones must have been deprived of their cartilaginous covering. On moving the patella, in two or three instances, a grating noise could be heard, yet no anchylosis in any case took place, but something like cartilage was probably restored, as no grating sensation was, on the recovery of the patient, any longer perceptible.

If the complaint has proceeded so far as to erode the articulating surfaces of the

bones, it has been generally thought that, if the disease was cured, ankylosis must inevitably ensue; but cases of diseased knees, where the bones on being moved were evidently found to grate, have been cured without being ankylosed, and the grating sensation has ceased to be discoverable. These instances would lead us to conclude, that, if surgical attention can succeed in checking the farther progress of the disease, the joint will recover its action, and be rendered rigid or ankylosed in proportion to the extent of the disordered state of the parts that previously existed.

Patients are very frequently, in this disorder, troubled with spasms of the affected limb; and, in the case of white-swelling, it has been conceived, that these spasms have induced the patient to bend the joint, and to keep it in that situation, in order to procure ease. It has been ascertained, that the spasms attending a broken leg or thigh are much diminished in their violence by a relaxed position of the limb; but the consequence of allowing patients a similar indul-

gence in this disease, will occasion such a contracted state of the joint as ultimately to render it almost useless. Indeed an attention to this point is highly necessary, as the spasms may be lessened by opium and the application of leeches to the joint, and they will entirely subside as the disease advances towards a cure. The emaciation of the limb, which frequently attends this disease, has been considered as an unfavourable circumstance, and it is to be remarked, that if the complaint has not been of any long continuance, the limb will often regain its natural size, not otherwise; for though it may recover a degree of plumpness, it will never arrive to the bulk of the healthy limb. Nevertheless instances of recovery have occurred with a very useful limb, after a tedious and long suppuration, though it has continued in a reduced size as long as the patient lived.

SECTION III.

ON WHITE SWELLINGS OF THE JOINTS.

MR. BENJAMIN BELL presents a melancholy statement, when he asserts, that after the disease is completely formed, it may, in almost every instance, be considered as incurable. This may be the case in Scotland, but we are much more fortunate in our practice here, and as no notice has been taken by Mr. BELL of the remedies adopted by us in England for the relief of those afflicted with white-swelling, it is reasonable enough to account for the result of the practice with us, and in the north, being so very contrary, by the circumstance of the difference of our curative means from those employed by our neighbours.

Although it is impossible to ascertain the precise state of the parts connected with

the disease called white-swelling, yet to the afflicted with this complaint, it may be no small comfort to be informed, that the mode of treatment is not attended with the perplexity which persons might expect in instances of disease, the precise nature of which is not accurately known.

For, if the malady originates within the bone, in its progress the cavity of the joint becomes concerned; that affected, the parts exterior to it suffer. In this instance of white-swelling the bones are carious, and the affections of the other parts are the consequence of their diseased state. In those instances of this malady, in which the ligaments become first affected, the bones suffer in the progress of the complaint in a secondary manner, by abrasion of their surfaces, as I have stated; and their structure is not otherwise changed.

In the white-swelling of the knee and elbow-joints, the thigh-bone and humerus are much more diseased than the bones to

which they are connected, so much so in the knee case, that I have, from viewing the tibia, after death, or amputation, found so little disease about it, that I imagined it was brought only into a morbid state by its connexion with the joint.

I deemed it right to mark the distinction ; yet while the disease is attached to the person of the patient, I cannot assist the reader in discriminating between the one and the other species.

The few opportunities I have had of examining diseased joints, after death or amputation, certainly did lead me to conclude, that the ends of the bones, connected with the diseased joint, suffer in the like manner with the bodies of the vertebræ, when they are attacked by scrofulous caries ; and this conception of the complaint induced me to hope, that a mode of treatment similar to that which Mr. POTT, so happily for mankind, recommended in curvature of the spine, would prove an effectual relief for this species of white-swelling.

After the progress of the disease is arrested, much time is required before the parts can assume a state of health; and when they have arrived at this state, before the articulation can become useful and strong, a considerable time must also elapse.

Two knee joints I removed contrary to my declared opinion, but was over prevailed, by the solicitations of the patients and their friends, to perform the operation. The recovering condition of the joint, as appeared on examining the diseased parts, has caused me greatly to regret my too easy acquiescence with the desire of the patients, and has produced an unchangeable resolution in my mind, never again to amputate but in those cases in which the life of the patient imperiously calls for the operation.

The condyles of the thigh bone in each case were softened in their texture; that of the tibia was of its natural firmness, though the articulating surfaces of both bones were deprived of their cartilaginous covering, and were ankylosed by ossific union.

It must be obvious to every surgeon, from the history of these cases, what a length of time must be required to effect the necessary changes from a diseased to a healthy state, and for the removal of parts by absorption, which are not only useless, but, until taken away by the absorbents, retard the recovery of the patient, either by ossific union or a renewal of their cartilaginous surfaces.

I have considerable objection to this gentleman's adoption of the term rheumatic white-swelling; and, although I agree with him that there are two varieties of the complaint, yet I cannot assent to the statement, that one arises from rheumatism, and the other from scrofula.

Rheumatism has nothing to do with it; and I should the less object to the term rheumatic white-swelling were it intended to convey a distinction only, but it goes further, as it creates a confusion which may prevent the patient's thinking seriously of the imminent danger likely to follow from

an active inflammation attacking a large joint.

The terms I have thought proper to adopt, in lieu of those used by Mr. BELL, are acute and chronic white-swelling.

I have seen the varieties, mentioned by that author, in patients who have evinced other signs of a scrofulous habit than the disease in the joint, therefore it would be erroneous to say the one was scrofulous and the other not.

It is impossible for me to ascertain the reason why Mr. BELL chuses to insist upon the term rheumatic white-swelling, but, in justice to this gentleman, I ought to notice that other authors* have adopted the like terms. My researches have led me to this conclusion, that in almost every instance of the complaint, which has fallen under my consideration, the patients have not manifested any thing like a rheumatic dis-

* Boyer on Diseases of the Bones, and Cooper in his Systematic Surgery.

position. This author is extremely just in making the discrimination he has done between the two species, and the call for more active exertions in the one instance than in the other; and this distinction meets with my fullest concurrence, as respects the propriety of the treatment.

But I cannot agree with him when he says, that in the one, namely, the rheumatic, we may frequently accomplish a cure; while in the other, the scrofulous, no material advantage is to be looked for from any remedy with which we are acquainted.

Were I to choose between the two species of the disease, with the view of performing a cure, I would select what I have denominated the chronic white-swelling, persuaded that the more time will be given to treat the complaint judiciously, while the other demands the most prompt and active measures for its relief. In the acute white-swelling the consequences which regard the health are more immediate and serious, as the acute more rapidly advances

to the suppurative stage of the disorder. In this we must first employ such remedies as have a tendency to lower the constitutional stimulus excited by the disease, before we can expect the complaint to yield to local measures.

I do not mean to say that constitutional treatment is generally required in the majority of cases, but I have taken blood at one time from the arm to the quantity of 420z. before ease was obtained, or the feverish disposition subdued. This patient had previously, within the space of three or four days, been twice cupped; 120z. of blood were abstracted at each operation; 200z. also were taken from the arm, and a number of leeches were constantly applied to the joint every day. This young gentleman was of a scrofulous habit; he had often, at different times, rheumatic pains flying about him. His father, on seeing the joint, declared that the complaint was not rheumatism, but one which demanded the most serious attention. This gentleman, although a very excellent practical surgeon, did me

the honor of requesting my attendance upon his son. We never saw a case attended with more violent inflammation, a considerable quantity of fluid was effused within the cavity of the joint, but which was absorbed with the aid of one blister, which was allowed to heal up, and no other application than cloths wrung out of the aqua ammoniæ acetatæ applied cold, and removed as frequently as they lost their chill; for so soon as the part became heated a painful state of the joint occurred.

In this patient's case it is strikingly evident, if a very early discrimination of the nature of the disease had not taken place, and the most active treatment been spiritedly persevered in, that either his life or his limb would have been lost; instead of which melancholy termination, very little inconvenience is the result, as there is no other remains of the disease than a want of power completely to straighten the limb, but which is no drawback to the strength of the joint, nor any abridgment of the activity of its motions.

From some extracts from the late Mr. HUNTER's Lectures, in my possession, on the subject of white-swelling, are contained these remarks: " Its beginning and progress
 " is generally similar to other scrofulous
 " cases, stealing upon the part, occasioning
 " stiffness, &c. There is some times fluctuation with pain, but then it is not truly
 " scrofulous; the pain is sometimes scarcely
 " perceivable, at other times considerable.
 " They are of two kinds; one is truly
 " scrofulous; the other, common inflammation, mixed with scrofula; the latter,
 " terminating in adhesion and suppuration."

Here are two species clearly pointed out by this teacher; and although he makes no comment on the propriety of treating these varieties, yet a surgeon must be very deficient who cannot supply that want, after having become acquainted with Mr. HUNTER's notions of the complaint. I do regret that the above are the only observations on the subject of white-swelling contained in the manuscript I possess, yet I feel a pleasure in inserting them into the body of my work, as remarks of much practical utility.

I consider myself as fortunate in having it in my power to produce such testimony that I am not singular in my opinions, and that they are founded on actual observation. With regard to treatment, the antiphlogistic plan must be resorted to according to the degree of painful symptoms, and the effects they produce on the health of the patient.

SECTION IV.

ON THE ADVANTAGES OF LOCAL BLEEDING IN
THE CURE OF WHITE-SWELLING.

I Cannot explain the reason why such contrary opinions should prevail with writers on any subject of surgical disease, except by supposing that some may make their statement from what they think they know, and not from what they have actually seen. This circumstance may, I believe, in some instances be the cause of such variety of sentiment; or, if this be not the case, it is probable that the real state of the patient's health, and of the disease must be a secondary consideration, and be made subservient to some theoretical view of the subject, which the ingenuity of the author may have thought proper to espouse.

A writer* of Dissertations on White-Swelling observes, that “ this complaint is
 “ always dependent upon debility, or lan-
 “ guid and morbid actions.” In another
 place he informs his reader, that the state
 of the patient’s strength will at no time ad-
 mit the loss of one drop of blood, and
 therefore, in proportion to the quantity ab-
 stracted the patient must be weakened.

“ The pathology of the pain,” says the
 same author, “ is just the very reverse of
 “ what has been supposed; it is the off-
 “ spring of passive instead of active inflam-
 “ mation; it is the necessary effect of de-
 “ rangement, debility, and morbid action;
 “ it is not the offspring of active inflamma-
 “ tion, because the deranged and scrofulous
 “ body does not, nor cannot, admit of this
 “ kind of inflammation.

“ Were the pain of white-swelling caused
 “ by active inflammation, it would be most

* Dissertations on White-Swelling of the Joints, and the
 Doctrine of Inflammation, by John Herdman, M. D. Fellow
 of the Royal College of Surgeons of Edinburgh.

“ severe at the very commencement of the
 “ disease when the body is most vigorous,
 “ and before it is worn out with pain and
 “ morbid irritation; but the pain is seldom
 “ the first symptom, at least it is rather a
 “ dull than an acute pain, with a sense of
 “ general languor and weakness in the dis-
 “ eased limb. As the other symptoms in-
 “ crease, however, so also does the pain;
 “ as the body becomes worn out and ema-
 “ ciated, as the force of every function is
 “ diminished, the pain becomes more and
 “ more severe; and it is only the bursting
 “ of abscesses, the removal of distension and
 “ irritation, that brings any relief from this
 “ most acute and grievous pain.”

My own experience of the complaint will
 not allow me to accede to the above con-
 clusions, for, as I have pursued with great
 activity the antiphlogistic treatment, which
 Mr. BELL has recommended, I think I
 must have witnessed its unsalutary ten-
 dency ere now. I spoke of the advantages
 of local blood-letting in my former publica-
 tion, and my subsequent practice has fur-

ther satisfied me of its great utility. We may object to the term rheumatic, but still Mr. BELL is correct as to his notions of there being two varieties of white-swelling, which I have denominated the acute and the chronic. Having noticed the above passages from Dr. HERDMAN's Dissertations, I shall add, that we must entertain very different views of this complaint; and if his are deduced from practical observation, I can only say, that my opportunities of observation have not led me to consider the disease in the same point of view which the Dr. by his writings, has laboured to establish.

With respect to the advantage of local bleeding in the generality of cases of white-swelling, and even of phlebotomy in some instances of the complaint, in which very active inflammation has taken place, I can appeal to many patients who have received the greatest benefit from this mode of treatment. Local bleeding should always be first resorted to, and continued for a length of time, until obvious improvement in the joint takes place by a reduction of the swel-

ling and a releasement from pain. Weeks, nay months have past, with obvious amendment, and nothing else has been done but cupping the joint, the repeated application of leeches, and the continued use of cold saturnine applications.

Mr. COOPER, in his first lines of the Practice of Surgery, has noticed the distinction pointed out by Mr. BELL: he says, “ white-swellings, whether of that description which has been termed rheumatic, or that which is denominated scrofulous, present themselves in practice in two very different stages: in one, there is a degree of acute inflammation about the joint: in the other the affection is merely chronic.” That this complaint is occasionally attended with acute, and with chronic inflammation, is very certain, and in proportion as the complaint partakes of the one or other character it is obvious that the antiphlogistic treatment should be more or less actively employed. In the acute disease of the joint, topical bleeding is insufficient, and bleeding from the system should also be had recourse to.

I am surprised that this writer should entertain an opinion that there exists any such disease as a rheumatic white-swelling: it is well known that in acute rheumatism the joints become swollen, and fluid is effused into their cavity, but still these cases have never been considered or termed white-swellings. In these instances the complaint is not confined to a single joint, but several are affected at the same time, a circumstance which very rarely happens in white-swellings.

The distinction made by Mr. BELL is therefore the more exceptionable, as tending to impress on the minds of students two maladies very different from each other. The observations which my own practice has supplied, confirm the opinion of Mr. HUNTER, that white-swellings of the joints are in fact scrofulous diseases, but that they may be attended with either acute or chronic inflammation. Mr. COOPER and myself estimate the use of the antiphlogistic treatment very differently; he observes, “ topical
“ bleeding and cold saturnine lotions are

“ certainly indicated when acute inflamma-
 “ tion is present, and what is implied by
 “ the antiphlogistic treatment may now be
 “ advantageously employed. I cannot with-
 “ hold my censure from those practitioners,
 “ who lose weeks and months in the adop-
 “ tion of such treatment. The plan is truly
 “ useful as long as the integuments are hot
 “ and tender, and there are symptoms of in-
 “ flammatory fever; but no sooner is this
 “ stage past than such treatment is ridicu-
 “ lously inert, and by preventing the em-
 “ ployment of really efficacious measures,
 “ it may even in some degree be conducive
 “ to the encrease of a most terrible dis-
 “ ease.” I wish to impress on the stu-
 dent’s mind the circumstance that, the in-
 teguments are not originally diseased but
 become affected sympathetically, and that
 only in the more advanced periods of the
 complaint. Even when the patient does ex-
 perience considerable uneasiness within the
 joint, which is greatly aggravated by exer-
 cise, the integuments can still be made to
 slide freely over its surface, and will be found
 not in the least tender to the touch, and of

their natural temperature. I caution the practitioner against drawing his conclusion of the actual condition of the internal cavity of the joint from the state of the parts without, if he should be so unfortunate as thus to make his deduction, I know from my own experience, as well as from that of others, that he will find himself deceived, and his treatment will be deservedly impugned as lamentably inefficient.

Whether this gentleman writes from his own experience or from having witnessed the practice of others, I have enjoyed equal opportunities, and shall be honored by any student or practitioner in surgery calling upon me for a reference to cases in which I have employed the antiphlogistic treatment with great energy, and the best possible success.

Since the publication of my *Practical Observations on Diseases of the Joints*, I have had abundant reason to conclude, from the successful termination of several cases, which have since been placed under my

care, that so far from having persevered too much or too long in their treatment by cupping and applying leeches frequently to the joint, that I censure myself for not having employed local bleeding, in the cases which I had previously published, to the same extent and with the same energy which is now my invariable practice.

It is of the highest importance that the integuments, covering a diseased joint, be preserved in as healthy a state as possible, but to wait until they become inflamed and painful to the touch, is an act of unpardonable supineness. To remove the disease within the articulation, and to prevent the external parts becoming affected, cannot be more certainly accomplished by any means, than by the abstraction of blood by the means of cupping and leeches, together with the application of cold washes; and when the patient has derived all the benefit obtainable from these methods, a purulent drain may be afterwards established with greater expectation of recovery.

If Mr. COOPER means by really efficacious measures, the application of blistering plasters, and dressing the surface, after the cuticle is removed, with the savine cerate, or establishing caustic issues on each side of the diseased joint, I congratulate myself as having been the means of ascertaining the salutary effect of this treatment, and of having communicated the result of my practice to the profession.

We ought to have in view two objects in recommending local bleeding for the relief of this complaint: the one is, to remove the inflammation existing within the articulation; the other, to prevent the baneful effects of inflammatory attacks which may invade the external coverings of the joint in the progress of the disease. In my former publication are the following remarks on the efficacy of local bleeding:

The advantages of local bleeding, as a means of relief in this complaint, merit our attention, though it has not appeared of any service, except in cases attended with pain:

in these, it is proper, that the part should be bled largely and repeatedly, until the patient's sufferings are somewhat mitigated. It has not appeared to me, that this treatment alone has ever entirely removed the pain, much less cured the disease. In one case, indeed, where no other means were adopted, the patient became easier for a short time, but in a few weeks the pain returned with its former severity, and the progress of the complaint seemed to have received only a temporary check.

I have however witnessed the efficacy of local bleeding, in cases of violent pain within a joint, unattended with swelling. All the patients thus affected were of a scrofulous habit. In addition to this treatment, the perspiration of the part was kept up by fomentations and poultices; the patients were confined to bed, the state of their bowels attended to, and antimonial preparations, assisted by a quantity of opium, proportioned to the degree of pain and age of the patients, were administered in the evening. I have known this method of

treatment completely succeed in removing an incipient complaint, which, if suffered to proceed, would most probably have terminated in white-swelling.

I may warrantably presume, that when these opinions were imparted to the public, they were founded on practical observation, but impressed, as my mind must have been at the time, with the superior efficacy of drains, it is not surprising, that I did not ascertain to what extent local bleeding would have been beneficial.

Were cases, exactly similar to those I have published, now to come under my care, I am satisfied, that abstraction of blood from the part would be pursued with greater vigour. Experience, and not theory, has led me to follow up the antiphlogistic plan as long as any benefit can be received by this mode of treatment.

When I have employed irritating means, without previous or sufficient local bleeding, my mistake has become too obvious; for I

have been obliged, in consequence of the pain, which has existed within the joint, to heal the blistered surface, and proceed in the cure precisely after the manner which I have just recommended.

In a conference I had with Mr. ABERNETHY some years since, he informed me, that he inculcated in his lectures the doctrine of not resorting to the use of irritants, until the antiphlogistic treatment had been fairly tried. In justice to this excellent teacher, it is but right to acknowledge, that this conversation led me to employ local bleeding more energetically, the advantage of which practice has been conspicuously useful; for, since adopting it, I have not, when I considered it a proper time to establish a permanent drain, met with the interruption I before experienced from subsequent attacks of inflammation.

It is obvious, that leeches must be used in those cases, in which, from the swelling of the joint, the integuments are in a state of tension, and that they are also to be pre-

ferred when the skin is inflamed. These are the only circumstances, under which this mode of drawing blood is preferable to another, for the benefit to the patient has been always in proportion to the quantity of blood removed, and has not been at all influenced by the manner of its removal.

To avoid repetition of cases, so nearly resembling each other, I shall only announce the recovery of a very bad diseased knee, and as its appearance was novel, it might be worthy of the reader's attention. The tibia was unaffected, but the end of the thigh bone, which articulated with it, although the case has been long cured, remains much reduced in its size, and manifests no appearance of condyles.

It is an admirable instance of the efficacy of purulent drain, which was maintained by blistering the part, and the application of the savine cerate. This patient was scrophulous, but she received considerable relief from repeatedly applying several leeches, previously to the application of the blister,

and which were also often required to allay occasional irritation, which manifested itself during the maintenance of the discharge.

I lately took Mr. LAWRENCE to see a knee-joint, which had remained under my treatment for four years; the patient has recovered, but with a stiff joint occasioned by ossific union. I had more interruption in the management of this complaint than usual, for repeated attacks of inflammation occurred during my attendance, to relieve which, the patient, a female, was occasionally cupped, in the whole ten times, and twelve ounces of blood were abstracted at each operation, besides the application of four hundred leeches, most of which were repeatedly made use of. As soon as I thought the diseased part was brought into a quiet state, I blistered the joint, and kept the part discharging, by means of the savine cerate; but in a few days I was obliged to heal the surface, to remove the irritation which was produced: I then directed the repeated application of several leeches, and when the inflammation had subsided, caustic issues the size of

a crown-piece were established on each side of the knee by the application of the paste caustic.

I have just completed another cure of a diseased knee, which had been bad above twelve months, and by a surgeon was supposed to be rheumatic gout. This young person was of a scrophulous habit, having had a strumous gland on one of her breasts, which dispersed, and was by a female empiric said to have been cancerous. The ease and reduction of the swelling of the joint, which were obtained by the means of cupping and leeching, were very remarkable. A blister was afterwards applied on each side, and the surface kept open by a dressing of the ceratum sabinæ for about three months, during which period half a dozen leeches were frequently employed. However highly I may think of artificial discharges in the cure of diseased joints, yet I cannot too strongly recommend the adoption first of the antiphlogistic treatment and cold evaporating washes to the part, so long as any benefit seems to be derived from

their use. I ought to state that this young lady's health received considerable improvement during the cure. Since writing the above, I felt a very strong inclination, which was enforced by a sense of public duty, to pay a visit, where it was possible, to such persons whose cases were published in a former edition.

A case recorded by me as of a joint cured, and only left increased in size by the expansion of the ends of the thigh bone, turns out, on an examination which took place this day,* to be the very reverse, for it is smaller than the other, across the condyles, above an inch. This patient was treated by caustic issues, and I shuddered at the risk to which I had exposed the patient, for the eschars were situated on each side of the joint, so that their extent equally embraced the tibia as the femur. The integuments covering the inner condyle had precisely that appearance we observe in ill-performed amputations, in which a renewal of skin becomes the only covering of the

* October 25, 1807.

projected bone. I might in this instance have indulged myself with a little theory, and imagined that during the continuance of the complaint the natural progress of growth in a child might, in a diseased joint, be impeded, but admitting this remark to have due weight, still nothing else than the disease in the bone could account for its altered figure. I confess that outward examination led me first to the conclusion, that the ends of the bones were expanded, but the result of this case has satisfied me that I must have adopted this opinion in consequence of the deceitful feel communicated through the diseased external covering of the joint.

Hence it may fairly be inferred, that the diseased and thickened condition of the parts, situated externally to the joint, was a sufficient protection to secure it against any possible injury which the application of the kali purum might otherwise have effected.

I am inclined, from having inspected

other joints, which I, in my former publication on this subject, reported as having left rather enlarged in consequence of, as I imagined, a tumefied state of the bones, to believe I must have been mistaken, as they do not appear in the least increased in their size; and the efforts of nature, it is clearly ascertained, will be of itself sufficient to remove any slight thickening of parts which might remain after the disease has been considered as cured.

SECTION IV.

ON THE SUPPURATIVE STAGE OF WHITE-SWELLING.

SUPPURATION occurring in white-swelling, if confined to the parts exterior to the cavity of the joint, now and then affords relief, arrests the progress of the disease, and in some instances effects a cure. I wish I could say that this mode of termination was the general consequence of suppuration, but the reverse is almost always the case: for, when the disease is approaching to this state, the patient's health begins to suffer, and the degree of danger is rendered more imminent by different abscesses forming, the irritation and discharge of which, independently of the mischief that is occasioned to the integuments and other parts of the joint by extensive ulceration, has

sometimes rendered it necessary that the patient should submit to amputation.

I have taken every opportunity to inform myself as to the propriety of opening the different abscesses which occur in this disease, and am satisfied that this practice, so far from being productive of advantage, has greatly increased the inflammation, and extended the sloughing of the soft parts; in some instances it has even produced ulcers of the phagedænick kind, whilst in others, diseased fungi have sprung up.

Dilatation of the openings, spontaneously formed, has been recommended with a view to expose caries, and facilitate the exfoliation of the diseased bone; but should the introduction of a probe into any of these sores discover the bone to be affected, it has seemed good practice, under such circumstances, to forbear the use of the caustic or knife, and not, as Mr. BROMFIELD has directed, to enlarge them; as he himself says, the carious part will crumble away insensibly, and be discharged with the matter.

When ulcers have been produced of the ill-conditioned kind, just mentioned, there has excited for a length of time a morbid state of the soft parts, and that to a greater extent than often could be expected from the appearance of the skin.

Even where ulceration has happened in an early stage of white-swelling, though the sores are certainly not of that malignant nature just described, yet from their number (for as soon as one heals another breaks out) they will constitute a more extensive disease of the integuments than may have been imagined, and the circumstance of the cellular membrane being destroyed will render the healing of them very difficult; they sometimes indeed do heal, but then they generally break out again, or fresh ulcerations are formed in parts contiguous to the former.

Practice, and not hypothesis, inclines me to condemn the dilatation of the sores which are produced in this complaint; for till I was satisfied of the inconvenience which

which occurs from the use of the knife, I was in the habit of laying them open. I can mention more than one or two cases, in which fungus arose after extensive openings which had been made; and the same effect I have known to occur in abscesses, which have burst, with a considerable sloughing of the skin.

Extensive inflammation has also followed the use of the knife, under the above-mentioned circumstances, and from some cases, I shall select the following instance of the ill effects of such operation. A patient had a white-swelling of the knee in which a number of collections of matter had formed, but as it was confined, and the different abscesses were found by the probe to communicate with each other, there were hopes that, by dilating the most dependent to an extent of not more than half an inch, I should be able to effect a complete discharge of the matter. This was accordingly done, and on seeing the patient the day following I found him very feverish; he complained of violent pain over the whole knee,

and within the joint, which was prodigiously enlarged by the inflammation which had supervened. The irritation and the great discharge, during only a few days, had so reduced him, that amputation was proposed as the only means of saving his life, to which he would not submit, and within three weeks he died hectic.

It would seem that the opening alone occasioned these evils, by inducing irritation on parts in a state of disease, and thereby augmenting rather than alleviating the disorder.

Patients do not sometimes apply for surgical relief till suppuration has advanced; and then it is generally encouraged by the application of warm fomentations and poultices, from a notion, as I suppose, that it is improbable that discussion can be obtained under such circumstance. But I have repeatedly succeeded in effecting the absorption of a fluid, which I had previously ascertained to be pus, from every attending circumstance, such as the appearance of the

skin, the degree of pain endured, and particularly when the part was examined, together with the general state of the patient's health.

Though the complaint has sometimes been cured by the occurrence of abscess in parts exterior to the joint, yet the situation of such patients has been rendered very hazardous, for it is great good fortune if they are not destroyed by the irritation and drain of these sores, and I have seen the removal of the limb become a necessary consequence of such external abscesses.

White-swellings occasionally recovering after the suppurative stage of the disorder, is an occurrence which has often given credit to remedies of no real utility. For if the patient should possess strength sufficient to support him under the discharge, the last application as well as the last practitioner who attended, will appear to have the merit of curing the disease, the patient not being apprized that this is sometimes ef-

fectured by the spontaneous formation of an abscess.

No surgeon, possessing humanity or judgment in his profession, would, in a case of curvature of spine, arising from a diseased state of the vertebræ, recommend his patient to wait for the appearance of lumbar abscess, because, perhaps in one instance a cure has supervened, but would immediately advise the caustics, from a conviction that it is almost a certainty that even if such abscess should take place his patient would be drained to death, in consequence of the great and long continued discharge.

And though it has been observed that where suppuration has taken place, and an external abscess been formed, in the early stage of white-swelling, a final cure has occasionally followed; it should nevertheless be remembered, that this abscess had no connexion with the cavity of the joint, for if it had, the chance of the patient's recovery would have been extremely precarious; and where it happens that the com-

plaint has proceeded so far as thoroughly to disorder every part connected with the joint, even in that case the formation of abscess becomes an unfortunate occurrence, as tending to increase the complaint and exhaust the patient.

Should it be deemed advisable to remove a limb, under the circumstance of matter being collected in a considerable quantity underneath the integuments, it had better be discharged by puncture a few days before the operation be performed.

I was present at an amputation above knee, in which the operator neglected this caution, and when he made his first incision down to the muscles, he discharged a large quantity of matter, and the appearance of the stump, from the retraction of the integuments, did not promise, what actually turned out to be the case, a speedy recovery.

A gentleman was wounded in a duel; the ball passed through the joint of the knee; an attempt was unfortunately made to save the

limb; however amputation was at last had recourse to, under circumstances exactly similar to the preceding case; the integuments greatly retracted, and the stump, as might be imagined, was very ill-formed.

This case terminated more unsuccessfully, as it was attended with considerable exfoliation. The operation was performed abroad, and I was consulted on the state of the stump on his return to England.

The retraction of the integuments was a very unfortunate occurrence, which might most probably have been prevented had they been relieved of the matter by puncture, and sufficient time allowed the parts to recover themselves. Had this treatment been adopted, I think it pretty certain that the patients would have been more largely indebted to their respective surgeons for their cure.

The efficacy of artificial purulent discharges, in cases of diseased joints, in which matter had formed, has been fully exempli-

fied by the cases which I have already published; my practice since would have enabled me to add to them, but a higher gratification is reserved for me by the insertion of the practical remarks conveyed to me by Mr. WARD in the subsequent letter. This gentleman, although a stranger, has laid me under a lasting obligation, and has reflected the highest honor upon himself, as taking an interest in the welfare of mankind, by communicating his opinions to me. Had his example been generally followed by other professional men, it might not have called from me such marked approbation of that sense of public duty, with which, I am sure, his mind must have been impressed when he honored me with his correspondence.

SIR,

Since the publication of your Treatise on White-Swellings, I have tried the plan of treatment there recommended, in the Manchester Infirmary, in cases which could not otherwise have been benefited, and with the best effects: I therefore think

it incumbent on me to inform you of the success which has accompanied the practice, in several cases of white-swelling of the knee and elbow joints, where the ends of the bones were enlarged, a fluctuation of matter was very evident, and the least motion of the limb was attended with considerable pain.

The amendment in the general health of the patients, during the continuance of the discharge, was very remarkable, and I am confident I have in this way saved limbs, which must otherwise have been amputated.

I am, Sir,

Your very humble Servant,

M. WARD.

Manchester, Aug. 8, 1799.

SECTION VI.

ON THE TREATMENT OF FUNGOUS EXCRESCENCES IN WHITE-SWELLINGS OF THE JOINTS.

WISEMAN has succeeded in the cure of several diseased joints, and he has also failed in the treatment of others, but from an impartial perusal of the history he gives of his patients, it might fairly be imagined that his failure was not a little attributable to the unwarrantable and shocking practice of his time of applying the actual cautery to the internal cavity of a large joint. When the Serjeant speaks of his patients dying tabid, it is a matter of surprise that such a circumstance did take place, and that it was not prevented by the intervention of locked jaw and tetanus. We will now take a view of his successful cases; in these we shall find that the complaint did not afford him an opportunity of using the same treatment to

the like extent, for the external openings did not communicate with the joint. The ultimate success, attending his application of caustic to the different collections of matter, which formed under the integuments, cannot be doubted, if we only advert to the success attendant on caustic issues, although it be true that WISEMAN made his eschar on diseased parts, whereas, modern surgery makes choice of sound integuments for the application of the caustic.

My determined opposition to opening collections of matter, formed externally to a diseased joint, has in many cases been productive of benefit, for it has frequently been absorbed entirely, and in all other instances considerably discussed. This resolution I am convinced has saved my reputation a few times, when, had I been busy with knives or caustics, it would have occasionally suffered; for I confess having seen some cases, which from examination, the violent throbbing pain in the part, the inflamed state of the skin, together with the feverish condition of the patient, left no doubt in my

mind but that matter had formed. I made a very small puncture in a part where I thought fluctuation was most perceptible, after which not any thing escaped but a drop or two of blood. In these cases the integuments are unequally distended, which in different parts are at length removed by absorption, and large fungi thrust up in their place. WISEMAN has very candidly advised that the practitioner should in such cases be wary in his prognostic. I imagined that the absorbents had removed the integuments, because had they not been so disposed of, I must have observed that they sloughed. I have under my care at this time two cases of the kind—they are of the ankle joint—one of which I shewed to Mr. LAWRENCE, for whose judgment I have a very high respect, and it pleased me that he concurred in my opinion, with respect to these fungous exuberances. I am inclined to believe, from the improving state of these joints, that no attempt for their reduction should be made; and, from what I have observed, it is not improbable that they will subside altogether as the disease advances towards a cure. In caries we have already spoken of

the use which these granulating excesses seem to possess; and so important do I think the result of the cases now detailed, in determining whether these fungi should be regarded as healthy processes for the removal of diseased bone by absorption; or whether we are in future to view them in the light of diseased appearances, as they have hitherto been considered, that I shall state to the profession, through the channel of some periodical publication, the successful or unsuccessful termination of them. I lately met with some MSS. of the late Mr. ELSE's, on diseases of bones, in which, in pursuance of old authority, he directs the fungous excrescences to be removed ere we can expect exfoliation to take place. The former of these ankle cases I had the other day [Oct. 27] an opportunity of enquiring after, it was six months since I quitted my attendance on this patient, and although obliged to me for my great attention, and stating that no alteration in my mode of treatment had taken place for some months, it was wished that I should give way to another's treatment, and a magnetic doctress was chosen as my successor. I found

to my great satisfaction that the integuments were healed, and the fungus subsided, without the use of escharotics, or the knife, and no exfoliation had occurred; this joint also is smaller than the other, and the malleolar end of the tibia is evidently flattened. Had the dressings been a little varied from time to time, the patient's friends would, I am persuaded, have been more contented; and I do not know, as emolument was no part of my consideration in my attendance on this patient, whether I should not have been justified in such deception. The joint is weak, but he is able to stand more flat on the foot, and bear more weight. This doctress deserves this commendation, that her applications, like mine, if they did no good, were capable of no harm.

The circumstance of its having occurred to me so very lately, that I might receive some additional information in point of practice, by calling on some of my former patients, will, I hope, be accepted as an apology for these remarks not appearing in their proper place.

It is true that in this case these fungi disappeared without the application of caustic or the use of the knife, and I am inclined to coincide in the opinion entertained by Mr. ABERNETHY, in his account of fungi of the dura mater. After the tumour is exposed by the removal of the cranium which covers it, he observes, “ Although the destruction of the fungus might be proper for the sake of expedition, and it can perhaps be attended with no harm by whatever means effected, yet it may not be necessary. Like other animal fungi it will cease to grow, and soon disappear, when the irritation which occasioned it has been removed.”* It was this sentence which excited my attention, there being so much sound practical information conveyed in a very few words, and which may be applicable to all cases of fungous excrescences attended with carious bone ; but the removal of the bone in fungi of the dura mater becomes necessary from the peculiar situation of the disease.

* Essay on Injuries of the Head, p. 85.

SECTION VII.

ON THE EFFICACY OF COLD APPLICATIONS,
WITH BRIEF REMARKS ON OTHER REMEDIES.

PRESUMING it unnecessary, it is therefore deemed improper, to occupy much of the reader's attention, by a minute detail of the applications usually employed for the relief of this disease, especially as they have proved unsuccessful, or from the degree of their efficacy, can, at the most, only be considered as palliatives. The effect of cold, in suspending the progress of ulceration in the spina ventosa, was noticed by RHASIS. Cold applications of the aqua lithargyri acetati composita, or sal ammoniac, during its solution in vinegar and water, though possessing no curative power, have had their use by checking inflammation, and thereby retarding the progress of the complaint towards suppuration, and conse-

quently preserving the integuments for a longer time in a healthy state. These applications besides have sometimes effected a slight reduction of the swelling of the joint, by promoting absorption of some of the fluid collected under the integuments; yet this is but a superficial advantage, for this fluid will be re-produced, whilst the progress of the disease, within the articulation, is unimpeded.

The ease and benefit which the patient always expresses as having obtained by the constant use and renewal of cold applications to the joint, would, we should think, preclude the surgeon from recommending heated applications: I have witnessed their effects, as directed by other practitioners as well as being adopted by the suggestion of the patient's friends. I cannot regard them as harmless, in my opinion they have become mischievous by encouraging suppuration, and diseasing the integuments, which it should be the surgeon's most anxious care to preserve entire and unaffected. We shall further notice the effect of heat when we

speak of hip-affection, which is a complaint analogous to our present subject.

The application, usually termed white-wash at the hospital, is an exceptionable formula for a saturnine lotion, for the skin as well as the cloths moistened with the same, early become coated with the lead which is always precipitated, if hard water be used instead of that which has been distilled. Although the pharmacopeia of the Royal College of Physicians of London, and those of different hospitals, have directed the latter to be used, economy may have been the reason why common water has, in hospital practice, been so generally substituted.

I am in the habit of using the following form as one not liable to the above-mentioned objection.

Rx. Cerussæ Acetatæ ʒi.
Aceti distillati ʒij.
Aquæ distillatæ ʒxiv.
Misce pro lotionē.

Mr. ABERNETHY, I am told, recommends

tincture of opium considerably diluted with water; in short, water alone is preferable to the application we have been objecting to: a clean and not expensive epithem for the poor, is one third of distilled vinegar to two of water.

ON MERCURY, SEA AIR, AND BATHING.

MERCURY was resorted to by HEISTER in complaints of this nature, from a notion that they arose from a venereal taint. Notwithstanding the success he attributes to this medicine, it would appear, from the observations I have been able to make respecting it, or to collect from the experience of others, that there is not the smallest foundation for this opinion; for, surely, if there were any affinity in the nature of the two disorders, the remedy which absolutely cures the one would in some degree have a tendency to relieve the other.

Patients labouring under white-swellings have applied to me on account of venereal complaints, which were entirely removed

by mercury, whilst no effect was produced on the diseased joint, even where the fairest possible opportunity was given, by rubbing it into the affected limb, which consequently exposed the joint completely to its action.

Mercurial friction has indeed in some degree reduced the swelling of a joint, by promoting absorption of fluid collected immediately under the integuments; but, as it had not any power over the disease, which existed within the articulation, the tumefaction returned. This mode of treatment will sometimes succeed in curing that sort of complaint which in appearance resembles the true white-swelling, but the seat of this disease is in the more external parts; it must be seen how widely it differs from that kind of affection which has its origin in a distempered state of the ligaments, or of the articular part of the bone. I have said, that in such cases mercury sometimes succeeds, but it will much oftener fail.

There is such an undecisiveness of cha-

racter attaching to surgical writers, as would induce a stranger to the profession to imagine that some practised in the air, where many, it is said, have erected their castles; for I think, if all practitioners spoke of remedies only from actual experience of their efficacy, it might be expected that we should be a little better agreed.

On the use of mercury in white-swelling I have selected the following observations :

“ In the first stages of the disease this mode
 “ of treatment seldom fails to prove useful;
 “ local blood-letting, when carried to a sufficient length, very commonly relieves the
 “ symptoms induced by inflammation, and
 “ the blisters often remove them entirely.
 “ These remedies however are not to be
 “ trusted in the more advanced stages of
 “ white swelling, nor ought they ever to
 “ be long persisted in when they do not
 “ soon procure relief. In this state of the
 “ disease never depend upon other remedies. Mercury proves here particularly
 “ useful, not given so as to salivate, but
 “ merely to affect the gums gently, and to

“ keep them in that state for a few weeks.
 “ In such circumstances the best method
 “ of using mercury is by external friction;
 “ and the unction should be of such a
 “ strength,” (surely the author must have
 intended weakness,) “ as to admit of being
 “ used in the quantity of two drams three
 “ times a day; for friction, in order to
 “ prove useful, should be frequently re-
 “ peated, and continued for the space of an
 “ hour each application.”*

Although this author speaks very indefinitely as to the quantity of mercury which should be proportioned to the lard, yet it should be remarked, that he has directed its use until it has produced a constitutional effect, and, even slightly as he might wish to manage this mercurial process, my experience has ascertained its want of success; and in some cases I have observed, in which a very gentle course of mercury has been employed, that the patients have been earlier hurried to a hectic state.

* Benjamin Bell's System of Surgery, seventh edit. vol. I,

Sea bathing, or the application of sea water, as local remedies in these cases, have not appeared to me to be attended with success. But the sea air is manifestly useful in improving the patient's health, and by that means supporting him under the excessive drain of a long-continued ulcerated joint; and in this respect I consider it as a very important means of relief.

I have seen cases of diseased joints evidently become worse after a residence of several weeks at a sea-bathing place, although the patient's health has considerably improved. If the cases I allude to were intended to ascertain the full effect, without any other surgical assistance, of sea air and bathing, the object was certainly obtained. Several patients have applied to me on their return home, and I was satisfied that relaxed and debilitated habits were certainly benefited, but the local disease had evidently increased; whereas, in those who possessed strength and health the consequences were such as to hasten the progress of the affec-

tion of the joint to the suppurative stage of the complaint.

I speak from observation, and not as a theorist; and it is hoped, that medical men, who are resident on the sea-coast will not confide in the means, which their situation provides as a remedy for white-swelling, but employ also that treatment which is known to be successful under circumstances in which the patient cannot have the advantages of sea air and bathing.

It will be obvious that, in the cases to which I have more particularly alluded, the antiphlogistic treatment should have been employed; and it is reasonable to believe, that had the patient been so treated, an abscess, which afterwards burst, might have been prevented from forming. The reader is referred to a most useful and excellent written book on scrofula, therein he will find Dr. HAMILTON, the author, treat this part of the subject with much practical knowledge and great candour. I confess my expectation of sea air and bathing has

been considerably lessened from having found so many scroufulously diseased persons natives of sea-bathing towns. For those who are not in possession of Dr. HAMILTON's Treatise, I have extracted the following remarks:

“ I must confess that I have my doubts
 “ as to the sea waters possessing powers in
 “ a superior degree to any other medicine
 “ in the scrofula; nor do I think that it
 “ merits the virtues given it by RUSSEL
 “ and SPEED. My reasons are the follow-
 “ ing, however heterodox they may ap-
 “ pear, but truth is my guide.

“ I have long lived in a sea port town of
 “ great trade, and the haven from the town
 “ to the opposite side is at least half a mile
 “ wide. The distance from the town to
 “ the mouth of the river Ouze (which forms
 “ the haven) where it opens into Lynn
 “ Deeps, an extensive inlet from the Ger-
 “ man Ocean, is about two miles and a
 “ half. A large body of sea water flows

“ from this inlet up the haven, many miles
 “ above the town, twice in twenty-four
 “ hours; and with the tide, we may sup-
 “ pose, a very large share of sea air: and
 “ during the summer months sea bathing
 “ is constantly used, when the time of high
 “ water will admit of it, by men of all de-
 “ descriptions, and many of the boys are
 “ seldom out of the water in the day time,
 “ except at school hours, all summer; yet,
 “ it is no less strange than true, there are
 “ no where more distressed victims to the
 “ scrofula to be met with than at Lynn;
 “ and they are as frequently to be met
 “ with amongst the lower orders of the in-
 “ habitants, who are used to the water
 “ daily, as in other ranks of life whose bu-
 “ siness has no connexion with it. And in
 “ no inland town within my knowledge,
 “ which extends at least thirty miles around
 “ Lynn, did I ever see so bad cases of this
 “ disease as in this town, in a course of
 “ more than forty years practice.

“ The inference to be drawn from these

“ remarks is, that if sea water and sea air
 “ were such specifics, surely the scrofula
 “ would be far less formidable at Lynn than
 “ in any of the inland towns, but it is a
 “ melancholy truth that it is not so; and,
 “ from long observation, I am rather in-
 “ clined to think that it is really more se-
 “ vere and distressing.

“ It may be alledged, that as moisture
 “ will increase the laxity of the fibres it
 “ will augment the symptoms of the dis-
 “ ease in some scrofulous habits, conse-
 “ quently this may be the cause why so
 “ many have it so severely in this place.
 “ Lynn certainly stands very low, so does
 “ every town in a fenny situation in this
 “ neighbourhood. Lynn is surrounded by
 “ marshy grounds, and therefore there must
 “ be a large evaporation from these as well
 “ as from the large body of water in the
 “ haven. The towns in the fens, situated
 “ from S. W. to N. W. of the town of
 “ Lynn, are surrounded by large bodies of
 “ fresh water, by the low fenny grounds

“ being overflowed in the winter, and the
 “ evaporation from thence is prodigious;
 “ and being fresh water, and liable to cor-
 “ ruption from putrid, animal, and vege-
 “ table matters, in this stagnant state, may
 “ be supposed to be more liable to increase
 “ the severity of this disease on that ac-
 “ count. But it does not appear to be so
 “ in fact, at least I have not seen any
 “ number of instances in proof of this;
 “ and Lynn possesses an advantage which
 “ the fenny situations do not; in them the
 “ evaporation becomes always stagnant,
 “ unless in high winds; but at Lynn vapor
 “ cannot be stagnant, but must be put in
 “ motion by the constant flux and reflux
 “ of the tides; and it is well known, that
 “ when the remittent fever becomes epi-
 “ demic in this county, that it always rages
 “ some weeks in the fenny situations of
 “ the above descriptions before it appears
 “ at Lynn, which we may presume is ow-
 “ ing to the salutary effects of the tides in
 “ not only causing a sort of ventilation
 “ through the effluvia, and dispersing part

“ of them into the upper regions of the
 “ atmosphere, but also in washing into
 “ the same some of those putrid matters
 “ which are partly the source of those in-
 “ fectious effluvia.”

SECTION VIII.

ON THE EFFICACY OF ARTIFICIAL DRAINS.

THE earliest records of surgery afford abundant proof of the beneficial consequences resulting from the use of the cautery, moxa, raw flax, and escharotic applications. The reasonings and arguments the earliest writers used* to explain the salutary action of these remedies may appear a little unphilosophical; nevertheless they noticed the very important effect of the power they possessed, in the relief of diseased joints, and in discussing fluids contained within their cavity. FIENUS's work† may certainly be referred to, on account of the mention he makes of the efficacy of

* Ωμόλινον linum crudum. Vide *Æconomia Hippocratis* sub voce.

† Fienus de cauteriis, 1598.

cautery and caustic in other diseases, with some interest and advantage.

Although he uses the latin word *absorbetur*, yet it can only be considered as synonymous, with *exsiccatur* and *consumitur*, but it is clear that they were as completely in possession of the advantages, to be derived from the application of those remedies, as if they had been ever so well acquainted with the absorbent system. This author has well remarked that rubefacients have a power to discuss fluids, but in a less degree than the cautery, and he mentions the latter remedy as superior to caustics in this effect. I cannot take my leave of this author without quoting a practical caution I think worthy of communication in his own words, "*semper periculosus est cauteriorum in calidis affectionibus usus.*"

The great success generally attending the use of caustics in curvatures of the spine, arising from a diseased state of the bodies of the *vertebræ*, induced me to extend the remedy to white-swellings of the joints of

the limbs. Sir JAMES EARLE* acquaints us that “ Mr. POTT used caustics in scrophulous swellings of the knee, where there was suspicion of beginning caries; they were applied just above and below the joint; in some cases they seemed to be materially serviceable, in preventing the increase of the swelling, but in many others they failed. In similar diseases of the joint of the ankle, he also tried them, but according to the observation of a very ingenious and accurate observer† the effect of the caustics seems to be inversely as the distance of the part affected from the trunk; in these joints no advantage appeared to be derived from them.” On reading the above note, I confess at the time to have regarded Dr. AUSTIN’s observation as one which might be anticipated as coming rather from a professed theorist, than a practical surgeon, so dissatisfied was I, at the Doctor’s conclusion, that I embraced the earliest opportunity of applying caustic issues on each side

* Earle’s edition of Pott’s Works, vol. III,

† Dr. Austin.

of a joint. In the year 1793 I published three cases, considerably benefited, but not cured by the application of the caustic. These and many other proofs since of their efficacy have fully confirmed the opinion I then formed, when I said that the failure has been supposed to be owing to the greater distance of the limb from the heart; it may be rather apprehended that in the extremities the application was not made near enough to the seat of disease.

Whether the practitioner apply caustics or blisters, dressing the blistered surface, after the cuticle is removed, with the savine cerate, yet local bleeding should always previously be had recourse to. It is now my practice to blister the sides of the joint, leaving the interspace for the occasional application of leeches which I very generally find necessary during the cure. This mode of treatment is preferable, as it is equally efficacious and less irritating than when I blistered the anterior and lateral surfaces of the joint, for I have by this means experienced less irritation and spasmodic affection.

I have often been obliged, by the occurrence of recent inflammation during the treatment by the savine cerate, an inconvenience to which the remedy by the caustic has also been occasionally subject, to apply leeches to the sore surface. They will, I have found, take hold, and considerably more blood will be abstracted than will follow their application to a sound skin. A patient of mine, an acquaintance of Mr. HEY the surgeon, was relieved of violent suffering from inflammatory attacks, which occasionally occurred during a long attendance, in a case of a very bad diseased knee, and so far advanced was the complaint in this instance, that Dr. MARSHALL intimated his fears, that the gentleman's case might be irrecoverable, and I should gain no credit by my attendance. This patient however got completely well, and has since frequently rode a journey of fifty miles on horseback at one time.

After the disease is cured, it is often a length of time before the patient regains the natural strength and use of the joint.

I determined that my treatment should recommend itself on the ground of its own merit, unaided by the good opinion or recommendation of any of my medical friends.

The present publication affords me an opportunity of returning Dr. MARSHALL my best acknowledgements for the countenance and encouragement I experienced from him in the several cases, which I submitted to his excellent judgment.

Of the customary remedies applied in cases of white-swellings, blisters have had the preference; and their efficacy has by some been supposed to arise from the stimulus, more than from the discharge they produce. Practitioners of this opinion have blistered the whole joint, and suffered the part to heal before another blister was applied; and in this way, they have kept up a constant succession of stimuli.

Others being of opinion that the discharge and not the stimulus produced advantage,

have had recourse to perpetual blisters; and though I never saw any permanent good arise from the first mentioned mode of employing these remedies, yet, in a case of diseased hip, a large perpetual blister placed behind the trochanter, was attended with remarkable success.

Dr. AKENSIDE published a paper in the Medical Transactions, on the efficacy of blisters in cases of white-swelling, in which alterative medicines, as calomel and bark, were given. He states, that he had been able by these means to restore the use of one or other of the principal joints, where the case seemed very near to an anchylosis ; but the Doctor remarks, that nothing can be expected from this treatment, where there is any sensible collection of fluid within the joint. He seems, in the first instance, to have applied a blister round the whole joint, and afterwards to have kept up a discharge from a circumscribed spot over the painful part ; he also lays some stress upon the use of oily frictions, where the motion of the limb was impaired.

His cases, however, were not all scrofulous: I think two of them were so, and in these the discharge was kept up for a considerable length of time.

From the irritation and the strangury occasioned by perpetual blisters, I was first led to apply caustics; the comparative advantages of these two remedies depend in some degree upon circumstances unconnected with partiality in favor of one or the other application. If the integuments are inflamed, or have become thin, and if fluid be collected beneath them, the use of caustics cannot be adopted with safety.

A surgeon was induced to apply the caustic, in a case of a diseased knee, on each side of the joint, where the integuments were thickest; and the eschar was so situated, that its centre covered the space where the femur is applied to the tibia. This situation was attended with danger; for as soon as the eschar, covering the inner condyle, had separated, an opening, hardly capable of admitting the end of the probe,

was found to communicate with the joint, from which the synovia was discharged; and this appearance first led to a discovery of the accident. This patient certainly died earlier in consequence of this unfortunate circumstance, although he would soon have been destroyed by the diseased state of his lungs, which contained a great number of scrofulous tubercles, many of which had suppurated, as appeared upon opening the chest.

I became also acquainted with another instance in which the caustic penetrated an elbow joint, and the patient was obliged to submit to amputation. The calamities, which befel these patients, must surely have excited very painful sensations within the breasts of those practitioners who attended the cases, and it is hoped that their misfortune will operate as a caution to others, and induce them to form the eschar above the condyles of the femur or humerus, which situation will obviate all possibility of including the capsular ligament within the operation of the caustic.

The kali purum was the application used on the occasion just alluded to, but had the calx cum kali puro been employed, I am inclined to think this accident would not have happened: for, certainly, independent of the kali purum being a very powerful caustic, its operation must be accelerated by the friction employed in its use.

Should a preference be given to a caustic issue, it may be kept open by means of the sponge tent. I would by no means recommend the caustic for the purpose of maintaining an artificial drain in any case, in which the integuments are thin, and will not allow of being elevated by the fingers. The capability of their being collected into folds, will be the surest test that the application may be employed without the hazard, which would attend its use, should the integuments be closely adherent to the cellular membrane in consequence of previous inflammation.

The Editor of the Pharmacopoeia Chirurgica, speaking of the caution necessary

to confine this application within due limits, says, that on account of the disposition of the kali purum to act laterally “ it should “ rather be twirled between the fingers “ and thumb, than employed with a circuitous motion of the hand.” I can practically say, that, if the moisture is absorbed by a dossil of lint as the eschar is making, the space destroyed by the caustic will correspond to the boundary first designed, as truly as if the paste caustic had been applied to the part, and encircled by an elevated margin of adhesive plaister.

Instances have occurred in my practice, in which the irritation of blistering a joint, and dressing the part with the savine cerate, was so insufferable, that I have been obliged to have resource to caustic. A very distressing case of this kind occurred, in which the savine cerate excited such considerable inflammation within the joint, as to induce the patient to submit to amputation: I was not present at the time the circumstance occurred, or certainly should have recommended the antiphlogistic treatment; and

have little doubt, from experience, that the irritation would have been removed.

When I first applied caustics for the relief of diseased joints, the sores were kept open by an occasional dressing of the unguentum cantharidis, or by an escharotic application ; but, before it could be known what effect the caustic issue would produce, I found that the blister ointment, as well as the escharotic applications, gave more pain than the patient could well bear. To promote a discharge from the sores in an easier way, I made use of a layer of sponge, dipt in melted wax, and pressed flat, which was cut nearly to the size of the sore, to which it was confined by cross slips of adhesive plaister. The same intention may be answered by pouring melted wax on two or three layers of lint laid on each other, but whether the lint or the sponge be used, the wax application should be less than the sores, so as to allow room sufficient for the granulations at their edges to rise above its surface ; thus will the waxed lint or sponge be confined in its situation, the use

of the blister ointment be rendered unnecessary, and the bandage required to keep on the dressings will prevent any fungus that can be distressing to the patient or troublesome to the surgeon. Should the sores contract they may be enlarged to the extent wished for, by applying sponge that has been dipped in the melted emplastrum ceræ compositum; sponge thus prepared will swell out, which is not the case when it is filled merely with wax: the plaistered application has frequently enabled me to shift the sore a little higher or lower on the one side or the other, by pressing the sponge in the direction to which I wished the issue to extend.

If from any circumstance the granulating border should be destroyed, it can be renewed by applying a sponge tent of rather smaller circumference.

Whoever has used both remedies will, I think, agree with me, that the curative operation of the caustic is slower and weaker; and that it must therefore be considered as

inferior to the application of blisters combined with the savine dressing. The issues may be sufficiently efficacious in those affections of the joints, which consist rather in a general thickening of parts, than in any actual effusion within the articulation; and they may deserve a preference in such cases from being less irritating: yet I will affirm without hesitation, as the result of my general experience, that blisters and the savine cerate are decidedly pre-eminent in promoting the absorption of fluid extravasated within the cavity of a joint.

I select the following narrative out of many facts which I could adduce in proof of the beneficial effects of this treatment in cases of hydarthrus.

A gentleman applied to me for a disease of the knee-joint, in which I observed the following particulars: the patella was considerably elevated, and produced, on motion, a grating sensation. A considerable quantity of fluid was collected in the capsule; great uneasiness was experienced on

the least exertion, and the integuments appeared in a puffy state. Twelve ounces of blood were removed from the part by cupping, and the aqua ammoniæ acetata was constantly employed as a lotion. These remedies occasioned a considerable diminution of the swelling of the integuments, and a very palpable decrease of the extravasated fluid. A blister was afterwards applied on the inside of the knee, and the blistered surface was dressed in the usual manner. Within three months the patient recovered, and on moving the knee a grating noise was no longer heard. I wish the student, in examining a case of hydatrus, would pay particular attention to the feel, which is conveyed on handling the puffy integuments, and that which is produced by pressing the fluid from one side of the articulation to the other: he will perceive an impetus in the one instance which is wanting in the other; this will enable him to ascertain more infallibly whether the tumefaction of the external parts arise from sympathetic affection, or from the accumulation of fluid within the joint.

It is now more than fourteen years since I first recommended the application of caustic on the integuments covering a diseased joint, from an opinion that issues would prove more effectual, the nearer they were made to the seat of the disease. I then stated, that this opinion had something more than probable conjecture to recommend it; and indeed subsequent experience has fully confirmed me in the belief, that the failure of the caustic in these cases was not owing, according to the opinion of Dr. AUSTIN, to the distance of the part affected from the trunk, but to the circumstance of the discharge not being procured from the immediate neighbourhood of the complaint: the reader will of course form his own opinion from the comparative success attending the more distant or closer application of the remedy, from the evidence hereafter to be detailed.

Notwithstanding the success which attended the application of the caustic, the very minute attention it requires made me apprehensive, that it would never be gene-

rally adopted. I was of course led to the trial of different escharotic applications, in the form of ointment, and amongst others, I was induced, from observing the effects of powdered savine, in the removal of warts, to give it a trial. Some of the powder was first mixed with white cerate, and applied as a dressing to the part that had been blistered; but the ointment ran off, leaving the powder dry upon the sore, and no effect was produced. I next inspissated a decoction of savine, and mixed the extract with the ointment, which succeeded better, for it produced a great and permanent discharge. At last, after various trials, I was led to prefer a preparation analogous to the unguentum sambuci, P. L. and I now offer the following formula, as answering every purpose which my wishes could have suggested:—

Rx Sabinæ recentis contusæ libras duas.

Ceræ flavæ libram

Adipis suillæ libras quatuor.

Adipe et cerâ liquefactis incoque sabinam et cola.

The difference of this formula from the one I published in 1797, consists only in

using a double proportion of the savine leaves. The ceratum sabinæ of Apothecary's Hall is admirably made: they bruise the fresh savine with half the quantity of lard, which is submitted to the force of an iron press, and the whole is added to the remainder of the lard, which is boiled until the herb begins to crisp, the ointment is then strained off, and the proportion of wax ordered, being previously melted, is added to the composition.

On the use of the savine cerate, immediately after the cuticle raised by the blister is removed, it should be observed, that experience has proved the advantage of using the application lowered by a half or two-thirds of the unguentum ceræ: an attention to this direction will produce less irritation and more discharge, than if the savine cerate is used in its full strength. I have also found that fomenting the part with flannel wrung out of warm water, is a more easy, and therefore a much preferable way of keeping the sore clean, and fit for the impression of the ointment, than scraping

the surface, as has been directed by others. An occasional dressing of the unguentum resinæ flavæ has been found by me to be a very useful application in rendering the sore free from an appearance of slough, or what I ought rather to term dense coagulable lymph, which in some cases has proved of so firm a texture as to be separated by the probe with as much readiness as the cuticle is detached after blistering. It is hardly necessary to direct that, as the discharge diminishes, the strength of the savine dressing should be proportionally increased.

The ceratum sabinæ must be used in a stronger or weaker degree, proportionably to the excitement which it produces on the patient's skin. Some require a greater stimulus than others, for the promotion of discharge, and this can only be managed by the sensations which the irritation of the cerate occasions. This application was in public use three years before I wrote upon its efficacy—chance introduced it—publicity has given it credit, and, as a re-

medy of the suppurative kind, it continues unrivalled.

I have used ointments impregnated with the flowers of the clematis ereta, with the capsicum, and with the leaves of the digitalis purpurea: the two first produced no effect, the last was very stimulating, and I shall employ the first convenient opportunity to determine its qualities more accurately.

I have also used kali purum rubbed down with spermaceti cerate, in the proportion of one drachm to an ounce: it proved very stimulating but produced no discharge. In one instance I used an application after blistering, consisting of one drachm of hydrargyrus muriatus to two ounces of the above cerate. It was so intolerably painful, that I was sent for at the end of about two hours, and found it necessary to remove the dressing immediately. The patient was attacked with the most severe ptyalism I ever witnessed.

CASE I.

I was desired to visit a man, about twenty-seven years of age, who had laboured under a white-swelling of the knee for more than twelve months. He suffered great pain within the articulation, before the joint appeared to enlarge, and his case was treated as a rheumatism. However, instead of receiving benefit, he gradually grew worse, and was admitted into a hospital, where he was first salivated, with not the smallest advantage. A blister was then applied to the joint, and repeated every other day, for the space of a fortnight. He stated, that this method procured him considerable ease, with some reduction of the swelling. When I saw him, he was in a confirmed state of hectic; had been troubled with rigours; the joint was much enlarged and very painful, particularly in one part, where the skin was thin and inflamed. Indeed, both from the appearances and by examination, I was fully satisfied that mat-

ter had formed. I advised him, on account of the state of his health, to part with the limb; but he declined the operation, telling me he quitted the hospital, as nothing farther was proposed.

I made a large eschar on each side of the joint, by rubbing the *kali purum* on the part, and the sores were kept discharging, by means of prepared sponge.

In this case, no ease was derived from the stimulus of the caustic; but after the sores had discharged freely for some time, his pains were mitigated, and his health improved.

The previous painful state of the part, prevented, before a minute examination, which would have ascertained that the ends of the bones were deprived of their cartilaginous covering, by the grating noise that was occasioned upon moving the joint. By the continuance of this drain, for nearly eighteen months, his knee got perfectly

well; its motion was unimpaired, nor was the grating sound any longer perceivable upon using the joint.

This man had also a similar affection of his ankle joint, attended with ulcerations and extensive caries, on which account he submitted to amputation; and though the knee had remained well a twelvemonth, and was so at the time of the operation, yet it was considered right to amputate above it. I very much regret I had not the opportunity of examining the diseased parts.

CASE II.

S. G. a child, about the age of seven, had an indolent white-swelling, for upwards of two years; the whole joint was greatly swelled, and the inner condyle of the thigh-bone appeared enlarged.

She appeared to be very consumptive, and breathed with difficulty; her skin was

yellow, dry, hot, and scurfy ; and she made little, and sometimes no water in the course of the day ; her belly was also swollen, and the glands of the neck enlarged. In consequence of the weak state the child was in, a sore was made by the caustic, on the inside of the joint, that part being most diseased, and was only kept open by the prepared sponge. When it had discharged only a few weeks, her skin became cool and perspirable ; her appetite was improved, and her breathing relieved ; she became easy, and her sleep was uninterrupted by those spasms of the affected limb, with which she had been before troubled.

In every respect she was mending, until, unfortunately, she caught cold, by sitting at the window, to view the flames from the fire at Radcliffe, which imprudence produced a fever, and a large deep-seated abscess formed on the outside of the knee. I ascertained that the fever was not symptomatic of the abscess, but that the abscess depended on the fever, from the mother's

account, who informed me, that the child had for two days been very feverish, before any alteration in the joint took place, or she had complained of any pain. It was pretty certain, that if the abscess had burst, or been opened, the child would have been drained to death ; but the joint having been considerably reduced in size, by the first application of the caustic, I was tempted to apply it again, on that part of the skin which immediately covered the abscess, taking the greatest care that it did not penetrate into the tumour. After the eschar had separated, and the sore had discharged freely, the child became easier, and the abscess gradually dispersed. The issues were kept open, first by the sponge, and afterwards by the savine cerate, for upwards of two years, at the end of which time she was in every respect healthy, and the joint appeared free from any disease, though there remained a slight enlargement of the inner condyle ; however, probably she will be obliged to wear a lift to her shoe, in consequence of the contracted state of the knee.

CASE III.

S. R. a scrofulous child, about seven years of age, was brought to me, on account of an indolent white-swelling affecting the knee, which had been diseased above two years; the whole joint was much tumefied, and a fluctuation was to be felt in its anterior and lateral parts. Although the child did not feel much pain when the part was handled, yet she expressed great uneasiness, when the joint was moved. The integuments covering the part appeared puffy and thickened, though not in the least œdematous, and the colour of the skin was remarkably pallid. A sore on each side of the joint was made by the caustic, and kept open, by the prepared sponge, for about six months. This child, when I first saw her, was certainly consumptive, but her health gradually amended, and is now perfectly good, and her joint free from any disease. I saw her lately (upwards of two years after her issues were healed) and she appeared

completely well. I examined the knee, and it measured about half an inch more than the other, which is probably owing to an enlargement of the inner condyle of the thigh bone, and not to any affection of the soft parts covering the articulation.

CASE IV.

I. G. aged nine years, of a scrofulous habit (as were also his parents) had laboured under a white-swelling of the knee for above two years. Before half of that time had elapsed, an abscess formed above the joint; for a short time, he seemed relieved, his knee being less painful, and the complaint at a stand.

He applied to me, in a state of hectic; his knee measured twice the size of the other, he felt great pain in the ends of the bones, and within the articulation, and there was a very considerable quantity of fluid to be felt over the whole joint. His parents not consenting to an amputation, the caustics

were applied on each condyle, and the sores maintained open by the sponge. A copious discharge being kept up for the space of a few weeks, effected a considerable amendment in his health, and some improvement took place also as to the joint, for he could bear it to be handled and moved with less pain, and the swelling was abated. He continued getting better, and recovered so well, as to be able to walk every day, for six months, to my house, which is a full mile from the place of his abode; during which time, his health was remarkably good, and the joint appeared free from disease, excepting a degree of enlargement in the bone, which, however, was no impediment to its action.

As he was one day returning to his father's house, he felt suddenly a great pain within the joint, which obliged him to be carried home, and in a few weeks he died hectic, in consequence of the inflammation and suppuration which ensued.

A particular examination of the joint was

not allowed; but an incision into it, discovered the ends of the bones eroded and enlarged; and I found, by introducing my finger into an opening, caused by the disease, in the thigh bone, that its cellular structure was destroyed, the ligaments were greatly diseased, and the capsular ligament was also perforated in one part.

CASE V.

I. T. a young woman, twenty years of age, was admitted into St. Clement's Workhouse, on account of an indolent white-swelling, she had been afflicted with, for above a year and a half. The joint was very puffy, and the skin pallid, though not œdematous, she felt great uneasiness within the articulation, and, when the joint was moved, the bones were perceived to grate. She had been in a Hospital, where the part had been frequently cupped, with the advantage only of mitigating her pain.

Besides the complaint of her knee, she

had a violent pain in her side, profuse cold sweats, with alternate heats, and an entire loss of appetite and sleep. She felt most of her pain within the joint, between the bones, and under the knee-pan, through to the ham. This patient, for about six months, submitted to the same kind of treatment as was used in the preceding case, to which she owes a complete recovery of her health and joint. I have seen her very lately, she walks well, and there is not the least grating to be perceived, or indeed any apparent disease about the joint.

CASE VI.

A little girl had a scrofulous elbow, which had ulcerated, and the bones were heard to grate, she besides laboured under strumous ophthalmy, and swellings of the glands of her neck. The caustics were applied on each side of the joint, taking care to make the eschars sufficiently remote from the sores, which the disease had made. After the issues had been kept open for

upwards of six months, by the sponge, her health was completely restored, the ulcers healed, the complaint in her neck and eyes were removed, and the disease of the elbow was cured, though the case terminated in ossific ankylosis; but as the arm was kept bent during the cure, she had a very useful limb.

CASE VII.

S. M. D. a boy, about five years of age, had a white-swelling of his knee, of some date; and notwithstanding the interposition of the fluid of the joint, the end of the thigh-bone was perceptibly enlarged; the usual applications had been made, but to no effect, as several abscesses formed about the joint, but no exfoliation had occurred; and when the boy was brought to me, his health had suffered much by repeated ulcerations. I applied the caustic on each side of the joint, so as not to interfere with the sores the complaint had caused; and

this artificial discharge was maintained for a year and a half.

The result of this treatment was a permanent healing of the ulcers, which existed previous to the application of the caustic, attended with a reduction of the joint to its natural size, and a perfect recovery of its motion.*

CASE VIII.

T. B. about six years old, had been afflicted with a white-swelling of his elbow, above eight months, and it then was ulcerated in seven places; he had also a strumous affection of his great toe on the left foot, a scrofulous abscess and two sores on

* Of a case, the particulars of which have been mislaid, I can only state, that the caustics, after a drain had been kept up for above a year, succeeded in curing a diseased knee of some standing, in which there was great swelling of the soft parts, with enlargement of bone, which enlargement, however, remained, after all pain and tumefaction of the integuments had subsided.

the right leg, besides a strumous opthamly which had subsisted from the fourth year of his age. On account of the inflamed state of the elbow, six leeches were applied, and cloths wrung out of the *saturnine lotion*, were kept to the part, and renewed when dry. Though this treatment in a degree relieved the inflammation, yet the sores did not indicate the smallest disposition to heal. A large caustic was applied above the elbow-joint, the ulcers preventing its nearer application; the issue was kept open for about ten months, when the ulcers, formed by the disease, had completely healed, and the joint recovered.

This case affords a very striking instance of the constitutional effect of artificial drains; as under this treatment, he entirely got the better of all the complaints which have been enumerated. On account of his disposition to scrofula, before the sore made by the caustic was healed, I cut him an issue in the arm.

I have almost daily opportunity of see-

ing this boy, as he lives in my neighbourhood, and he has not since had any complaint, though a period of nearly three years has elapsed.

CASE IX.

M. H. a girl, about five years of age, was troubled with a white-swelling of the right elbow, which was attributed to her having fallen from a swing. The mother discovered the joint to be larger than the other, and that she favoured it, and complained on its being moved. The skin covering the diseased part was pallid, and the integuments were thickened, though no impression of the finger remained after handling. This child laboured under weak eyes, had a swollen belly, the glands of her neck enlarged, and she was drowsy and inactive. Two sores were made by the caustic, on each side of the joint, and were kept discharging for about six months, when her elbow got well, and her health recovered. At the mother's solicitation, I healed the

sores, but in about two months, the swelling of the elbow returned, and there was a chain of lymphatic tumours extending from thence, towards the axilla, and she relapsed into her former ill state of health. Some time after, I observed, that though the articulation was considerably distended with fluid, the integuments were unaffected.

The advantages derived from the first application of the caustic, encouraged the parents to hope, that a second trial would prove equally successful; but though the child did perfectly recover from the disease of the elbow, after the second drain had been established, yet it required twice the time in this instance, to complete the cure. Whether the diseased state of the lymphatics had any share in thus protracting the cure, I shall leave the reader to determine for himself. The swelling of her belly subsided, as did the glands in her neck, excepting one, which was scarcely to be felt.

A common issue was made in her arm at a time the discharge by the caustics was

suppressed; her health has remained for nearly three years remarkably good, and her elbow, entirely free from disease, is equally strong and useful as the other.

CASE X.

R. N. a scrofulous boy, eight years old, had a diseased knee, for about four years, which was much contracted, as he had been suffered to keep the limb in a state of flexion. The part was considerably enlarged and painful, and from the boy's general health, and the appearance of the skin, I had no doubt, of its being matter which fluctuated under my fingers. The caustics were applied on each side of the joint, avoiding a part which was thin and inflamed, and the sores were kept open for about ten months; the boy's health gradually became good, the fluid collected in and about the joint was entirely absorbed, and the pain removed, though there remained some enlargement of the inner condyle. I wished to remove the limb, because the con-

traction of the knee rendered it of no use, and it was only in his way; but the mother objecting, I directed the issues to be kept open; this advice was not followed, and though the knee preserves its improved state, yet a scrofulous abscess has formed in the middle of his leg.

CASE XI.

A young lady felt a pain in her knee, three years before I saw her, which was exasperated by walking, long standing, or any kind of fatigue; the joint was contracted, much enlarged, and the integuments were in a thickened, puffy state, and of a pallid appearance, though not œdematous. She described her pain as particularly severe in the inner condyle, and under the ligaments of the knee-pan, shooting from thence into the joint. The part was at different times cupped or leeched, and a large blister applied. As the case occurred before my knowledge of the effects of savine, I employed the *ung.*

cantharidis to keep up the discharge, which produced great pain and strangury. I therefore applied the caustic on each side of the joint, and kept the sores open by the plaistered sponge. I wish particularly to remark, that she always expressed herself relieved in proportion to the quantity of discharge. This patient continued under my care for two years, and nearly the whole of that time, a drain was maintained, either by the prepared sponge, or by the savine cerate, a blister being previously applied. Her knee is perfectly recovered, she can straighten or bend the joint without pain, and her health, which had suffered very considerably, is now completely re-established. I cannot sufficiently commend the patience with which the lady, who is the subject of the present case, has borne her sufferings. Indeed, the circumstances were particularly unfavourable; for a very near relation had fallen a victim to the same disorder, and but for a visible improvement in her general health, I should frequently have proposed amputation of the limb, as preferable to the misery she endured. To

secure her from a relapse, and as she had been troubled with swellings of the glands of her neck, I cut an issue above the knee.

CASE XII.

R. D. of a scrofulous habit, had a diseased knee, for above three months. He described his pain, as first originating in the inner condyle of the *os femoris*, under the patella, and within the articulation, before the part manifested any swelling.—The customary applications had been previously used, with no advantage; but as he had lately contracted some venereal complaint, it was thought adviseable, to try how far mercury would relieve the diseased joint; he was directed to rub mercurial ointment on the affected limb every night, for about six weeks, which salivated him, though it did not in the smallest degree alleviate the pains of the joint, which were not more exasperated in the evening, than at any other period of the day. He was afterwards admitted into St. Clement's workhouse,

when his health was much impaired, from the uneasiness of the joint, and loss of sleep and appetite. An eschar was made, by the application of the caustic, on each side of the joint, which was puffy, much enlarged, and somewhat contracted; and the sores were kept open, by the prepared sponge, for about four months, after which period the joint became perfectly free from disease, though some further time was necessary for it to acquire its usual strength. About two years after, in consequence of his application to me on account of another disease, I had an opportunity of examining the joint; he told me it was equally strong and useful as the other, and I could not discover any vestige of disease.

CASE XIII.

I was desired to visit E. C. who had been two years afflicted with a diseased knee, and had suffered great pain in the condyles of the thigh-bone, under the knee-pan, and within the articulation, for some time be-

fore there was any appearance of swelling. The joint was in a contracted state, and of twice its natural size; the integuments appeared puffy, and were thickened, but not œdematous, and the colour of the skin was remarkably pallid. As the joint was rapidly becoming more and more painful, and as her health was materially affected, a removal of the limb was twice proposed, in consultation, as the only means of relief. The caustics in this case, were applied on each side of the joint, not with any expectation of cure, but rather as a palliative sort of remedy, and to prevent the repetition of abscesses, which always attend the latter stage of white-swellings.

The sores were kept open by the sponge, for about a year, in which time the joint progressively recovered. This patient was not relieved by the irritation the caustics first produced; for, indeed, after the sores had discharged freely for some weeks, the improvement that took place in her health, was the first circumstance which afforded the smallest ray of hope.

CASE XIV.

I was desired to visit a gentleman, who, after acute rheumatism, had a diseased knee, which measured more than the other by three inches and a half. Fluid was to be felt fluctuating on each side of the joint, and under the knee-pan, which was elevated considerably above the thigh-bone, and which, by motion, was distinctly heard to grate. This patient felt much uneasiness within the articulation of the knee, for some time before the joint enlarged, and his health was very much impaired.

The caustic was applied on each side of the joint, and the sores were kept open by the sponge; an artificial drain was kept up, either in this way, or by previously blistering, and afterwards dressing with the savine cerate, for the space of nearly twelve months, with manifest advantage; for his health was restored, he was enabled to walk without pain, though the joint felt weak,

and appeared somewhat swollen; and, on motion, no grating could be perceived, yet the patella appeared to be increased in its circumference. I cannot give any further account of this case as the vocations of the gentleman carried him out of town.

CASE XV.

A. M. about the age of twenty-two, called on me, on account of a diseased knee, with which he had been afflicted for nearly two years; and when it first appeared, the pain was removed by blistering, but it soon after returned. The joint was much enlarged; but so tense and hard was the part, that it appeared to a medical friend and myself, that the condyles were enlarged; and from the deep pain he felt in the cavity of the joint, when it was used, we concluded also that the ligaments had suffered. This person's joint was treated, for four months, in the same way as has been mentioned in the preceding case, and with the like success, and the joint is now

of its natural size. Though several months have elapsed since the cure was performed, he continues well, and enjoys a remarkably good state of health.

CASE XVI.

C. B. a young woman of a strumous habit, had felt for some months, great pain on each side of her knee, and under the knee-pan, which was followed by swelling; and when this effect took place she became easier. This patient also had night-sweats, fever, and loss of appetite; the joint was enlarged, puffy, and of a pallid hue. A blister was applied, which completely covered its anterior and lateral parts, and when the cuticle had been removed, the sore was daily dressed with the ceratum sabinæ, for about three weeks; when the sores were suffered to heal, excepting in those places where the pain first originated. She also had some scrofulous sores on the other leg, which kept mending as long as a discharge

was kept up from the diseased knee; but when the sore was healed, in consequence of the joint having recovered, the ulcer became worse. This circumstance induced me to cut her an issue above the knee, which I understand is kept open, and she has had no relapse.

CASE XVII.

A child, about two years old, with enlarged glands of the neck, had suffered from a white-swelling of the knee, for about three months; the joint was twice its natural size, and the child cried much when it was moved. The mother, previously to her discovering the part to be swollen, noticed that the infant could not bear this joint to be exercised with the same freedom as the other. The integuments were pale and thickened, but not œdematous. A blister was applied sufficiently large to cover the anterior and lateral parts of the knee, and when the cuticle was removed, the joint was covered

with a dressing of the savine cerate, which kept the part discharging very copiously for about three months, in which time, the joint completely recovered, and was in every respect as useful as the other; the swelling of the glands of the neck also subsided, under the same treatment.

CASE XVIII.

I. C. between twenty and thirty, of a scrofulous habit, was attacked very suddenly, with a violent pain within the joint of his knee, which he described as shooting from each side, and under the knee-pan, into the interior part of the articulation. He applied to me a few days after this attack, when the whole of the joint was much swollen, and the pain, on motion, very excruciating; twelve leeches were applied, which bled freely, and the part was frequently fomented; but no relief was obtained from this treatment. A large blister was applied, and a very great discharge was maintained by the use of the

savine cerate, for above a month; when he lost all pain, and the joint was reduced to its natural size, although considerably weakened. It ought to be mentioned, that this patient was not relieved by the first effect of the blister, and indeed, not till after a discharge had been kept up for several days. I have frequently seen this person since, and the joint remains perfectly well, and as useful and as strong as the other.

CASE XIX.

W. C. had been afflicted twelve months with a diseased elbow; he felt great pain within the articulation, and in the condyles of the os humeri, for some time previously to the joint appearing enlarged. About seven months after the elbow had been diseased, his knee became affected, and this complaint was preceded by excruciating pain, first in his hip, and which (to use his own expression) fell into his knee, and there continuing for some time, the joint

began to swell. When I saw this patient, he complained of violent pain in his side, had hæmoptysis, cough, and night-sweats; his elbow had ulcerated in three places, and discharged freely; and, though there was a quantity of fluid accumulated about the joint, the condyles appeared enlarged, and when the elbow was moved, the bones grated. The knee was contracted, much swollen, and so distended, that till after the reduction of the swelling, I was unable to ascertain that the end of the thigh-bone was enlarged, though he experienced much uneasiness in the condyles, and within the cavity of the joint. In consequence of the weak state of the patient, I was contented to try what would be the effect of a purulent drain derived from the knee only. After the part had discharged freely for about a fortnight, he did not expectorate any more blood; his complaints in his chest were greatly relieved, and in a few weeks were entirely removed. The improved state of this patient's health was an encouragement to treat the elbow in the same way, and an

artificial drain was procured, first by blistering, and afterwards dressing with the savine cerate, for nearly a year. The elbow remains contracted, and when it is moved, no grating is perceptible; the ulcers have gradually healed, and, excepting an enlargement of bone, there is no appearance of disease.

The knee became free from pain, and perfectly recovered its motion, though the joint was an inch in circumference larger than the other, a circumstance clearly attributable to an increased size of the condyles.

This patient is of a scrofulous habit, and the disease of the knee has once returned; the same treatment was again resorted to, and, excepting the joint being very considerably weakened, it remains in the state just described; but with a view to prevent any further relapse, a common issue has been made above the knee.

CASE XX.

A boy, aged seven years, had a diseased knee and ankle-joint of the same limb, which had so impaired his health, that amputation was thought adviseable, but to this the parents would not consent. The knee-joint having been first affected, and advancing fast to a state of suppuration, it was blistered, and the part was every day dressed with the savine cerate, for above six months; this treatment produced a reduction of the swelling of the soft parts, a removal of the pain occasioned by the disease, and a complete absorption of the fluid, with which the different parts of the joint had been distended.

The knee is capable of every function, though the condyles of the thigh-bone remain considerably enlarged.

From the improvement of the boy's health, and the amendment of his knee, I

recommended the ankle-joint to be treated in the same way; but with what advantage, I have not yet heard, as he resides in the country.

CASE XXI.

E. P. eleven years old, of a scrofulous family, had an indolent white-swelling, for about four years; the joint was much swollen, the integuments were thickened, but not œdematous, and the skin was remarkably pallid. This boy was suffering much from the painful state of the part, the disease was making rapid progress, and he could not, as before, bear it to be handled without great complaint, and in moving the joint, he expressed a sensation of much uneasiness within the articulation. A blister was applied over the whole knee, and was kept discharging with the savine cerate for about two months, by which treatment he perfectly recovered, though the joint for some time remained weak: it is almost two

years since, and no symptom of disease has appeared.

CASE XXII.

A. D. of a scrofulous habit, some days after a fall, which at the time did not occasion any inconvenience, complained of a dreadful pain in the inside of his knee, which was followed by a puffy swelling, under and on each side of the knee; he could bear the part to be handled with freedom, provided the limb was at rest, without manifesting any increase of uneasiness; but when the joint was moved, his sufferings were severe. Six leeches were first applied without affording any relief, a blister was therefore had recourse to, and the sore was dressed with the savine cerate for about three weeks, in which time, a very copious discharge was kept up, the pain gradually subsided, and the joint has remained in a perfect and healthy state.

CASE XXIII.

I. S. aged sixteen, had for several months, prior to his application to me, suffered great pain within the joint of his knee, before the part began to swell; he could then bear it to be handled without increase of pain; but his using the joint in any way, occasioned great uneasiness, and his sufferings were somewhat diminished after the tumefaction appeared. When I saw him, the joint was much distended, and he felt a deep-seated pain within the articulation, which affected his health.

A blister was first applied to the knee, and when the cuticle was removed, the part was dressed with the savine cerate for six months, when he had lost all pain, and the joint in every respect appeared sound, though it was weak for some time.

He remained well for six months, and when he relapsed, the same sort of treat-

ment, with success, was resorted to; but in this instance, twice the time was requisite for his recovery: and to prevent another relapse, as he was of a scrofulous constitution, an issue was made above the knee, and he has remained well almost twelve months.

CASE XXIV.

H. W. aged thirty, was seized, about four years ago, with pain in the condyles of the thigh-bone, and within the articulation; her case was treated and looked upon as rheumatism, as the joint became easier when used, but more stiff and painful, after the limb had been at rest for some time. She began to suffer in her health, which was afterwards much improved by being at the sea-side; she went frequently into a warm sea-bath, with the advantage only of relaxing the joint, but it did not reduce the swelling, or remove the pain. Different liniments and plaisters were applied, and

she underwent a long course of mercury, without the smallest relief.

It is now more than twelve months since I first saw her, and by submitting to the treatment mentioned in the preceding case, she has a very useful limb; can extend, but is unable to bend it so perfectly as she can the other knee. Her health is very good; she is free from those pains, by which she had been before oppressed, and the swelling of the soft parts is completely removed. Her complaint being of long standing, and her pains having begun in the condyles, which remain enlarged, I have thought it advisable to keep up a discharge for some time longer on each side of the joint, and ultimately mean to make an issue above the knee.

CASE XXV.

A maid-servant in my neighbourhood, about seventeen years of age, had for many months been afflicted with a pain within the

articulation of the knee, before the joint appeared at all enlarged. In the incipient stage of the complaint, she could bear the part to be handled without any additional uneasiness, but moving the joint in any way, greatly increased her sufferings. After the first appearance of enlargement, she became somewhat easier, but when the swelling had very considerably increased, and the joint become much distended by fluid collected in the different parts of it, handling then became very uneasy to her, and the pain within the articulation was particularly severe, indeed so much so, that opium was given every night, to procure sleep.

The anterior and lateral parts of the knee were blistered, and the cuticle being removed, the sores were dressed every day with the *ceratum sabinae*. After a discharge had continued for some days, she became easier, the opium was therefore omitted, and in about a month the pain and swelling entirely subsided; the joint

in every respect recovered, and remains well.

CASE XXVI.

A young lady, aged twelve years, was brought to me, from the country, to be put under my care. She had a diseased ankle-joint, of the indolent sort, the appearance of which I have so often described; it had suppurated on the inner side, but the ulcer did not reduce the general swelling, and only seemed to affect that part over which it was immediately situated. A blister was applied round the whole joint, but the ulcerated part was defended by a dressing of white cerate, a discharge was kept up for six months, in the manner I have recommended, and the success of the practice was most decisive. From her constitutional tendency to scrofula, I made an issue above her knee, and directed that it should be constantly kept open. I consider this treatment as having prevented the recur-

rence of any modification of the disease since that time.

CASE XXVII.

W. B. thirty-four years of age, of a scrofulous habit, had an affection of the left ankle-joint, after external injury, which at last increased so as to render him incapable of following his ordinary occupation of a farrier. He was for some time admitted a patient in a hospital, without receiving any benefit, though all the ordinary methods of treatment were employed. It is now more than three years since he applied to me; the joint was much swollen, and was remarkably tense, though a fluctuation was perceptible in some parts; he complained of a violent deep-seated pain within the joint, and it was completely useless. I first directed leeches, and then applied a blister over the joint, intending to maintain a permanent discharge by the common blister-ointment; but the strangury which supervened, made it necessary for me to desist

from its use. I therefore made a large eschar on each side of the joint, from which a drain was established for more than a year and a half: it became free from pain and swelling, and though it is less flexible and strong than the other, he is nevertheless enabled to follow his business, which the disease had previously obliged him to quit.

CASE XXVIII.

E. S. about six years of age, of a strumous habit, and labouring under phthisis pulmonalis, was brought to me, for an indolent white-swelling of the elbow; the joint was twice its natural size, and a fluctuation of fluid was evidently to be felt.

The whole joint was surrounded by a blister, and when the cuticle was removed, the part was dressed with the savine cerate. The advantages first derived from this treatment, were effectual in recovering the patient's health, as his breathing became

easier, and his night-sweats, cough, and pain in the side were entirely removed.

The diseased joint gradually recovered in about twelve months, and was completely cured; an issue was at that time made in the arm, and the child in every respect has since continued well, a period of about a year.

CASE XXIX.

A case of a diseased elbow occurred in a scrofulous girl, about the age of fifteen, nearly similar in appearance to the case just recited, excepting that the arm was in an extended state, and the joint so rigid, as to be incapable of the least flexion, though it admitted a degree of motion sufficient to prove that its rigidity was not owing to ossific union. By a drain of several weeks' continuance, the disease of the joint got well, and the limb was perfectly restored to its functions.

CASE XXX.

I shall now mention a case, in which, though it is not yet terminated, the alteration produced, has been as marked as I could wish: it was an elbow disease. The condyles were much enlarged, the integuments were become thin in one part, and a general fluctuation could be perceived; there was an ulceration with considerable fungus, and a discharge of a viscid glairy matter in small quantity, upon that part where the integuments were thinnest. Dry lint was applied immediately to the fungus, and then the joint was surrounded by a blister. A discharge has been persevered in for six months, the general health, which had always been bad, seems from the mother's account, to be very much improved. That part of the swelling which depended on fluid, has disappeared; the fungus has subsided, so that at present, the discharge is kept up from the surface even of the whole joint, and the only disease which

seems to remain, consists in the enlargement of the bones.

CASE XXXI.

A gentleman, of a scrofulous habit, had a diseased knee, for the relief of which cupping and leeches were frequently resorted to, and as soon as ease was procured, the joint was blistered on each side, and the discharge maintained by the savine cerate. The effect of this treatment was a gradual absorption of the fluid effused within the articulation, with a reduction of the swollen condition of the integuments.

The friends of the patient became uneasy about him, and solicitous that another opinion should be had respecting his case, and a surgeon of eminence was selected. The result of this consultation was to heal the blistered surface, apply the emplastrum gummi ammoniaci cum hydragyro over the knee, and persist in taking the decoction of cinchona with the natron preparatum. This

advice was followed. The joint within a fortnight became very considerably increased in size, and a large collection of fluid had formed itself under the fascia. The patient was feverish and much weakened; I removed the plaister, and covered the joint with the saturnine lotion, and passed a roller from above downwards towards the knee, a little above which finding the fluctuation very distinct, I discharged by a small trocar, a pint of sero-purulent fluid. This operation was repeated at the interval of every other day for three times.

Of this part of his complaint he completely recovered, but his health and strength were so greatly reduced, that I sent him a little way out of town. He improved so much in a few weeks that I was induced to apply a caustic issue on each side of the joint of the size of a crown piece: the discharge was kept up nearly the space of a year and a half. He then went by sea into the north, where his friends reside, from whom I have heard of his

recovery, and was much pleased in being assured that the motions and use of the joint are not perceptibly diminished, and the issues were still discharging. When I last visited him I expected nothing less than a stiff extended limb.

CASE XXXII.

Master ——, aged five years, applied to Mr. Langstaff on account of a diseased elbow-joint. The integuments were not discoloured, but very hot; and he complained of pain when the joint was moved, or the external condyle was pressed upon.

The antiphlogistic treatment, with the frequent application of leeches, was strictly attended to for upwards of six weeks. The joint at this time had undergone no diminution of swelling, but the heat and pain had entirely subsided, though the integuments felt much thickened and so tense as not to allow of their being pinched up. A blister was applied on each side of the joint,

and after the cuticle was removed the surface was dressed with equal portions of the ceratum sabinæ and spermaceti ointment. After three days use of this application a purulent discharge was established, but the pain and inflammation obliged Mr. LANGSTAFF to dress the part with the spermaceti cerate, and to apply leeches and evaporating lotions, under which treatment the blistered surfaces healed. At the end of three weeks the joint was again blistered, and the discharge was maintained by equal proportions of the savine and spermaceti cerate. The patient began to complain of pain in the anterior part of the elbow near its articulation with the radius, where, in a few days, a tumor, about the size of a pullet's egg, appeared, pointed and burst, and the matter discharged was of a scrofulous curdly kind; on the introduction of a probe into the opening it was found to communicate with the joint, but the bones were not denuded of their cartilage. A dressing of spermaceti cerate was applied to the abscess, and the blistered surfaces were kept discharging six months. At this period the

complaint of the joint was entirely removed, but fomentations, oily frictions, and gentle exercise were employed until the use of the part was restored. The boy's father died of pulmonary consumption: upon opening the body his lungs were found replete with scrofulous tubercles, and the lumbar and mesenteric glands enlarged and indurated

Cases of supposed Enlargement of the Bones.

An opportunity has been afforded me of acquainting the profession with two other cases of knee affection, in which I had given my opinion that the slight enlargement of the joint, which was left, was owing to an increase of size in the bone, but they prove, on subsequent examination, to be otherwise. Mr. LANGSTAFF, a surgeon of experience, zealous for the advancement of the science, can bear testimony, that in one case the condyles of the femur are considerably diminished, and the size of the joint is less than the healthy one by

an inch and a half. The other instance is the second case I published in my former edition, and although I then stated that there remained a slight enlargement of the inner condyle, there is now scarce a vestige of its existence. After the recovery of the joint, a little thickening of parts sometimes remains; the size of a nutmeg, of the following volatile mercurial liniment rubbed in night and morning, has been found serviceable in removing it, previously fomenting the joint with warm water:

R. Unguenti Hydrargyri fortioris unciam unam

Adipis suillæ uncias duas

Camphoræ dracmas duas

Spiritus vini rectificati q. s.

Aquæ ammoniæ puræ unciam.

Camphoræ spiritu vinoso solutæ adde aquam ammoniæ et
unguentum prius cum adipe commixtum.

From the observations which have been made, and the cases adduced, I think myself justifiable, in drawing the following conclusions;

That long-continued discharges, artificially excited, are highly beneficial in cases

of white-swelling, and in various other modifications of scrofula.

That caries has been arrested, and sometimes cured; that collections of fluid within the cavities of joints, or exterior to them, have been removed; that sores connected with the local affection have been permanently healed, and a repetition of them prevented; that the general health of every patient has been strikingly improved, and that where this treatment has been adopted in consequence of the diseased joint, other scrofulous appearances in distant parts have also yielded to it.

That the best method of producing such discharge, is the application of a common blister in the first instance, and when the cuticle has been removed, by dressing the part with the savine cerate; and that the use of this preparation may be beneficially extended to a great variety of cases, where a copious local discharge may be thought advisable.

That an issue in any part of the body,

may be successfully employed, as a constitutional remedy, in all cases of scrofula, and may probably be sufficiently powerful, when it is applied in time, to prevent an attack of this disease, in constitutions predisposed to it.

And finally, that we are not to be depressed by the obstinate resistance of the complaint, or lose the necessary confidence in our mode of treatment, although months should pass without much apparent advantage; for it has principally been owing to a steady perseverance, that I have succeeded in restoring some patients, labouring under unfortunate and almost desperate diseases, to the full enjoyment of their health.

SECTION IX.

NECROSIS.

I HAVE been induced to give this subject a place in the present work, not on account of any analogy which the disease bears to white-swelling, but because experience has taught me, that however dissimilar the two maladies may be, yet the treatment, which they both require, is the same, with very little modification.

Necrosis, or the death of a bone, is a very different affection from any other disease of these organs.

Surgical observers have published several cases, in which a large portion of the whole substance of a bone has been removed, and the place of the lost portion supplied by a new bony cylinder; yet the manner, in

which this was effected, has, until of late years, been very imperfectly understood. The complaint was regarded as a species of caries; and surgeons supposed that the renewal of the bone was effected by callus. If the term necrosis were unknown to MEEKREN, yet he noticed, with considerable accuracy, the principal phenomena occurring in this complaint, as the substitution of a new bone in place of the original dead one, and the subsequent enjoyment of full power and use of the limb. I will give his own words, which contain a clear and explicit statement of these facts:—"Alterum hic considerandum naturæ providentiam spectat, qua ablatae partis in locum ea reponere observatur, quorum ope actio requisita exerceri queat. Ita notare nobis licuit in milite quodam anglo femoris os totum abscessu consumptum, et ablatum fuisse, et tamen incessum neutiquam læsum, eo quod in locum deperditi substantia alia regenerata."*

* Jobi à Meekrén Observationes Medico-Chirurgicæ, p. 332, cap. lxix.

The author refers us to the observations of HILDANUS and others; and the records of surgery on this subject have been largely increased by subsequent writers, whose labours I think it unnecessary to refer to, as the disease may be sufficiently understood by the observation or perusal of a few cases. The old and dead bone has been called sequestra, and as the osseous cylinder is formed on the outside of the former, its external dimensions must of course exceed those of the old bone. Its appearance and texture are also very unlike those of the original, being more hard and compact in substance, and rough and irregular on its surface. Indeed the only point of resemblance between the two parts is their length. The articular ends of the bones are not affected by necrosis; it is their diaphysis only, or that part which is situated between the epiphyses, which, in a former section of this work, I have called the internodial portion of a bone.

No subject in the whole circle of pathology affords a more obvious and convincing

proof of the vast powers of nature in remedying the effects of disease than the processes which occur in the various stages of necrosis. We must be led to place the greatest confidence in her resources, when we see the whole body of the thigh bone perish, and then become surrounded by a newly formed tube, which absorbs the dead part, and preserves the figure and motions of the limb unimpaired. The latter circumstance has particularly attracted the attention of practitioners, and has been considered by them as a subject of difficult explanation. A case in which about two-thirds of the lower jaw perished, with a very slight interruption of the motions of the part, drew from the author the following observations, containing an obscure hint towards the true method of accounting for the phenomena of necrosis. “ Cette derniere observation sembleroit prouver qu’il y a eu reparation de la substance osseuse par des sucs auxquels le perioste auroit servi de moule, et dont il a pu fournir une partie. La nature mieux connue que du temps de nos prédécesseurs nous a

montrè ses ressources d'une maniere si evidente, en cas analogues a celui-ci, qu'on ne peut plus former de doutes, sur son operation favorable et vraiment digne d'admiration."*

As my own practice and opportunities have not furnished me with the means of investigating the changes, which take place in a case of necrosis, I consider myself as particularly fortunate in being able to communicate to the public, an original and very satisfactory account of the subject, in a letter from my friend Mr. MACARTNEY. The abilities of that gentleman are too well known, and too generally admitted to need the aid of my feeble eulogium. I shall only state, that I consider the following observations on necrosis to be a very successful application of those abilities to the elucidation of a most important and highly interesting pathological phenomenon.

* Memoires de l'Academie Royale de Chirurgie, vol. V. p. 358.

“ DEAR SIR,

“ The observations I spoke of having made upon necrosis related to the changes of structure which attend the progress of that complaint, and which, as far as I am informed, have not been accurately described by any writer upon the subject.

“ It happened a few years ago, that a number of specimens of necrosis came into my hands, and some of them at very early periods of the affection; after having injected these with colored fluid, I was enabled to trace the proceedings of the disease from its commencement. I found that the first and most important circumstance is the change, which takes place in the organization of the periosteum; this membrane acquires the highest degree of vascularity, becomes considerably thickened, soft, spongy, and loosely adherent to the bone; the cellular substance also, which is immediately connected with the periosteum, suf-

fers a similar alteration: it puts on the appearance of being inflamed, its vessels enlarge, lymph is shed into its interstices, and it becomes consolidated with the periosteum. These changes are preparatory to the absorption of the old bone, and the secretion of new osseous matter, and even previous to the death of the bone which is to be removed. In one instance I found the periosteum vascular and pulpy, when the only affection was a small abscess of the medulla, the bone still retaining its connexion with the neighbouring parts, as it readily received injection. The newly organized periosteum, which, for the sake of distinction, one might call the vascular sheath or investment, separates entirely from the bone, after which it begins to remove the latter by absorption, and during the time that this process is carrying on, the surface of the vascular investment, which is applied to the bone, becomes covered with little eminences, exactly similar to the granulations of a common ulcer.

“ In proportion as the old bone is removed,

new osseous matter is dispersed in the substance of the granulations, whilst they continue to grow upon the old bone, until the whole or a part of it is completely absorbed, according to the circumstances of the case.

“ What remains of the investment, after the absorption of the old bone, and the formation of the osseous tube, which is to replace it, degenerates, loses its vascularity, and appears like a lacerated membrane. I never had an opportunity of examining a limb, a sufficient time after the natural termination of the disease, to ascertain whether the investment be at last totally absorbed, but in some instances I have seen very little remaining. During the progress of the disease, the thickened cellular substance, which surrounded the original periosteum, becomes gradually thinner; its vessels diminish, and it adheres strictly to the new formed bone, to which it ultimately serves as a periosteum.

“ The most striking peculiarity in the his-

tory of necrosis, you will then perceive to be, the conversion of the periosteum into an organ possessing active powers of absorbing and secreting bone: the structure of granulations seems to be best calculated for performing these offices, as we find it employed for the same purposes on other occasions.

“ Thus it is well known, that the granulations, which are interposed between the two ends of a bone, in cases of a compound fracture, become ossified; and I have observed, that the detachment of carious bones in external ulcers, is effected by the granulations of the sore, working their way from the edges, absorbing indifferently the sound and dead bone, until the separation of the latter be complete.

“ I am, dear Sir,

“ Yours, &c.

“ JAMES MACARTNEY.

“ P.S. The anatomical preparations, which

authenticate the above observations, are preserved in the collection of St. Bartholomew's hospital."

I shall trespass shortly on my reader's time, by noticing some opinions of modern writers on the subject of necrosis.

Mr. BELL says, in his System of Surgery, "We would naturally suppose, that those tendons of muscles, which were originally inserted into that portion of the old bone, that is now destroyed, would completely lose their influence: but it is quite otherwise; for we find, that they possess their relative situation in the newly-formed bone, into which they are inserted by the ossification of a gelatinous fluid poured forth around them."* The reason why the muscles lose not their attachment, is from their connexion with the periosteum; the change, which this membrane undergoes, Mr. MACARTNEY has most satisfactorily explained.

* Vol. VII. p. 216, 7th edit.

Mr. RUSSELL, of Edinburgh, has taken great pains, in an Essay on Necrosis, to prove, that the periosteum of the original bone, has no share in the formation of the new osseous cylinder. According to this gentleman, “ the first step of the process is to surround the old bone with an effusion, which seems to be of a gelatinous nature.”* The description, which he proceeds to give of this newly deposited substance, corresponds very much with Mr. MACARTNEY’s account of the changes effected in the periosteum and surrounding parts; so that, although the mode of accounting for the change is somewhat different, the essential facts and observations are nearly the same.

Mr. RUSSELL’s arguments against assigning to the periosteum any share in the production of the new bone, do not appear to me at all direct or convincing. I shall quote his own words, to enable the reader to judge for himself on this subject.

“ But upon this foundation, the growth of the osseous shell has been imputed solely to the extension of the periosteum, and to the deposition of osseous particles in the heart of its substance, or between its layers. According to this latter supposition, that the bony matter is deposited between the layers of the periosteum, the new osseous shell should derive a compleat covering from the original periosteum, both on its inner and outer surface. That this, however, is not the fact, appears from an examination of parts, while they are forming. It is then evident, that ossific granulations arise, both from the internal and external surface of the new osseous shell, but on neither of the surfaces does the smallest vestige of a covering, derived from the original periosteum, make its appearance. Indeed, this idea seems to me wholly incompatible with the inequalities of both surfaces: for, if two layers of periosteum were distended by the interposition of ossific matter between them, both surfaces would then be smooth along the whole of the extent: yet, that the

direct contrary takes place, is apparent from the slightest examination of appearances. Besides, in those cases, where the sequestra is removed, and consequently does not limit the extension of the new bone internally, the whole space fills up, and the cavity is totally obliterated along with the supposed investing periosteum. Yet, surely, this obliteration could not possibly happen, if the internal surface of the new bone were fortified with a new lining from the original periosteum."

It must appear very clearly, that none of this reasoning will apply to Mr. MACARTNEY's observations. That gentleman says nothing of the *layers*, or the *heart of the substance* of the periosteum. He only admits a great and general change in its texture, adapting it for a most important and beneficial purpose in the animal economy, —the formation of a substitute for the dead bone. He expressly states, that on the inner surface of the new tube, it assumes the form of granulations, which absorb the sequestra. None of his observations afford

any reason for inferring, that the outer surface should be either uniform or otherwise; but we should undoubtedly have concluded a priori, from the analogy of all instances of deposition of new bony matter, as we find to be actually the case in this instance, that it would present a rough and irregular appearance.

“ And further,” says Mr. RUSSELL, “ in all cases of necrosis, the new bone in its incipient state is on its outside so blended with the neighbouring part, that it is impossible to distinguish and separate them from each other; whereas, if the new bone still remained encompassed on its outside with the external layer of the original periosteum, the separation of parts would be distinct and easy. Indeed, the want of this distinctness is almost a proof that no covering is derived from the original periosteum.”

Here we have a just observation of a fact applied to prove a point, with which it has no connexion. The cellular substance, and

muscular and tendinous parts surrounding a bone, that has suffered necrosis, become thickened and indurated: they are indeed all massed and confused together, and consolidated into a tough substance of a cartilaginous or tendinous hardness. These appearances must undoubtedly be referred to the severe and long continued inflammation, which forms a striking feature in every case of necrosis; and which is kept up in a greater or less degree by the irritation of the complaint to its complete termination. I can by no means discern how this circumstance can at all affect the question, whether the periosteum be or be not concerned in forming the new bone.

The appearances in certain cases of compound fracture are also adduced in further proof of Mr. R's opinions.* A process similar to necrosis is sometimes observed in these injuries. I cannot discover, by an attentive perusal of the arguments on this subject, that they prove, that the new bone might not have been furnished by the peri-

* P. 18 to 21.

osteum ; and in a specimen, which I have examined myself, there is every appearance that the new deposit was actually formed by that membrane.

The instance of simple fracture, related at page 22, as well as the other examples of a formation of new bony substance independently of the periosteum, in other injuries of bones, alluded to in the same section, are altogether foreign to our present subject ; which is a discussion of the question, how far the periosteum is concerned in the formation of the new bone in a case of necrosis.

I do not deny, nor have other writers denied the power of forming bone to various parts of the body. Indeed the occurrence of bony tumours, and the ossifications of almost every organ in the body, so frequently met with in the examinations of morbid appearances, must have proved the fact even to those who have been but little conversant in the researches of practical anatomy. I only contend that, in necrosis,

the periosteum is the chief agent of reproduction; and if, in other affections, other parts have also the power of depositing bone, my position will not be at all invalidated.

Mr. RUSSELL's opinion, on the mode in which the dead bone is removed, appears to me particularly exceptionable, because it leads us directly to form very erroneous and dangerous conclusions concerning the treatment of the complaint. I quote his observations on this part of the subject from the sixty-sixth and three following pages of his Essay :

“ In the other form of the attack, where the sequestra is removed by dissolution and absorption, without making its appearance externally, the disease is more uniform in its progress, and does not admit of so great a variety of symptoms. The process is necessarily tedious, and always attended with a profuse discharge of matter.

“ The dissolution of the sequestra is more

or less complete. In young subjects it is more quickly and more completely dissolved. In those of more mature age, the dissolution of it is more tedious and uncertain; and, in some cases, a small portion remains unchanged, and resists all the power of the system.

“ The internal and softer parts disappear first, and probably owe their decay to the spontaneous decomposition which all parts of the body naturally undergo, when they are deprived of life, and detached from the system. The gradual operation of these unseen causes is, perhaps, sufficient to accomplish the destruction of the sequestra in most cases. At the same time, their action is doubtless very much promoted, and the process of dissolution very greatly accelerated, by the solvent power of the purulent matter which surrounds the sequestra; for this constant maceration facilitates the spontaneous decomposition of the detached bone, and by reducing it to a fluid state, prepares it to be removed by

absorption, or to be washed out along with the discharging of matter."

In answer to this statement, I contend, in the first place, that we have no facts nor experiments, which authorise us in ascribing to pus any such solvent power, as is here represented. And, secondly, I affirm that the appearances, exhibited by the sequestra, are such as we should have expected, on the ground of its being absorbed by the vascular lining of the new bone; and exactly the reverse of those, which the immersion of the bone in a fluid capable of dissolving it, would have exhibited.

The surface of the sequestra in contact with the granulations that line the new osseous cylinder, is the part in which its destruction proceeds the most vigorously. Here the bone presents a kind of worm-eaten surface, with depressions and sharp ridges corresponding to the form of the granulations. And it is just in this part that the close approximation of the new and old bones leaves no room for the lodge-

ment of matter. In those situations, on the contrary, where the sequestra is exposed in the bottom of an ulcer, and where it must be incessantly covered with pus, the process of destruction stops. Had the removal of the dead bone been effected by solution, that cause should have shewn its operation most unquestionably in this very part. Similar phenomena may be noticed in exfoliation. Granulations make their way between the dead and living portions. They first make a groove round the dead edge, and then proceed, by the absorption of the dead part in every direction, till they meet in the centre. The inner surface of the exfoliated piece presents the most undeniable proofs of the absorbent power of the granulations; while the exterior, which has been all the time soaked in pus, is not in the least altered.

After the immersion of a piece of bone in a fluid capable of dissolving it, we should naturally expect to trace the effect of the menstruum by some alteration in the appearance of the surface subjected to its

action. A softening of the bony substance would be anticipated; but no such change is observed. The bone retains its natural hardness, and possesses risings, &c. which the action of a solvent would probably have destroyed.

The pernicious practical consequence that might be very fairly deduced from Mr. RUSSELL's opinion, would be that of encouraging suppuration, with the view of promoting the solution of the sequestra. How contrary such a doctrine is to the notions, which ought to guide our treatment of necrosis, will appear most clearly from the observations which I shall presently make on that part of the subject.

I. B. F. Lèveillé has, like M. Brun at Toulouse, endeavoured to controvert the opinion generally maintained, that a new bony cylinder may be formed round the original bone. The former writer on necrosis observes:—" Il ne faut pas croire alors que l'os soit nécrosé dans toute son épaisseur; car on se mèprendroit beau-

coup. Il est frappé de mort dans cette partie qui est plus voisine du canal, et qui recevoit particulièrement la vie des vaisseaux sanguins que lui transmettoit la membrane médullaire, son périoste interne. Au contraire, tout ce qui est en rapport de vitalité avec le périoste externe, ce qu'on pourroit appeler avec Scarpa le *cortex* de l'os, est parfaitement sain, et doit concourir à l'expulsion du corps étranger qu'il contient et qui lui est concentrique. Pour cela, il se gonfle, se tuméfie ; de compacte, dense et serrée qu'étoit sa texture, elle devient épaisse, spongieuse, molle et moins consistante. L'os peut acquérir un volume considérable, et offrir une exostose des plus prodigieuses. L'inflammation du tissu parenchymateux de l'os sain, se continue bientôt au périoste, au tissu cellulaire qui le recouvre, et à toutes les parties molles qui l'avoisinent : en un mot, la totalité du membre est affectée.

“ Le pus augmente en quantité dans l'intérieur de l'os ; chaque jour la pression devient plus forte contre cette substance

spongieuse, molle, de l'extérieur de ce même os, autrefois d'une consistance si dure et si serrée. C'est cette partie nouvellement développée, qui forme cette espèce d'étui, de gaine dans laquelle est contenu le séquestre et le pus dont il est baigné de toutes parts. Les parois de cette nouvelle cavité osseuse sont formées aux dépens de l'os lui même, et non par un changement d'état du périoste."*

Mr. MACARTNEY's observations are so conclusive, that I should have no hesitation in adopting his opinions on the phenomena which occur in necrosis, even if I had not had ocular proof that the sequestra in the early stages of the complaint preserves the bulk and figure of the original bone, which never could have happened unless that part had perished in its whole substance. Of this fact I have been still more completely satisfied by viewing different specimens preserved in Mr. ABERNETHY's Museum, in the presence of Mr. LAWRENCE, the anatomical demonstrator.

* Mémoires de Physiologie et de Chirurgie pratique, par Scurpa et Lèveillé, p. 283, 285.

The soft parts investing a bone which is undergoing necrosis, suffer in the same manner as we have described in white-swellings: they inflame and suppurate, and at this period the patient is brought into a very alarming and hazardous situation. To relieve this complaint, an operation has been proposed, that of denuding the new osseous shell, and perforating it with a view to extract the sequestra. In some cases, in which the bone has become dead to a small extent, and is thinly covered, such an attempt may be feasible; but in the majority of instances, and especially in the thigh bone, it must be utterly impracticable.—Amputation might certainly be performed in these cases, but not without the probability of extensive exfoliation. I can recommend a mode of treatment which supersedes the necessity of either of these formidable operations, which indeed is exactly similar to that adopted for the relief of soft parts covering a diseased joint.

The occasional application of leeches, combined with the use of blisters, and the

savine cerate, will obviate the occurrence of abscess ; a most important point in the treatment of the complaint. If the external parts are kept free from disease, by these means, the absorption of the sequestra will in process of time be effected. The extent to which these remedies must be employed, and the frequency of their repetition must depend upon the irritation excited in the external parts. If there is an interval of ease, and the limb is neither swollen nor tender to the touch, the treatment may be interrupted for a time ; but whenever pain is again felt, the use of leeches must be immediately resorted to ; and when ease has been procured by their application, blisters and the savine cerate must be again employed. The first case I ever treated in this manner, I mistook for a disease of the thigh bone. The patient became so well as to quit St. Clement's Workhouse, to which she returned after an absence of above six months, in a hectic and miserably reduced condition, having just quitted a hospital, in which she had been salivated. Although I succeeded in

preventing the formation of abscess, she died in three weeks, and afforded me an opportunity of examining the disease, which I found to be necrosis, and not, as I first imagined, a carious bone. I have been equally successful, and less ignorant of the nature of the case in other instances; but I will not claim the merit of being the original proposer of this mode of treatment; for when I communicated my notions on the subject to Mr. ABERNETHY, I found that he had already in his lectures promulgated this doctrine; to him therefore mankind is more largely indebted for the usefulness and propriety of this mode of treatment, than may have been hitherto conceived. I only know, that we think alike on the subject of cure, and shall leave to his much more able pen the publication of his own remarks.

SECTION X.

ON LUMBAR ABSCESS.

REMEDIES, recommended in particular complaints, have frequently, in consequence of too general an application, lost their reputation for the cure even of those diseases, for which they were originally intended. Hence, I should be sorry to have it supposed, that I either adopt in my own practice, or recommend to others, the indiscriminate use of any particular mode of treatment; and I trust, that the relation, which the cases hereafter mentioned bear to the more immediate subject of my observations, will avert the possibility of such an imputation.

The effect, which I had observed artificial drains to produce, in discussing several collections of fluids, and even in dispersing the abscesses, which generally attend white-

swelling, naturally led me to employ the same treatment in similar complaints of other parts of the body. The first opportunity, that I met with, of bringing my opinion on this subject to the test of practice, was a case of large lumbar abscess.

The patient, who was of a strumous habit, had, in the early part of his life, laboured under a diseased hip, which recovered, after passing through the suppurative stage. The skin, covering the most prominent part of the abscess, for which he applied to me, was thin and inflamed. He was very weak and feverish, and was troubled with night-sweats, flushings, loss of appetite, and cough.

I feared, that if the abscess burst, or was opened, while the patient remained in this state, he would sink under the discharge, and therefore applied a blister over the whole swelling. After removing the cuticle, the part was dressed regularly every day, with the ceratum sabinæ, and the discharge which took place was so far from

producing any debilitating effect, that the patient's health was gradually restored: the pain in the part slowly abated, and, in a short time, the size of the tumour was very perceptibly reduced.

By submitting to this treatment, for nearly the space of a year, he completely recovered, and has since enjoyed a perfect state of health. That part of the swelling, where the skin was thin and inflamed, at last ulcerated; but no matter escaped, nor did the introduction of a probe into the sore lead to any cavity.

Another case of lumbar abscess was successfully treated in the same way. The size of the tumour in the loin, was so large, that it could not be included within a pint bason; and there was another swelling below Paupart's ligament of smaller dimensions. That the purulent fluid was contained in one sac, appeared clearly, from the impetus caused by striking the superior tumor, being transmitted to the hand placed on the inferior one. I applied a blister on

the lumbar abscess, and dressed the part with the ceratum sabinæ. A gradual diminution, and at last an entire removal of the swelling below Paupart's ligament took place, but no reduction of the tumour in the loin had then succeeded: at length, however, this also entirely disappeared. The manner in which the swellings were successively removed, afforded an additional proof of the discussing effect of the means I used.

A woman applied to me on account of a very large lumbar abscess. This I immediately punctured with a small trocar, when twelve ounces of inodorous matter of good consistence were discharged. I tapped the swelling about twenty times at intervals of six or seven days, and the cyst became so contracted in consequence of these repeated operations, that an ounce of matter only escaped from the last puncture. Having found that the surface of the abscess was now no greater than might be expected to furnish such a quantity, I enlarged the

opening, and the wound, from which some flakes escaped, healed in a fortnight. One circumstance which occurred in the early part of my attendance on this case deserves to be mentioned.

The sac became painfully distended, while I was absent from town a few days, and the fluid discharged from the next puncture was extremely offensive. I now tapped the tumor every other day for a week, when the matter lost its smell, and regained its usual appearance. I conceive that the unfavorable change in the properties of the matter, can only be accounted for by the inflammation excited by the distension of the cyst.

The termination of another case was equally successful; but the patient died two years after her cure of phthisis pulmonalis. When the trocar is employed for the evacuation of a lumbar abscess, any flake of cellular membrane, or coagulable lymph, that impedes the flow of matter,

can be easily pressed back by the introduction of a probe through the canula. In the cases above-mentioned, I always introduced the trocar through the same puncture, and was pleased in observing that the aperture did not ulcerate, and that no matter escaped after the part was dressed. I have had no opportunity of examining persons who died with these complaints.

I have never observed a single patient with lumbar abscess paralysed in the lower limbs: but I should expect that if the disease originated in a morbid state of the bodies of the vertebræ, symptoms of palsy must necessarily precede the appearance of the abscess. If such a case should occur to my notice, I certainly would attempt the dispersion of the abscess by means of a purulent drain.

About fourteen years ago I was sent for to Lambeth, to see a person who had lost the use of her upper extremities for some months. I begged to examine the state of her neck, and discovered an abscess which

originated from a carious state of the cervical vertebræ ; I directed a blister to be applied over this, and that after the cuticle was removed the surface should be dressed with the cantharid ointment ; for at that time I had not discovered the efficacy of the savine cerate, and the integuments were too inflamed and thin to admit of the caustic.

A singular appearance manifested itself on removing the cloaths to view this abscess. One side of the chest was covered to a great extent with a layer of incrustated matter. She informed me that her breast and the surrounding parts had been destroyed by cancer, and that, if this incrustation was by any means partially detached, the sore spread until it was reproduced. It is right to mention that my opinion was asked not on account of the palsied state of the upper extremities, but to relieve her from the painful condition of the abscess.

The practice of discharging large collections of fluid in gradual quantities by the

means of a trocar is by no means novel. We find that DECKERS* adopted this plan in the case of a very large tumor which was situated on the internal surface of the thigh, but it seems the canula was not removed, and that a cork was put into it to regulate the precise quantity, which was to be discharged at different times

I was surprised to find Mr. BENJAMIN BELL recommending the same practice in cases of lumbar abscess. This systematic writer observes: "The matter, however, ought certainly to be discharged in such a way as to prevent the air as effectually as possible from getting access to the cavity of the abscess. With this view a trocar may be used with advantage. By pressing the matter down to the most depending part of the abscess, the skin is made so tense, that a trocar is easily introduced. This I have done in different cases with complete success: and the patients wore a small canula in the opening for several

* Deckers *exercitationes practicæ circa medendi methodum*, 1696.

months, for the purpose of giving a free vent to the matter." I am not at all amazed, from the continued source of irritation, which the retention of the canula must have produced, that such a length of time was required for the recovery of the patients, and I consider them as extremely lucky to have escaped the usual fatal consequences of such long-continued draining.

The advantage of treatment which I have employed for the relief of lumbar abscess, appeared to me to have been derived from puncturing the cyst at different times, by which means an immense cavity is enabled to contract itself to the smallest possible dimensions. The part was punctured with a small hydrocele trocar, and care was taken that the aperture should heal by the first dressing. I have tapped these collections frequently in the same part, in some cases above thirty times, and the puncture has always closed immediately. A piece of lint and adhesive plaister were the only dressings I employed.

Mr. ABERNETHY, as appears in his first essay on lumbar abscess, was not accustomed to discharge the whole contents of the cyst at one time, but in his supplement on this subject, we find this very respectable surgeon, expressing himself thus: " When I first began to open lumbar abscesses in the method I have recommended in this and my former essay on the subject, I was extremely solicitous to do it in such a manner, that the inner part of the aperture might act as a valve, to prevent any matter from oozing out so as to keep the orifice open. I have found, however, that great care in this respect was quite unnecessary, and by using a broad abscess lancet, the wound is generally sufficient to give a discharge to those coagula which are frequently found in the matter. I always completely empty the abscess, and then bring the lips of the orifice together by means of lint and sticking plaister, as after the operation of phlebotomy; and over these a compress and bandage are applied. I dress the wounds every second day, and of late have found very little difficulty in healing

them, though many of them granulate before they completely unite. The only troublesome circumstance that has lately occurred to me, has been an enlargement of the lymphatic glands on the part of the thigh, at the place where the abscess has been opened."

I have seen my father let out the matter by a small puncture with a bleeding lancet, as he made no attempt to heal the orifice, it remained open, and this want of precaution may account for the fatal termination which constantly ensued. This ill success determined me, in the earlier part of my practice, to leave lumbar abscesses to burst of themselves. The evacuation of the whole matter at one time, produced a very weakening effect, which the patient never got the better of; whereas, when the pus escaped gradually, some cases did recover. I presume to recommend the practitioner to exert every means for the immediate healing of the wound; for if that should not take place, the patients will be in no better situation than those

who submitted themselves to my father's care.

I have read Mr. ABERNETHY's two tracts on lumbar abscess with considerable interest, but cannot avoid wishing that my friend had been more generally successful in procuring the immediate healing of the wound; I think if he had thus been fortunate he might not have experienced the trouble he complained of with respect to the lymphatic glands of the thigh; nor probably should I have had the opportunity afforded me of dissenting in the slightest particular from the practice adopted by him in instances of lumbar abscess.

SECTION XI.

ON THE CURVATURE OF THE SPINE.

THE history and treatment of that species of curved spine, which is attended with paralysis of the lower extremities, have been so ably described by our immortal countryman, POTT, that nothing remains for any future writer on the subject, but to give his sanction to the means which he so fortunately suggested for the relief of the complaint. To this course I should most certainly have confined myself, had not a publication appeared lately, containing what seems to me to be the most erroneous notions on the nature and treatment of the disease. It must be very clear that I can experience no gratification in engaging in a controversy with Sir JAMES EARLE; and I add the present section to my work, because I consider it incumbent on every

writer to notice the errors of his predecessors, without any personal or unpleasant allusion to their authors.

A practical surgeon would not discharge his duty to the public, nor shew a proper respect for the character of his profession, unless he exerted himself in the removal of mistaken impressions, without regarding their author, or the circumstances under which they were produced: nay more, if he neglected to point out errors in his own writings, or in the works of others, I should consider him as actually responsible for their consequences. These motives operate the more powerfully on my mind, on the present occasion, inasmuch as the gentleman above-mentioned, the author of the pamphlet alluded to, is a near relation of Mr. POTT's, and holds the situation of senior surgeon to the largest hospital in this metropolis. The objectionable statements of Sir J. EARLE may be reduced to the two following propositions. First, that nature has the power of supplying the place of the vertebræ, destroyed by

the disease, by means of a newly-formed substance; and, secondly, that the proper mode of treatment consists in the use of such machines, as by supporting the weight of the upper parts of the body, may prevent the approximation of the vertebræ situated immediately above and below the chasm created by the disease; or may even allow an opportunity for the spine already curved to regain its natural figure. The following quotations will shew that I have not misrepresented his opinions on these subjects.

“ The first and great object in our endeavour to relieve this disease, must be to prevent the increase or continuance of the caries, and to give nature an opportunity of restoring the weakened part by furnishing fresh growth of bony matter.”

“ Surely it appears reasonable that those parts should be strengthened and supported, while nature with the assistance of issues is doing the work of restoration by putting a stop to the caries, after which bony matter

is deposited to supply the deficiency which the disease has produced. We apply splints to a broken leg, while ossification is forming, we do not allow any pressure to be made on it, while that natural process is going on, and the patient takes off the weight of the body from it by means of crutches, until it is perfectly strong, and capable of its own duty. I am at a loss to find any good reason, or sound argument, why the same means of assistance, at least so far as it lies in our power, should not be applied in cases of a weakened spine, in order to take off superincumbent pressure, and to endeavour to restore the actual form of the spine during the progress of the cure; if this be not attempted or cannot be brought about at this time, the consequence must be that the back will remain crooked during the cure. Nature is obliged to do her work, while it is in the bent position, and though the strength of the pillar be subsequently encreased, the cure itself becomes in some degree an evil, and a lasting one, as the growth of new bone in that situation must consolidate all the parts, and

must confirm the curvature, exactly, or nearly as it stood, before the cure was attempted; for whatever power the issues have in strengthening, it cannot be supposed that they can materially alter the curve which is already formed. The period when we are most likely to improve the form of the pillar must be during the progress of the cure, while the parts allow of some latitude of motion; when they are once become consolidated and fixed by the growth of bony matter, no alteration scarcely can take place but what is effected by the future general growth of the whole body."

I shall have great satisfaction, if I am so fortunate as to convince Sir JAMES EARLE of his error, and to effect this desirable object, I shall insist in the first place, that no specimen of diseased vertebræ is to be found exhibiting such a deposition of new bony matter, as this author describes. If previously to the espousal of his hypothetical notions, Sir J. EARLE had glanced his eye over the engraved plates, which Mr.

POTT's publication on this subject contains, or had taken the trouble of inspecting some specimens in Mr. ABERNETHY's museum, he would have been satisfied of the truth of this assertion. In short it appears, that in every case there is no more ossific matter supplied than is requisite to cement the bones together. Indeed if the circumstance had been otherwise, we should probably have had occasion rather to deplore the miserable condition of the patient, than to admire the all-wise disposition of the creator. For if bony matter had been so profusely secreted as to supply the hiatus caused by the destruction of the bodies of two, three, or four vertebræ, which occur not unfrequently in this complaint, endless sufferings of the paralytic kind would probably have ensued from the newly-deposited bone pressing on the spinal marrow, laid bare to so great an extent. If then it be granted, as the inspection of every specimen in this department of morbid anatomy most incontrovertibly proves, that the chasm caused by the loss of the bodies of the vertebræ is never filled up by any

new matter, the reader will anticipate the conclusion to which I am hastening; viz. that when the disease has proceeded so far as to destroy one or more bones, the curvature caused by the approximation of the neighbouring sound ones, is a necessary part of the curative process; that the patient could not recover unless this salutary curve took place, and consequently that “the preservation of the upright figure of the human frame,” is an object incompatible with the restoration of the patient’s health. The annexed engraving will sufficiently explain and illustrate the view which I have taken of this subject. I may adduce the words of Mr. POTT in order to confirm my opinion that the curve is the effect of the disease, and that the paralytic symptoms cannot quit the patient, until the chasm occasioned by the loss of the bodies of the vertebræ has been removed by the approximation of the bones above and below the complaint.

This author observes that “there is no displacement of the vertebræ with regard

to each other, and that the spine bends forward only because the rotten bone or bones being unable in such a state to bear the weight of the parts above ;” and in another part he remarks, “ that according to the degree of carious erosion, and according to the number of the vertebræ affected, the curve must be less or greater.” Having thus proved, as I trust, to the reader’s satisfaction, that Sir JAMES EARLE’s first position is totally unfounded, the treatment which he has founded on this, must necessarily fall to the ground, and I might therefore be justified in passing over his observations on that part of the subject in entire silence. I shall, however, take the liberty of making a few additional remarks. Any effort used to prevent the approximation of the bones, if such an object could be effected, would be injurious. I will pay a compliment to Sir JAMES’s theory, and suppose he is able to amend the crooked figure of the spine by his machine ; will he then undertake that ossific matter shall be secreted in the quantity necessary to occupy the place occasioned by the loss of

the bodies of the vertebræ? He has promised as much, but I am confident he will never keep his word, and we ought to be grateful that he will never have it in his power. I will not offend the reader's judgement by describing the efficacy of instruments in the various cases, to which their application has proved serviceable, especially as these occurrences are in no way connected with the subject under present consideration. We know well how to appreciate the value of mechanical assistance in deformities which arise from weakness, or in such as are naturally produced, but my experience has most clearly taught me that such assistance is not in the least degree availing in that curvature of the spine, which is occasioned by the loss of one or more of the bodies of the vertebræ. On this subject therefore I may venture to state, that the result of practice will confirm the reasonings already adduced concerning the natural processes which accomplish the cure of this complaint. I should be wanting in candour, if I did not inform the student, that I employed the instru-

ment recommended by Sir JAMES, in a case of curvature of the spine, attended with paralysis of the lower limbs. The machine was worn one day, but the child, who was about six years of age, could not be prevailed upon to submit to a second application: it was not unaptly remarked at the time, that if the child were to carry the instrument, there should be some contrivance invented to carry the child. The other instance in which the mechanism failed, was in a case which Sir JAMES EARLE attended; the persisted recommendation of the use of the instrument first introduced me to the notice of the family. This case recovered by Mr. POTT's treatment, unaided by any mechanical means. In the instances I have mentioned, its failure, or rather its inutility, appeared at the commencement of the treatment, and that was the period in which it would have been more fairly ascertained what relief mechanical aid was likely to afford.

I take shame to myself, that I could have been guilty of such weakness, as ever to

have recommended the instrument; and the only amends I can make is the assurance, that I will never in future adopt any mode of treatment, without having first fairly and fully investigated its merits. I refer the reader to the four cases which Sir JAMES EARLE has brought forward, as proofs of the efficacy of mechanical assistance; and am inclined to believe, that he will concur with me in opinion, that they go fully to establish the advantages caustics were of, without shewing that any benefit was derived from the use of the machine.

There is another point of practice recommended by Sir JAMES EARLE, to which I cannot readily assent; and that is a preference given by him to the seton. This subject is introduced by the insertion of a letter written by Dr. LATHAM, in which he says “it is not merely an issue that is wanted, but a deep-seated drain; and the nearer to the caries such drain can be established, the better chance there must be for the removal of the disease. “The setons,” Dr. L. goes on to say, “have indeed a ma-

nifest advantage over common issues, for they embrace a larger extent." The situation for either of these remedies is the same: if the caustic be employed, the integuments are destroyed; if the seton be used, the skein of silk is lodged under them; and it is the same surface which supplies the purulent discharge in both instances. I always thought that the suppuration was proportioned in its degree to the destruction of parts. A train of caustic can be applied in any situation of the spine, and to any extent, which is not the case with the seton. In curved spines the integuments cannot be thrown into folds for the use of the seton-needle, but this circumstance affords no obstacle to the application of the caustic.

That Dr. LATHAM directed a seton to be inserted, so as to include the extraordinary space of about six inches, I verily believe; but I must hesitate a little in believing that the operation was effected as he prescribed. I have the highest opinion of Dr. L.'s medical abilities, but I hope he will excuse me

for thinking, that in the surgical department he may be considered rather too theoretical.

To Sir JAMES EARLE's assertion, "that it (Dr. L.'s letter) certainly strongly corroborates the advantages to be derived from setons, and shews how well calculated they are to search out the situation of the disease, when it is not perfectly apparent to the sight or touch," I think it unnecessary to reply; as it is very evident, that the judgment of the practitioner must discover the proper situation for the remedy, and be most likely to detect the seat of disease.

I strongly recommend the young practitioner to prefer the caustic issue to a seton: the former remedy can be employed to any extent, whereas the latter, in cases of considerable curvature, cannot be so applied as to include the whole seat of the complaint within its operation.

I cannot take leave of Sir JAMES EARLE without stating, that I think the community

indebted in a very great degree to him, for the more general introduction of injection, as a radical cure for hydrocele ; and so zealous am I for the improvement of our profession, that I experience much regret that I cannot with equal propriety felicitate this author on any of his other attempts to advance the art of surgery.

It ought to be noticed, that, in the history of the case communicated by Dr. LATHAM, in the letter addressed to Sir JAMES EARLE there could have been no curvature : the Doctor says, “ In a case about two years ago, where the effects of pressure of the spine were but too evident, from a total loss of sensation in the lower extremities, and where, from the same cause, there were involuntary discharges of urine, and very obstinate costiveness, and, in short, every symptom which usually characterizes the disease ; but where the precise spot of pressure could not exactly be ascertained, I directed a seton to be inserted on each side of the spine, so as to include a space of about six inches. In a very few

days some advantages were observable ; and in three weeks he had a greater command over his urine than he had experienced for many months. The setons were maintained for more than half a year, without any other difficulty than the insertion of a clean skein of silk when the old one was nearly expended, and which was easily effected, by looping that which was fresh into the end of the other ; about which time the patient was so far recovered, as to walk with the assistance of a stick." This is certainly a good case, and the Doctor manifested much professional judgment in the treatment of it ; but had there been curvature the integuments would have been more on the stretch, and the person who passed the seton would not have had it in his power to have occupied such a quantity of parts as intimated in this letter.

Mr. BENJAMIN BELL does not speak with confidence of the good effect of issues in curvatures of the spine, attended with carries ; nor, indeed, does he seem to entertain notions similar to those which Mr. POTT

formed, and which others entertain on the subject. He says, “ Mr. POTT, to whose observations upon this subject we are much indebted, speaks highly of the effects of issues placed as near as possible to the tumour. He advised an issue to be opened with caustic on each side of the tumour, large enough to admit of a kidney-bean, and the bottom of the sore to be sprinkled, from time to time, with the powder of cantharides. This I have often practised, in various cases; and in some instances with good effects. But in all of these there was reason to suppose, that the seat of the disease was in the ligaments only, and not in the bones of the spine. When they have appeared to prove useful, the bones have been not affected. I conclude that the mitigation of symptoms has arisen from the cause I have mentioned, the pressure upon the spinal marrow being lessened in the progress of the disease.”*

* Surely the author should have substituted the word “cure” for “disease.”

The issues should be of sufficient length to extend above and below the curve produced by the diseased state of the spine. Mr. POTT in his practice certainly caused his eschars to be made of a size considerably more extensive than his publication directs. When we speak of curve, we are not to imply that state of bend which must necessarily arise from the whole spine above the complaint falling forwards, but that projection of the spinous processes marking the degree of curvature. Mr. POTT insisted in his lectures, and very justly, that there could be no curvature of the spine, of the nature he had written upon, without the body or bodies of the vertebræ giving way, in consequence of disease: whereas Mr. BELL speaks of curvature arising from a morbid state of the ligaments. It must be apparent that this affection can bear no analogy with the complaint which Mr. POTT described in his Tracts on Curved Spine. Another fact, of no small importance, is, that the bodies of the vertebræ must be more or less destroyed, to produce a curvature from within outwards. A weak-

ness, or disease of the ligaments, rather tend to the production of a lateral curve; although I know that sometimes the spine is bent forwards; but if the patient be relieved of the weight of the upper part during the surgeon's examination of the complaint, it will be readily seen what degree of deformity is attributable to weakness, and what may properly be ascribed to carries; above and below which the caustic remedy ought to be applied.

SECTION XII.

ON SPINA BIFIDA.

I HAVE been induced to add this section to the preceding sheets, because the drawings which were taken from the subjects afford a satisfactory view of the state of parts attending Spina Bifida.—I have experienced the want of such assistance, to satisfy the parents of the inutility of our art to remedy this grievance.

The child from whom the bone was taken had a swelling of the same appearance as that which is described by Mr. LANGSTAFF, and which he obligingly afforded me an opportunity of seeing. In the case I attended the tumour was distended with fluid, which I discharged by a puncture: it was pellucid, and incoagulable by acid or heat, as recorded to be the property of the water

which is sometimes found in the brain of maniacal subjects*. I was sorry that I evacuated the swelling, as the child's sufferings seemed much increased. After the operation, it was seized with a tremulous motion of its lower limbs, attended with incontinence of urine and involuntary discharge of the fœces; and in three days after the puncture was made the child died.

Mr. BENJAMIN BELL proposes to include the base of the tumour in a ligature, and as soon as the tumour has fallen off, to apply a firm stuffed pad to the opening between the vertebræ. It must appear to every person of the meanest capacity, what a condition the child would be in, if the parts did not unite, which, from their texture, I think is not improbable: they have appeared to me as possessing vital powers very inadequate to the expectation of any thing like a healthy healing taking place. In the case I punctured, the opening manifested no disposition to heal, and fluid constantly flowed from it until the child died.

* Haslam's Observations on Insanity.

I shall in future leave these cases to their own fatal termination, as was the practice of Mr. L. in his attendance on the following case.

CASE.

“ An infant, two days old, was brought to me, in August, 1807, with a spina bifida, situated in the lumbar vertebræ. The tumour was about the size of a small pot orange; the integuments covering it were of a beautiful transparent cherry colour, except on the centre, which was ulcerated to the circumference of a shilling.

“ The child, making every allowance for its age, was small, deficient in strength and vigour, and much emaciated; and when the tumour was gently pressed, great pain seemed to be produced.

“ The methods of cure hitherto recommended having proved ineffectual; and as spina bifida is, I believe, allowed by the

most eminent practitioners to be incurable, I did not think myself reprehensible by determining to leave the event to nature.

“ The child's bowels being disordered I merely ordered an absorbent mixture; and requested it might not be placed on its back, for fear of giving pain, and increasing the ulcerative process.

“ The tumour continued to increase gradually, and the ulcerated part spread in proportion, and secreted good pus till a few days of its death, when the middle part began to protrude beyond the sound integuments, and appeared quite diaphanous, and a transparent fluid oozed from several minute points.

“ The sufferings of the child were increased greatly about the time the fluid began to make its escape through the protruding dura mater; the lower extremities were paralyzed, stool and urine voided without the smallest effort of the child.

“ The contents of the tumour oozed freely from almost every point of the ulcerated surface, and in the course of that day were nearly evacuated. I now applied a bandage, but not with any hope of success: the sufferings of the child were extreme, till the time when death fortunately put an end to its miserable existence.

“ I obtained permission to open the body, and removed as much of the spine, with diseased integuments, as were necessary to make a preparation; as I only wished to shew the figure, situation, &c. of the tumour, having other specimens of spina bifida in my possession.

“ The disease was unconnected with hydrocephalus internus. Bowels much deranged in their functions; sometimes constipated; at other times, diarrhœa so violent as would, I have no doubt, had not means been used to moderate it, have destroyed the child.”

SECTION XIII.

MISCELLANEOUS REMARKS.

IN offering my opinion on several surgical subjects, I disclaim any pretension to the title of an Author. My object in intruding my observations on the public attention arises from a conviction in my mind, that they have been confirmed by practice; and if acted upon by others, mankind might in a degree be benefited.

Thus much is said for the remarks which this section contains; an apology equally required for the many other imperfections of the same kind with which the rest of the work too generally abounds.

As a proof of the absorption of matter being no way injurious to the constitution, I shall briefly state another circumstance under which it occurred.

I was desired to visit a man, who after a fever, which appeared, from the account given of him, to have been typhus, was afflicted with a large abscess, occupying one side of his face, and extending below the jaw. It was painful to the touch, and the skin was in one part reddened. After a discharge had been kept up for three weeks, the whole tumour dispersed, and the patient got perfectly well.

After long continued fever, and sometimes after the administration of mercury for a length of time, patients complain of pain within an articulation, which is followed by an effusion within the joint. The application of a few leeches to the part, and cold acetous lotions, will procure ease; and as soon as that is obtained, the absorption of the fluid has always succeeded the use of blisters and the savin cerate, with appropriate bandage. Those affections of the joints which succeed small pox, measles, &c. in children, do not seem to require the antiphlogistic treatment, but a drain may be immediately resorted to. These mala-

dies very readily yield to this treatment: but it should be understood that this is an effect by no means to be expected in other cases of diseased joints, namely, those which do not arise, as in these instances, from temporary affections of the system.

Swellings of the glands have, by the treatment of leeches and cold washes, been prevented from suppurating, and I have seen instances in which these tumors have continued in a painless and indolent state during life, an effect every way preferable to their forming abscess. I have been induced to treat the integuments, covering a swollen gland, with the view of preserving them whole, in the same way as we have recommended to be pursued with regard to the external parts investing a diseased joint.

I have seen glands suppurated, but so partially that I have endeavoured to keep the integuments free from inflammation, and passed electric shocks through the gland, applying leeches to the skin and cold washes. This practice has sometimes dis-

persed these swellings; at other times suppuration occurred, but under circumstances more favorable, as the maturation was more complete, and the skin was not diseased as we too frequently find it. I have seen the integuments inflame and ulcerate, while the induration of the gland has been little diminished by the matter discharged.

A man has this moment applied for my assistance: the integuments, covering the enlarged gland, which had suppurated, were partially inflamed and ulcerated. I think it had been better if the skin had been kept free from disease by the application of leeches and cold washes. In those cases, in which the gland has completely suppurated, the matter should be discharged before the skin inflames, and the part will readily heal by pressure and appropriate dressing.

I have, after the application of leeches and washes, dispersed swollen glands situated in the axilla and inguen, by directing the patient to rub mercurial ointment in

the course of the absorbents. If this practice should be thought eligible the practitioner should, to prevent misrepresentation, assure the patient that he adopts this mode of treatment with no impression of its being venereal.

Strumous swellings of the inguinal glands, of considerable size, have also yielded to cicuta taken internally, and covering the part with the emplastrum gummi ammoniaci cum hydrargyro. It was suggested by a practitioner, that somewhat of the advantage the patient received might be attributed to the local treatment. In consequence of this suggestion I contented myself in other cases with giving the hemlock alone, and had no reason, in the recovery of the patient, to regret having deprived him of any supposed benefit which might have arisen from local treatment. I was induced to try cicuta internally, from having witnessed its effects in the recovery of a patient who abounded with scrofulous swellings in his limbs and different parts of his body. The person had

been under my care without receiving any benefit ; he at length applied to an eminent physician, who directed the hemlock for him. I mention this circumstance to shew that I entertained no prejudged opinion of the efficacy of hemlock in scrofulous cases.

In lax, debilitated, scrofulous persons the nitrous acid taken internally in the proportion of a drachm to a pint of water through the day, has had the best effect in giving strength, and restoring the health and appetite of the patient. To children it is particularly palatable if sweetened with honey. I can in truth say, in those cases, it is an internal remedy greatly to be preferred to cinchona combined even with prepared natron.

I have stated in the Introduction, that the robust and the weak are subject to strumous complaints, and that different treatment in the cure of these maladies should be adapted agreeably to the state of health of the patient.

To a note left at Mr. JEREMIAH TAYLOR'S house, requesting information respecting a scrofulous patient of his, the following is that gentleman's reply:—" In answer to your letter regarding the young lady whom you incidently saw at Kennington, I have to observe, that, owing to the hint which I received from you, I ordered her (she being young and plethoric) to take purgative medicines occasionally preceded by calomel at night; which treatment certainly prevented suppuration from taking place on one side of her neck, thereby preserving her from the disfigurement which had obtained on the other side, after a contrary mode of treatment directed by another practitioner a little time before I attended her."

I have seen two cases of hydro-sarcocoele, of the strumous kind, yield to electricity. The one patient had, when a child, a swelling of the knee, which recovered after the suppurative stage of that complaint; the other had strumous swellings of the neck, with scrofulous ophthalmia, at the time he

consulted me on account of the disease of the testicle.

The two cases were so exactly similar, the description of the one will answer to that of the other. The body of the testis, and its epididymis formed one indistinct mass, and the fluid collected in the tunica vaginalis was sufficient in quantity to have rendered its evacuation secure from harm; but feeling the posterior part of the swelling the induration and enlargement of the gland was very perceptible. It was smooth in its surface, and not painful upon handling, the only particular uneasiness was its weight which was taken off by wearing a bag truss. I passed electric shocks through the tumor daily for about two months, and the result of this treatment was as follows: first, the absorption of the fluid; secondly, the division of the swelling into testis and epididymis; and lastly, the reduction of these parts to their natural size and healthy structure. I have in the true carcinomatous testicle been directed to treat it in the same way, a means in such a dis-

ease I will never again resort to, as it tended to aggravate the painful symptoms and increase the size of the swelling.

In a case of disease of the testis, which from its symptoms I presumed to be an abscess, I applied a small blister to the scrotum, and maintained a discharge from thence by the savin cerate. By this treatment the fluid was dispersed, and the patient recovered with a diminished state of the gland.

I have also dispersed by the application of blisters, and dressing the part with the savin cerate, several abscesses of the glands of the neck, and three very large scrofulous buboes, where the swellings were composed of distinct glands, which were connected to each other by intervening substances.

These last cases prove very tedious, and the patient suffers much from the repeated suppurations, which, in some instances succeed each other, for a space of more than six months, and even then the part has

sometimes been left in a state of hardness ; and when that happens, scrofulous ulcers are very liable to break out again, and fresh collections of matter to form. Observing that when this circumstance occurred, the sores uniformly healed with induration, I was induced to keep them open, either by an occasional touch of the lunar caustic, or a solution of it in water, till all hardness was removed, and I think I have also seen some effect from a mercurial dressing* in increasing the discharge, and not only amending the state of the sore, but causing the edges of the ulcers to subside.

The opening of scrofulous abscesses in

* The precipitate by pure ammonia, from a solution of mercury, in diluted nitrous acid, made in a low temperature, and applied moist, the superabundant ammonia being previously washed away by distilled water.

The precipitate, after drying, has not appeared to me to answer so well as whilst it retained its moisture, so as to possess about the consistence of cream. It was first proposed to me by Mr. Haslam, of Bethlem Hospital, as an application to venereal sores, or any kind of ulcer, in which the external use of mercury might be thought adviseable, and from my own experience I can recommend it in such cases.

general, when attended with circumscribed hardness, has been found to be productive of harm; for these require, after artificial opening, a longer time to recover than when they are permitted to burst of themselves; but an aperture is indispensibly necessary in those collections of matter which cannot be discussed, and are attended with no surrounding hardness; for here, if the matter be not let out, it will often diffuse itself into the cellular membrane, and cause a number of extensive sinuses.

After the bursting or laying open these imposthumes, the sore has sometimes become phagedenic, though indeed this term will convey but an imperfect idea of that state of sore I wish to describe. The true phagedenic ulcer, according to my opinion and observation, wears rather a cancerous appearance, it enlarges rapidly, has inverted edges, is irregular in its figure, and is sometimes attended with fungus; but the patient does not feel those lancinating pains, nor does he complain of uneasiness when

the part is dressed, nor is the sore subject to bleeding, as is the case in cancerous ulcers; indeed but for such distinctions, and more particularly from these complaints having recovered, they certainly might be mistaken for cancerous.

I have seen six of these cases in the groin, two of them were patients afflicted with the venereal disease, the others were scrofulous: mercury given in the first instance, to those who were venereally affected, tended to enlarge the sore, though it afterwards became necessary to complete the cure.

In these complaints, lint dipped in tar, had an excellent effect in checking the farther progress of the sore, and disposing it to suppurate kindly. And the application of sorrel succeeded in two instances where the tar and carrot poultices, with spirituous fomentations, had failed.

I shall relate the cases of these sores, as accurately as my recollection serves, be-

cause their appearances were peculiar and striking.

A boy, about fifteen, had a large scrofulous abscess in the fore part of his thigh, which burst, and as the natural opening was insufficient for letting out the matter, I enlarged it with the probe-pointed bistory. Next morning, the whole sore had become one continued slough, and was without any surrounding hardness; the mischief went on rapidly spreading, notwithstanding a very liberal use of the bark internally, and was not arrested till bruised sorrel leaves were applied.*

A girl, about six years of age, was brought to me on account of a scrofulous

* My idea of making this application was suggested by the success stated by Dr. Beddoes to have followed the use of a similar plant in some cases of scrofulous ulcerations. His testimony is in favour of the wood-sorrel (*Oxalis acetosella*) which I could not readily procure, and therefore substituted for it the common wood-sorrel (*Rumex acetosa*); but it is probable, from the larger relative proportion of oxalic acid contained in the former plant, that it may be superior in its powers to the latter.

abscess seated on the ulna, which burst, and produced a sore exactly of the description of the preceding one. The child suffered much from the pain, and therefore a solution of one grain of opium was given daily, and as much bark as the stomach could bear. Notwithstanding tar and other applications were used, the sore continued to spread, and I determined upon trying the sorrel, intending, if this should fail in checking the disposition to slough, to make an escharotic application. This however was unnecessary, for the sorrel soon gave a healthy appearance to the sore which continued during its use; and when it was afterwards dressed with lint and calamine cerate, it degenerated into its former sloughy state, which was again removed by the application of the sorrel, and was at last totally healed by it.

Although a purulent drain, artificially excited, ought not perhaps to be esteemed a constitutional remedy, merely from an improvement taking place in the patient's health, in consequence of an amendment

occurring in a local disease; yet certainly it establishes a claim to that appellation, when we find other modifications of the same disease, existing at the same time, and in the same patient, removed by a treatment adopted only with a view to the relief of a local complaint. Fact being at all times preferable to theory, I shall relate some instances inclining me to the opinion that an artificial drain, in cases of scrofula, is in itself a constitutional remedy.

A young lady, about ten years old, had a great number of scrofulous ulcers over her body, besides the joints of most of her fingers being enlarged. Her mother stated, that the child had an affection of her chest, with cough, difficulty of breathing, night-sweats and flushings, and that as soon as one sore healed, another broke out. I informed her that as the child had tried what medicine could do, I wished that she might submit to an issue only. Accordingly I made her one in the arm, and kept some of the sores discharging by the *ceratum sabinae*. In about two years after her first

application to me for relief, her mother informed me, that she had completely recovered of her complaints, excepting that some of her fingers remained rather in a contracted state.

The glands in the neck of a little boy, of about three years old, were in a state of suppuration, and his finger-joints considerably enlarged. A tedious course of medicine had afforded him no relief, and therefore I recommended an issue to be made in the arm. After this discharge had been kept up for three months, the enlargement of the fingers entirely disappeared, and the complaint in the neck was much amended.

From some of the cases which have been stated, it will appear, that the general habit of the patient has been improved by the establishment of a drain, for the alleviation of a diseased joint; and that it may therefore be advantageously employed, as a constitutional remedy. I have recorded some instances, also, in which a relapse did occur after the sores were suffered to heal,

and the patient was obliged to submit to a repetition of the same treatment. But when an issue has been kept open in any part of the body, for a considerable length of time after the cure of the local disease, no such accident has occurred.

SECTION XIV.

ON SCROFULOUS AFFECTIONS OF THE HIP
JOINTS.

I CONCEIVE that practitioners should have in view, in the publication of their writings, either advancement of science, the statement of new facts, or the correction of practical errors, which have been received or circulated through the medium of the press.

Medical authors, without a reference to any one of these objects, may certainly acquire by their writings literary fame; but they can never entitle themselves to the esteem and good opinion of the profession. Such writers and their productions will receive attention and respect from professional readers, just in proportion as they tend to advance the honor and usefulness of the art, and thereby promote the advantage of the public.

Impressed as I am with these sentiments, I will never attempt to promulgate, as my own, doctrines which have been before maintained by others; nor trespass on the time of my reader, by stating the opinions of other authors, which may be always more clearly ascertained, and more fairly appreciated, by a perusal of the original works.

On hip affection, therefore, I have great satisfaction in referring the reader to the excellent observations of Mr. FORD, which will furnish the requisite practical information on this very important subject. By thus pointing out a source of more copious instruction, I conceive that I apologize sufficiently for the small number and desultory nature of my own observations.

Children are peculiarly subject to the disease called a scrofulous hip: and no case has hitherto occurred to me, in which the patient was not of a strumous habit. Affections of this articulation, produced by

accident, may not all be of a scrofulous nature; but the majority of such cases is undoubtedly of that description.

The observations already made, concerning the manner in which other articulations are affected, apply with equal propriety to the disease of the hip joint. The bones become carious to a greater or less extent, and all the soft parts belonging to the joint are subsequently involved. In other cases the ligaments are only affected; or at least they are first disordered, and seem to sustain the the chief weight of the attack.

There are certain appearances in this complaint dissimilar from those which attend scrofulous affections of other joints. The elongation and contraction of the limb are the phenomena to which I now allude. The peculiar position of the hip, and the mode, in which the weight of the superior parts of the body is sustained by this articulation, seems to me to afford an adequate solution of the former appearance; while the latter owes its origin most undoubtedly

to the action of the muscles attached to the thigh bone.

The early stage of this disease is very generally attended with an elongated condition of the lower extremity of the affected side; a symptom, of which no surgical writer has hitherto assigned a satisfactory explanation. The ancients, and indeed many practitioners even of modern times, have assigned as causes of the encreased length of the limb, a supposed relaxation of the orbicular ligament, or a distension of the articular cavity by fluid effused into the capsule. Such are the notions brought forward by GALEN and FABRICIUS to illustrate the meaning of the two aphorisms of HIPPOCRATES concerning the nature of this disease.*

I insert these opinions, because, I con-

* Sæpe in articulis humor pituitosus acervatur, quem myxam appellat (Hippocrates) a quo madefacta articulationis ligamenta, laxiora redduntur: atque ideo facile a cavitate articulus excidit, et rursus non cum difficultate incidit.—Galen in Aphor. Hippocr. Com 6.

ceived until lately, that they afforded the only rational means of accounting for the lengthened condition of the limb. I reasoned from the laxity of the knee and shoulder joint, which we frequently notice, when those articulations become distended by fluid effused into their cavity, and I concluded that the symptom in question owed its origin to an analogous state of the hip joint. In referring to old authorities I have at all times been influenced merely by their usefulness. I have been irritated by observing persons, under affectation of great diffidence and modesty, apologizing for noticing in their writings, the opinions of the earlier authors. I verily believe, modern surgery would have made much more rapid advancement to perfection, had the labors of the ancients been more generally adverted to.

I shall quit this subject, by just remark-

In quo aphorismo Hippocrates causam assignat læsi articuli femoris, quod excidat et recidat, quam in pituitam rejicit mucosam; et est ut puto ille, qui naturaliter solet contineri in articulorum cavitate copia tamen plus æquo adanctus.—Hieron. Fabricii Opera Chirurgica, c. 106, p. 643.

ing, that had a HUNTER been acquainted with the facts stated by ÆTIUS and WISEMAN on the subject of aneurism, the labors of an ABERNETHY would not have been required to perfect the surgical treatment proposed by that late very eminent anatomist and practitioner.

The orbicular ligament of the hip is extremely dense and compact in its structure; and in many parts not less than the tenth of an inch in thickness. Instead of a loose membranous bag, designed merely for secreting and containing the synovia, as in most other joints, the capsule of the hip is the ligament, by which the bones, composing this most important articulation, are tied together with that degree of strength, which the functions of the part so obviously require; hence, until the researches of the anatomist, in the examinations of morbid bodies shall have furnished some direct evidence on the subject, we may reasonably doubt whether such a part admit of the same processes of distension and relaxation which take place in joints of different organization.

A swollen state of the head of the thigh bone, together with a thickening of the acetabulum, have been assigned by some writers as probable causes of the elongation. But I will not occupy my readers time, by commenting on these hypothetical notions, until the existence of the above-mentioned appearances shall have been ascertained by dissection.

There is only one more explanation which I think it necessary to consider. This refers the lengthening of the limb, to the destruction of the articular cartilages, and of the ligament completing the lower and inner margin of the acetabulum. Admitting, for argument sake, what has not yet been proved, that the changes just alluded to, do actually occur in every instance of elongated limb, the gentlemen, who adopt this notion, should have the goodness to inform us, how the limb becomes lengthened in consequence of these changes. I have no hesitation in expressing my firm conviction, that if the connexion between the femur and os innominatum be loosened or

destroyed in any way whatever, the muscles attached to the former bone, would draw it backwards and upwards, and thereby cause a shortening of the limb.

And this objection applies to all the explanations, which I have now been considering, whether they proceed on the supposition of a laxity of the orbicular ligament, and effusion into the cavity; of a tumefied state of the cartilages or synovial gland; or of a destruction of the articular coverings and ligamentum teres.

The use which the patient still makes of the affected limb in progression, and indeed the free power of motion in every direction which the femur still possesses, cannot fail to occur to our minds, on the first examination of the subject, as an insuperable objection to any of the explanations hitherto assigned; all of which suppose a removal of the head of the femur from its acetabulum. This unimpaired motion of the part is utterly irreconcilable with any degree of luxation of the hip. Moreover,

if the latter circumstance has really occurred, should we not expect a vacancy in the natural situation of the head of the femur, and a tumour in the part where it was unnaturally lodged? neither of which appearances has ever been noticed at the period of the complaint now under review.

The importance of the subject demands, that the different opinions should be freely investigated; and it is my sincere wish, that those, which I have promulgated, should be tried, both by reasoning, and by an appeal to facts. It will afford me satisfaction to have any mistake of mine publicly corrected; and the moment I am convinced of error, either in judgment, or in practice, the acknowledgment of my inaccuracies shall be as public.

My own practice, and that of others has afforded me a few instances of recovery without lameness, after considerable elongation had taken place. These facts are, I think, very unfavourable to the opinion,

which assigns a destruction of the cartilages or ligaments as the cause of the lengthening.

I acknowledge my obligations to Dr. FALCONER, for the accuracy he has shewn in making the following observations; and more especially for the use they have been to me in investigating the real cause, why the limb often appears elongated in hip affection.

“ Sometimes the breadth of the nates on the diseased side is much increased, though its prominence and firmness are diminished. A man has the nates on the left side, at least three inches wider than the right.”

In two cases, now under my care, this appearance of the hip is very visible; and, as far as I am acquainted with the subject, this observation originated in Dr. FALCONER.

The following is the paragraph, which more particularly interests me: “ The tubercle, or lower part of the ischium, may, in many instances, but not always, be dis-

covered, by feeling it behind to be lower on the affected side, than the other. A man, now in the hospital, is a remarkable instance of the difference between the height of the bones on each side ; and a pelvis of a person, who died at the same place, and was preserved there many years, shewed it still more strongly." I confess, that this account puzzled me, and, I was induced to wait upon my friend, Mr. LAWRENCE, requesting he would give it every proper attention. Mr. L. then mentioned to me a conversation, which he once had on this subject with Mr. LONG ; in which that gentleman informed him, that Mr. JOHN HUNTER had attributed the lengthening of the limb to the situation of the pelvis ; and that he (Mr. LONG) had found the observation correct in every instance, in which he had attended to that point. Not long after, two cases of diseased hip in children came under my care ; and I felt particularly happy in having Mr. LAWRENCE's assistance and judgment in determining the accuracy of Mr. HUNTER's observations.

We instituted, in both these cases, a very close and minute examination, and noticed the following particulars: when the patients were laid on the table, with the whole body in a straight line, the anterior superior spinous process of the ilium on the affected side was lower than that of the sound side, just in proportion to the difference in the length of the two limbs: this was about a quarter of an inch in one patient, and a full inch in the other. A similar obliquity of the pelvis was equally manifest from behind, when the patients were placed on the abdomen, with the precaution of laying the body in a straight line. It was impossible to place the pelvis in its natural horizontal position, without bringing the body into a curved line, and when we did this, the lower extremities, instead of falling straight under the body, deviated from the perpendicular towards the diseased side. A straight line, drawn along the spinous processes of the sacrum, and continued downwards, did not fall between the lower limbs, as it would in a pelvis possessing its natural position

and bearing, but it touched the heel of the sound side.

The obliquity of the pelvis in these cases, can, I think, be ascribed to no other cause than that of the patient's endeavouring to throw the weight of the body, as much as possible, on the sound hip. The pain, and the general weakness of the affected limb, induce a constant effort of this kind; hence, we observe children bending the knee and hip, and hopping about on the sound limb. The pelvis naturally sinks on the diseased side; and this deviation, which would affect the centre of gravity of the whole body is counterbalanced by a bend of the upper parts of the trunk towards the sound side. Accordingly, we found, that both the patients inclined the head very manifestly over the sound shoulder.

I have been thus particular in describing these cases, to remove every idea of the appearances being supposed to originate in inadvertency, inaccuracy, or want of due examination. I flatter myself that I have

thus given a more satisfactory explanation, than has hitherto been offered to the public, of the manner in which the limb in this complaint becomes elongated: and I am pleased that my examination of the subject has tended to confirm the statement of Dr. FALCONER. The only motive, by which I am actuated, is a desire of collecting useful practical observations concerning the history and treatment of disease; and I always feel grateful to any person from whom I can derive such information.

The shortening of the limb, that comes on in the latter stage of hip disease, has not excited that difference of opinion concerning its cause, which I have had occasion to notice in speaking of the elongated state. When the affection consists in a carious state of the bones, the process of destruction goes on until the head of the femur is removed; and then the muscles draw the bone upwards and backwards, and produce thereby a considerable shortening of the member. Should the ligaments be the parts more immediately concerned, they

are first destroyed, and the limb then undergoes a real luxation, the head of the thigh being drawn upon the dorsum of the ilium; this is the "luxation consecutive" of the French surgeons.

The treatment of this malady is no way different from that which is required in similar complaints of other articulations. The remedies are intended to prevent or subdue inflammation, and to obviate the occurrence of abscess.

The application of leeches behind the trochanter and in the groin will have this salutary effect; abstracting blood by means of cupping in the former situation, when the state of parts will admit of the operation, has been found very beneficial. The use of cold washes is very effectual in procuring absorption of fluid, and an abatement of pain: warm applications have to my knowledge increased the sufferings of the patient, and encouraged suppuration; the wet cloths should be placed on the hip and on the groin.

As soon as ease has been procured by these means, a drain should be established by caustic behind the trochanter, and it should be kept discharging according to the length of time required by the complaint, or rendered prudent by the constitution and age of the patient. If, as sometimes happens, whether the discharge be maintained by blistering and the savin cerate, or by the application of caustic, painful symptoms should arise, these can be removed by the antiphlogistic treatment.

I have confined the afflicted by this complaint wholly to their bed or couch, believing that the deformity so generally produced by the disease, has been too often augmented by suffering the patients to bear on the diseased limb.

A writer* has conceived it necessary to discriminate between the lameness incidental to affections of the hip, and that

* Mr. Samuel Cooper on Diseases of the Joints.

which arises from curvature of the spine. I should not have noticed his remarks on this point because I cannot see any reference which the two diseases can have to each other. But when a surgeon points out a distinction which he conceives worthy of attention in practice, it becomes a duty in every one to ascertain its accuracy, This gentleman believes, that in curvature of the spine, the weakness of the lower limbs affects both sides at once, and is unattended with pain about the knee, circumstances completely discriminating this complaint from the feebleness of the limb, arising from a disorder in the hip joint.

The opportunities, which my experience has supplied, lead to a very different conclusion. In the very early period of vertebral affection, in which the spinous processes have projected very little, I have found one limb very little affected with lameness, while the power of the other was much impaired. Indeed in the more advanced period of this complaint, one limb, in respect of paralytic affection, seems to

suffer more than the other : whether this circumstance can be explained by the bodies of the vertebræ being found more distempered on the one side than on the other, the student will determine for himself. If my reader should require information from me to enable him to discriminate between these two complaints, let him advert to the projection of the spinous processes of the vertebræ in the one, and the lengthened or shortened condition of the limb in the other ; these remarks, together with the attention which he should otherwise pay to the state of the joint of the hip, will prove unerring rules in practice, and not fallacious, as must that judgment be, which rests its conclusion on any circumstance connected with the lameness of the patient.

The annexed representations of diseased hips are taken from patients now under my care. As they are merely designed to exhibit the alterations which this affec-

tion produces in the length and general appearance of the limb, I do not consider it necessary to relate the particulars of the cases. They are all in a state of progressive improvement under the treatment, which I have recommended in the preceding section; and should any circumstance occur hereafter to make them deserving of communication to the profession, I shall publish them in one of the medical journals.

APPENDIX.

MR. FORD's publication on the Hip-disease, is a well written performance; and the student will derive considerable practical information from its perusal. It was with regret I noticed in it a translation of the fifty-ninth and sixtieth aphorisms of the sixth section of HIPPOCRATES; because it appeared to me, that neither would the disease bear Mr. FORD out in his interpretation, nor could he be justified by the original text in translating these aphorisms in the manner he has done.

Mr. FORD says, in the sixty-third page of his book, " I think I may venture to af-

firm that the doctrine of HIPPOCRATES, if the aphorisms alluded to are liberally translated, is very clear and comprehensible to those who are conversant with the disease, and may amount to neither more or less than what follows.

“ Aph. 59.—In the progress of the hip-disease, the standing out of the hip-bone, or its external projection, and the falling in of the nates behind are prognostics of supuration.

“ Aph. 60.—When, in this complaint, the hip-bone stands out, the limb wastes, and the patient must necessarily halt, unless he be cauterized.”

The latter aphorism should certainly be considered as a supplement to the former, and I am supported in this opinion, by the different commentators on HIPPOCRATES: nay their very sense and meaning denote the propriety of so arranging them; and I am almost inclined to think, that if Mr. FORD had thus regarded them, neither he

nor his friend of Lisson Grove could have possibly adopted the translations, which have by them been offered to the public.

I shall first insist that the appearances described in the fifty-ninth aphorism form neither an indication nor a prognostic of suppuration.

By suppuration may be understood the formation or production of abscess; I have never found it necessary in my own practice to advert to the figure of the limb, in order to ascertain the existence of matter; for the sensations of patients, their state of health, and the fluctuation perceived in the part, have rendered me acquainted with, and themselves sensibly alive to, the nature of their situation.

It is obvious that the latter aphorism applies to a condition from which the party might be relieved, and in which lameness may be avoided; now I am inclined to believe that no such case of diseased hip, as that described by Mr. Ford in his transla-

tion of the fifty-ninth aphorism, has ever occurred without the patient being irretrievably maimed. I mean that in those cases of hip-affection, which have advanced to the period of suppuration, the patients have been irrecoverably crippled; consequently lameness could not have been prevented by the application of the cautery, as intimated and directed by HIPPOCRATES in his sixtieth aphorism.

Experience has taught me, that cases, in the incipient stage of the complaint, may recover, previous to the occurrence of suppuration, and thus that lameness may be altogether obviated. I could also adduce, on this point, the testimony of other surgeons.

The elongation of the thigh, the extenuation of the limb, and the falling in of the nates behind, are characteristically represented in Mr. FORD's first engraving, in which it is proper to observe, that there is no mark of suppuration.

The second plate is also a very just exemplification of the appearance induced by a carious state of the bones. The shortening of the limb, and the outward marks of repeated suppurations are well depicted: and, if there were any correctness in Mr. FORD's translation of this aphorism, I will predict, that the patient, whose case furnished the drawing, will carry with him through life, the prognostics of suppuration: as the projection of the hip, and falling in of the nates behind, will remain with him to the latest period of his existence.

These appearances are in fact, consequences of the disease, and never can be regarded as prognostics of suppuration; and, although it be true, that the complaint may have arrived at the height, which is intimated in Mr. FORD's translation of the 59th aphorism, and abscesses have occurred, yet these collections of matter do not take place, on account of the projection of the hip bone, and the falling in of the nates behind, but, are the ordinary effects of the disorder, with

all its ill consequences to health, and its destructive influence on the affected limb.

Should a knowledge of the disease give me any advantage over Mr. FORD's friend, and teach me, that the interpretation insisted upon, by J. C. of Lisson Grove, cannot be supported by the actual occurrences of the complaint, I shall have done my duty, as a practitioner of surgery, in rescuing HIPPOCRATES from the imputation of inaccurate prediction, or of deficient information on this subject.

If I speak confidently in favor of the former translations, which have, until the publication of Mr. FORD's book, been received and considered, with no essential difference, as expressing the true meaning of these very aphorisms, I am justified by finding, that GALEN, and every commentator on the works of HIPPOCRATES are in support of my convictions in favor of the old translators.

In the first of these aphorisms, J. C. of

Lisson Grove, renders the word *καὶ πάλιν ἐμπίπτει*, *et retrorsum incidit, and falls in behind*. In support of this, he tells us, that the word *πάλιν* signifies *retro, retrorsum and contra behind*, as it does *russum and iterum again*; but, from any of the passages quoted by him, we cannot see in what manner the word, though it may be rendered *retro*, can, with any degree of propriety, be translated by the English term *behind*; nor, do we think, that this adverb corresponds with the Latin *retrorsum*, which he uses. But I. C. commits a greater error in his translation of the word *μυξαι* which he calls *suppurationes*. We apprehend, that it will not be deemed too bold an assertion, when we maintain, that the word can have no such meaning: *μυξαι* implies strictly *muci or mucres*, this signification is warranted both by the derivation of the word, and its acceptance by the best commentators.

FOESIUS, in the 254th page of that part of his work, entitled, *Œconomia Hippocratis Alphabeti serie distincta*, defines *μυξα* to be “*humor ille pituitosus et lentus qui*

naturaliter in articulorum acetabulis continetur," he adds, moreover, the following emphatical words by way of illustrations " mucus aut mucor, qui cum purus sit, et secundum naturam se habeat, bene valentes et facile mobiles articulos reddit: ac si contra naturam succreverit et redundarit, nimio humore articulorum ligamenta imbibens et lubricans, eorum prolapsiones facit. Sic aph. 59. lib. vi. $\mu\nu\xi\alpha$ et mucores supervenientes femoris caput læve et lubricum reddentes, in causa sunt ut facile sua cavitatem excidat."

$\mu\nu\xi\alpha$, as appears in Goræus, signifies that " mucor qui est in articulis, in spatiis internis continetur" and not suppuration.* I will subjoin the words of Goræus, $\mu\nu\xi\alpha$ mucor, mucus dicitur ab Hippocrat. humor pituitosus, lentus et albus. Is in partibus exanguibus, ossibus et cartilaginibus colligi consuevit; cum ad eam imbecilitatem pervenerint ut alimentum suum nequeant concoquere.

* Vide Goræi Opera sub voce $\mu\nu\xi\omega$

After these proofs of the clear and plain meaning of the word $\mu\upsilon\chi\alpha\iota$ we are rather surprized at the pertinacity with which J. C. insists upon the propriety of rendering it suppurationes; wishing, however, to bring this matter to a conclusion we beg leave to quote a passage from the appendix to Mr. FORD's observations on the disease of the hip joint. In page 250, we find J. C. expresses himself thus; "to the rendering the word $\mu\upsilon\chi\alpha\iota$, which I have translated suppurationes, although it has various significations, there cannot, I believe, be any solid objection: in vindication of the sense in which I have taken it, I appeal to Gorraeus, who expounds it in the same meaning with regard to this very aphorism."

In answer to the above, we deny that the word has various significations; it signifies mucii and not suppurationes, consequently there is every objection to its being translated suppurations.

If J. C. should feel himself awkwardly

situated, he is rendered so, by his friend, Mr. FORD probably not acquainting him, that mucus and pus are distinct things. In justice to J. C. however, it ought to be stated, that a gentleman, pre-eminently distinguished by his profound knowledge of the Greek language, would, when I stated the question, have committed the same error, but for my explanations, conceiving that mucus or pus might be used indifferently; from this circumstance it may be surely inferred, that, however eminent a man may be for Greek literature, he is not therefore sufficiently qualified to judge of medical subjects, unless assisted by other advantages.

It is really a matter of astonishment, that an appeal should have been made to the works of Goræus; in which I positively assert that there will not be found any thing which could, by the most forced construction, justify us in assigning any such meaning to the word *μυξαι* as the matter produced by suppuration, or pus. I am at a loss to conceive, unless J. C. acknow-

ledges that he is unacquainted with the distinction which medical men have established between pus and mucus, what apology he can offer for such an unwarranted assertion as, “ thus you see that there is not a single word of any importance which I have warped, violated, or translated at my own peril.”

Having thus, I trust, shewn the impropriety of adopting either Mr. FORD's, or his friend's translation from the authorities which they themselves have produced, I shall take the liberty of referring the reader to any of the old commentators on the works of HIPPOCRATES, for they all, without any material difference, agree as to the proper interpretation of these two aphorisms.

Dr. FALCONER of Bath has taken notice of these very aphorisms in his dissertation on Ischias; as his construction certainly favors these gentlemen's translations, I think they are justly entitled to every support Dr. FALCONER's opinion can possibly supply.

The Doctor expresses himself thus, “ in the sixth section of the aphorisms of HIPPOCRATES, there are two that refer to this disease, which, I think, have been mistaken by the translators, who have expressed themselves, as if there was an entire dislocation of the head of the bone, when the word* implies no more than a projection, which is indeed a partial dislocation. The meaning of HIPPOCRATES, is, I think, clear enough, that if the head of the thigh-bone be at first considerably protruded, or, as he expresses it, stands out, and again sinks back (suddenly, as I think implied) into the socket or acetabulum, it indicates a suppuration to have taken place ; and this, I take to be true, provided, as we may reasonably suppose, that HIPPOCRATES meant, that there be no general amendment or abatement of the symptoms.”

It is really painful to my feelings, that I should again advert to these aphorisms, but, with due submission to Dr. FALCONER's ex-

perience, I can no more adopt his opinions, than those, which I have before objected to. It is a pity, that men of professional ability, and others of literary attainments, should be so unmindful, as to neglect the poet's advice to "speak no more than is set down for them:" if this admonition had been attended to, I am satisfied, that an opportunity would never have been afforded me (as a practical surgeon) of defending HIPPOCRATES against a charge of professional ignorance, want of sense, and incapability of prediction, which, in my mind, is implied, could it be supposed, that his meaning was in fact that adopted by either of these gentlemen.

It is rather curious, that it never occurred to them, that the meaning of an author can be only ascertained by what he himself says on the subject. The reader will readily see, that all the objections, which have been made to Mr. FORD's and I. C's translation, apply equally to that of Dr. FALCONER. I have great respect for the Doctor's medical skill, but surely his surgical reputation is a

little impeached, when he states, “ that the membranes, which were at first thickened by inflammation, and which thrust the head of the bone outwards, being melted down by suppuration, allow it to fall back again into the socket, from whence it had been pushed by the thickening of the periosteum, or of the lining of the cotyloid cavity.” And again, Dr. F. observes, “ the succeeding aphorism implies no more, than that hip cases of long continuance, and accompanied with a projection of the head of the bone, are apt to induce lameness and wasting of the limb unless a cautery be used.”

A man must possess vast credulity, and little acquaintance with surgery, who can, for a moment imagine, that the application of the actual cautery, could possibly have the power of preventing the occurrence of lameness, should the patient ever have been affected in the manner Dr. FALCONER has described.

It may be objected, that more has been said with respect to these aphorisms, than,

in a practical sense, they may seem to deserve; but, I beg to remind the young surgeon, that his reputation will be no less hazarded by an unfortunate prognostic, than if he had committed an error in practice.

Mr. FORD has judiciously requested a learned friend, whose impartiality is the more to be respected, as he is not of the medical profession, to furnish him with a new translation of these aphorisms, that coincides with his own opinions. I also have propounded the matter to a divine, whose character for Greek erudition, were I at liberty to disclose his name, every English scholar would revere; and, as I find that his idea of the sense of HIPPOCRATES differs from that of J. C. and agrees more nearly with the commonly received translations, I shall lay his opinion, and the authorities, by which he supports it, before the public; and leave those, who are interested in the controversy, to form their own judgment.

EXPLANATION OF THE PLATES.

THE figures, illustrative of the hip-affection, exhibit the appearances of the limb under the three circumstances described in the last section.

PLATES 1. and 2. furnish a very correct view of the increased breadth of the nates, as described by Dr. FALCONER in his treatise on Ischias.

PLATE 3. represents the elongated condition of the limb with the flatness of the nates, and the general extenuated appearance of the whole member.

PLATE 4. shows the shortened condition of the thigh, the patient having undergone repeated suppurations. In this case the thigh bone was ankylosed with the ischium.

PLATE 5.—An engraving taken from a drawing of the appearance of the case of spina bifida, mentioned in Mr. LANGSTAFF's letter. The inner circle represents the ulcerated surface described by that gentleman.

PLATE 6. Fig. 1. and 2. show the manner in which the spine was defective in the case of spina bifida attended by myself, as described in the section.

PLATE 7.—The bones which furnished this drawing were taken from the body of a patient who had been under my care, and who died, some years after the cure was effected by the caustic issue, of some other distemper. The reader will observe, that there are seven spinous processes, and four bodies only, so that the patient must have sustained a loss of three bodies more or less. I have given this preparation to Mr. LAWRENCE, who has deposited it in the Museum of St. Bartholomew's Hospital:—It is an excellent specimen to show that there is no renewal of bone to supply that removed by the disease.

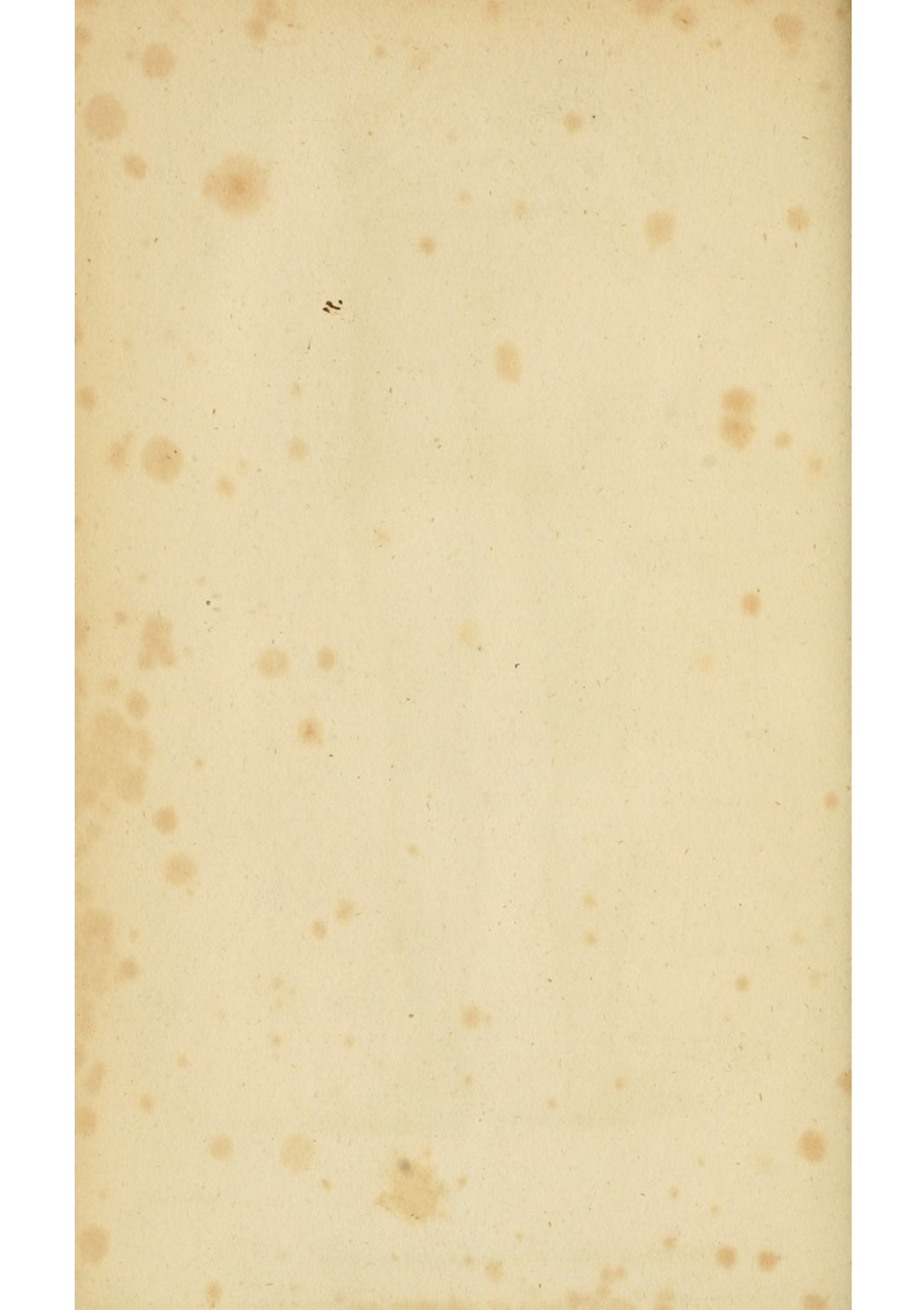
ERRATA.

Page 13, line 13,	for verterbræ, read vertebræ.
18,	23, for inflammationem, read inflationem.
27,	9, for œdematious, read œdematous.
59,	2, for andvantages, read advantages.
104,	2, for scroufulous, read scrofulous.
122,	2, for savine, read savin.
128,	4, for ereta, read erecta.



Ball. del.

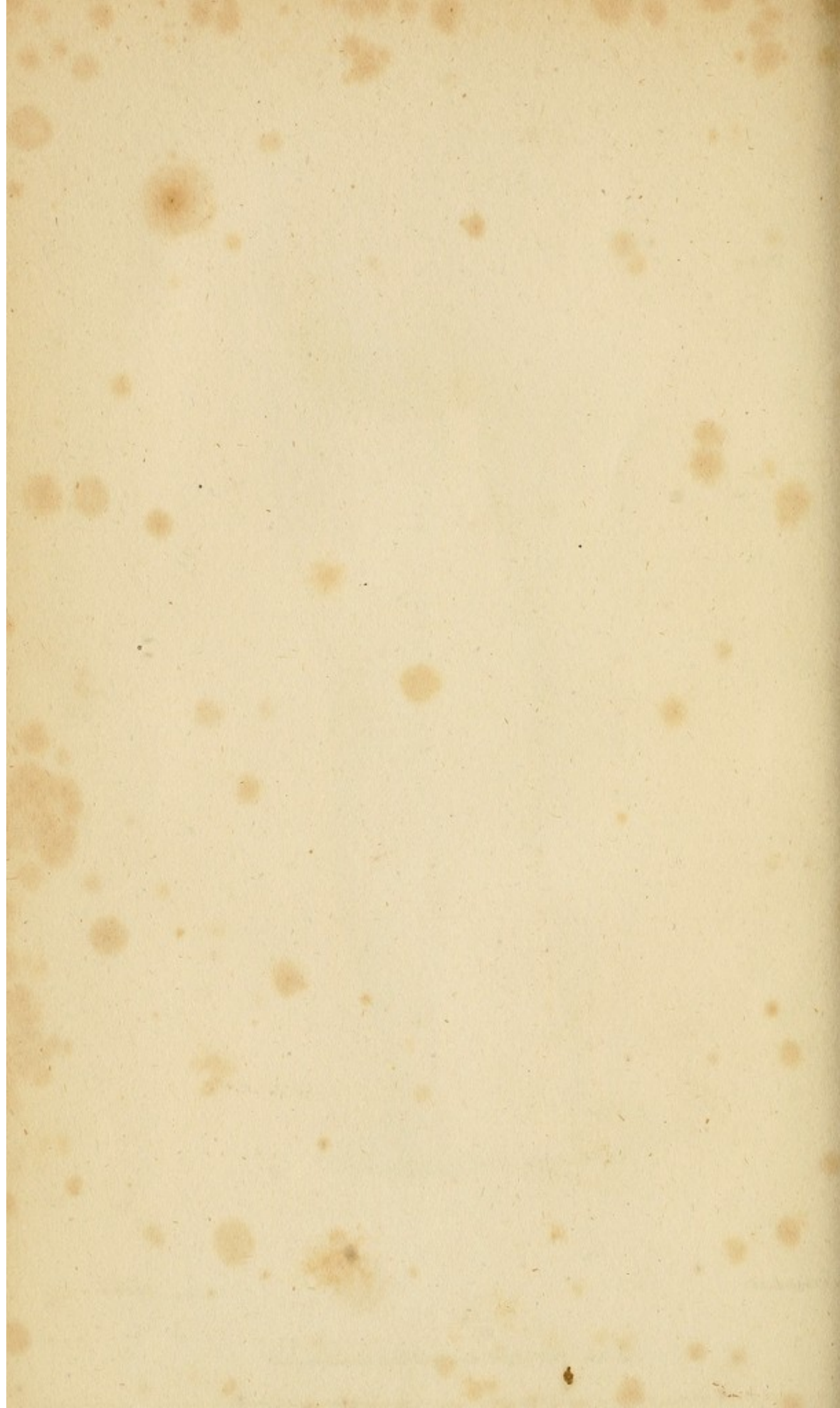
J. Sautliar. sculp.

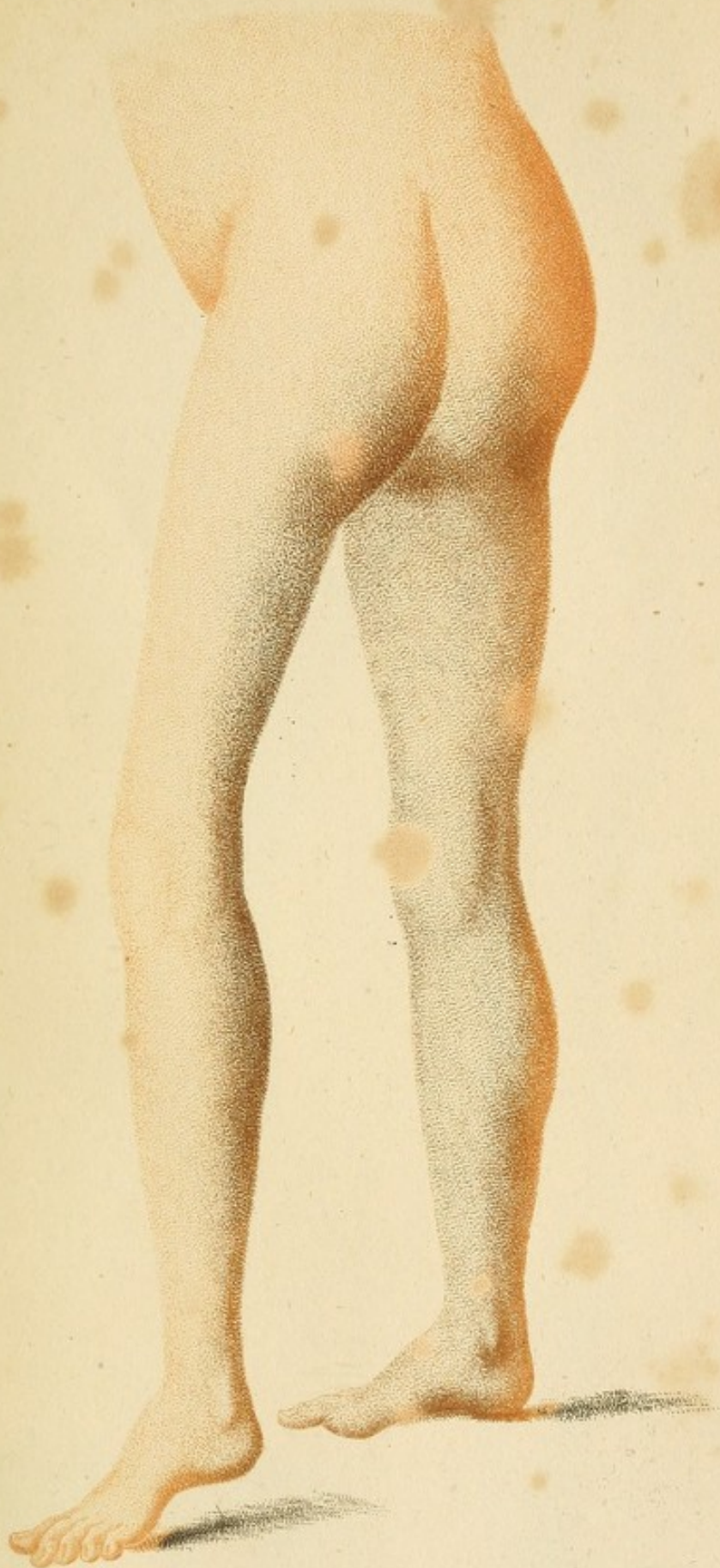




Am. Campbell. del.

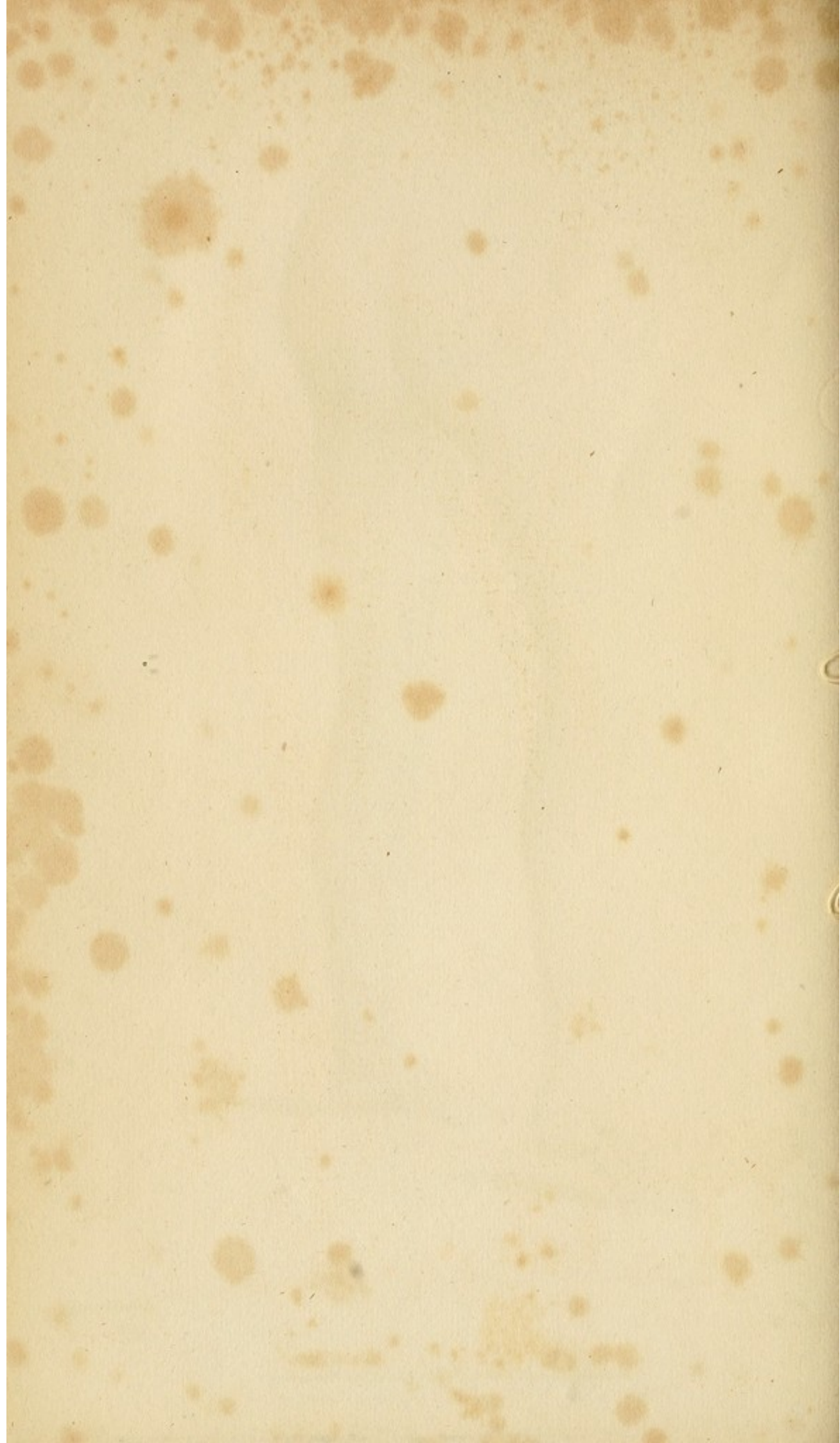
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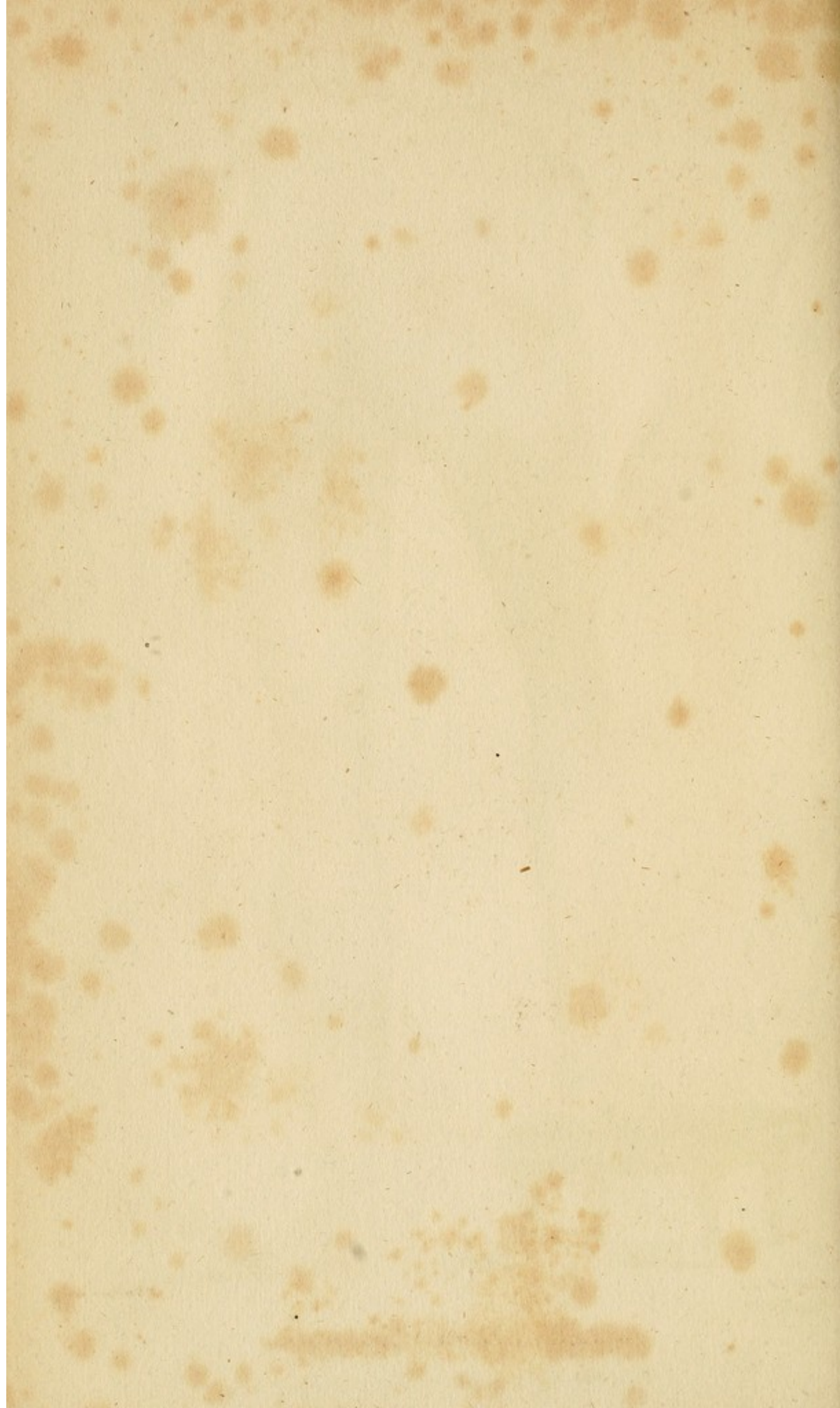
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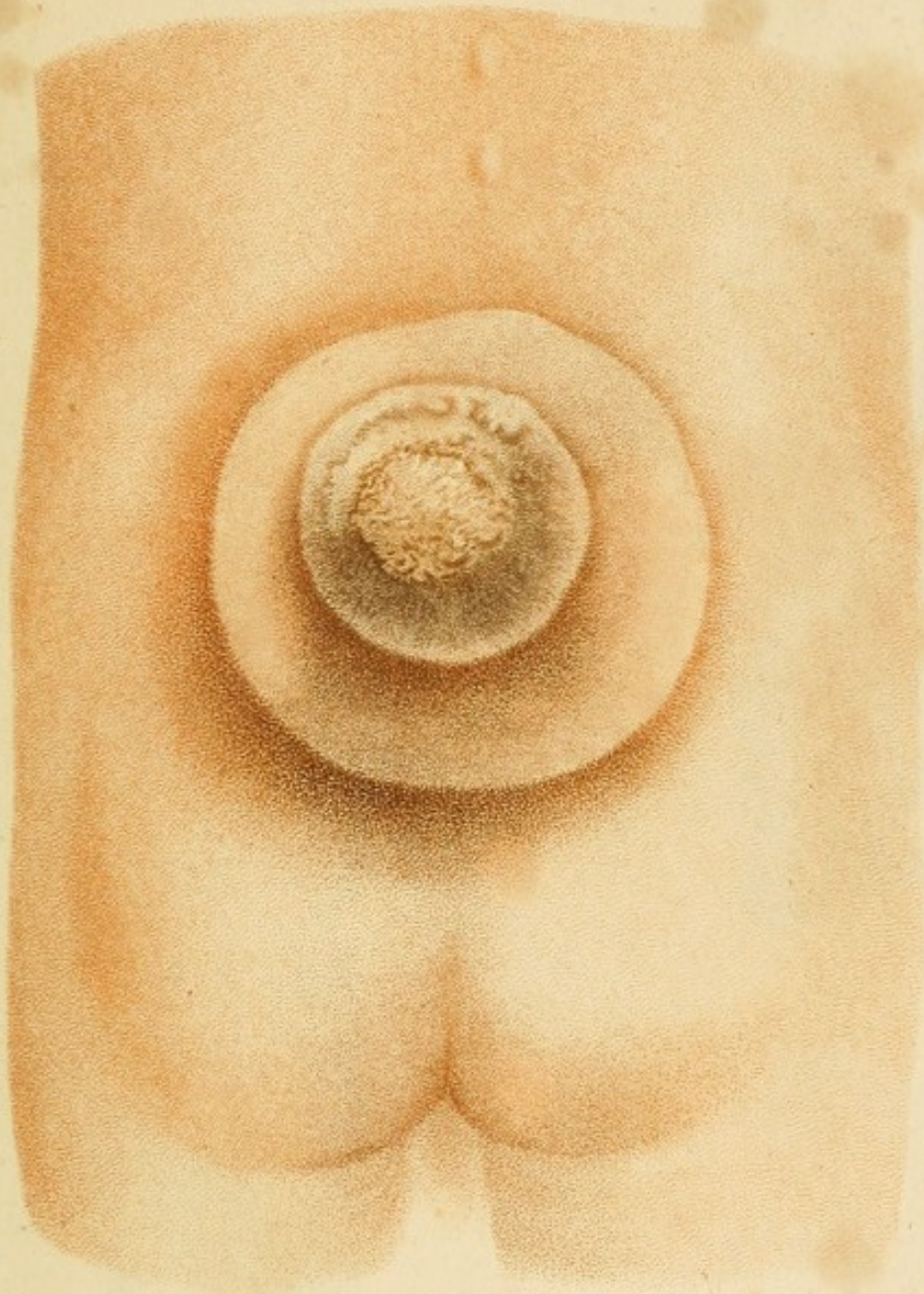




Wm Campbell del.

J. Saulliar. sculp.





John Campbell del.

J. Saillier sculp.

Published Dec^r 9th 1807. by J. Callow. Crown Court. Princes Street.

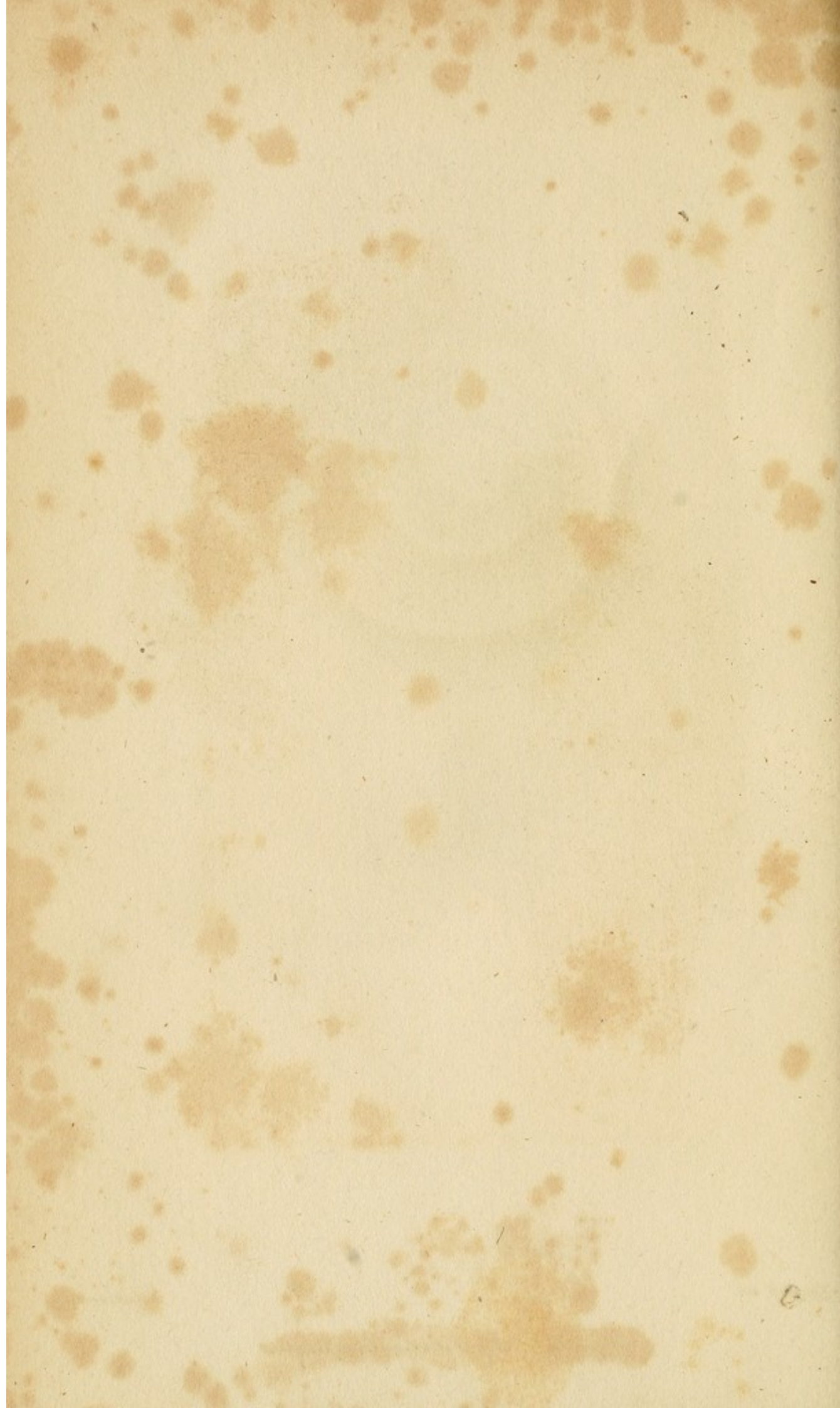


Fig. 1.

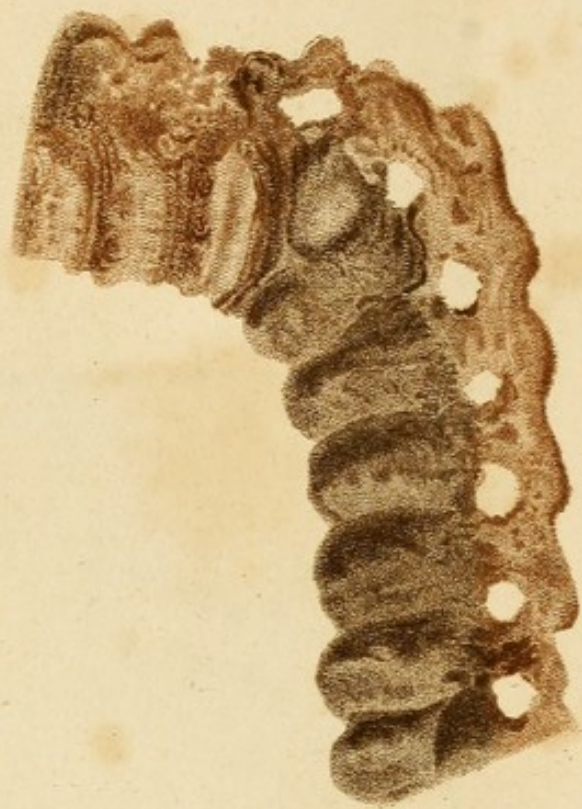
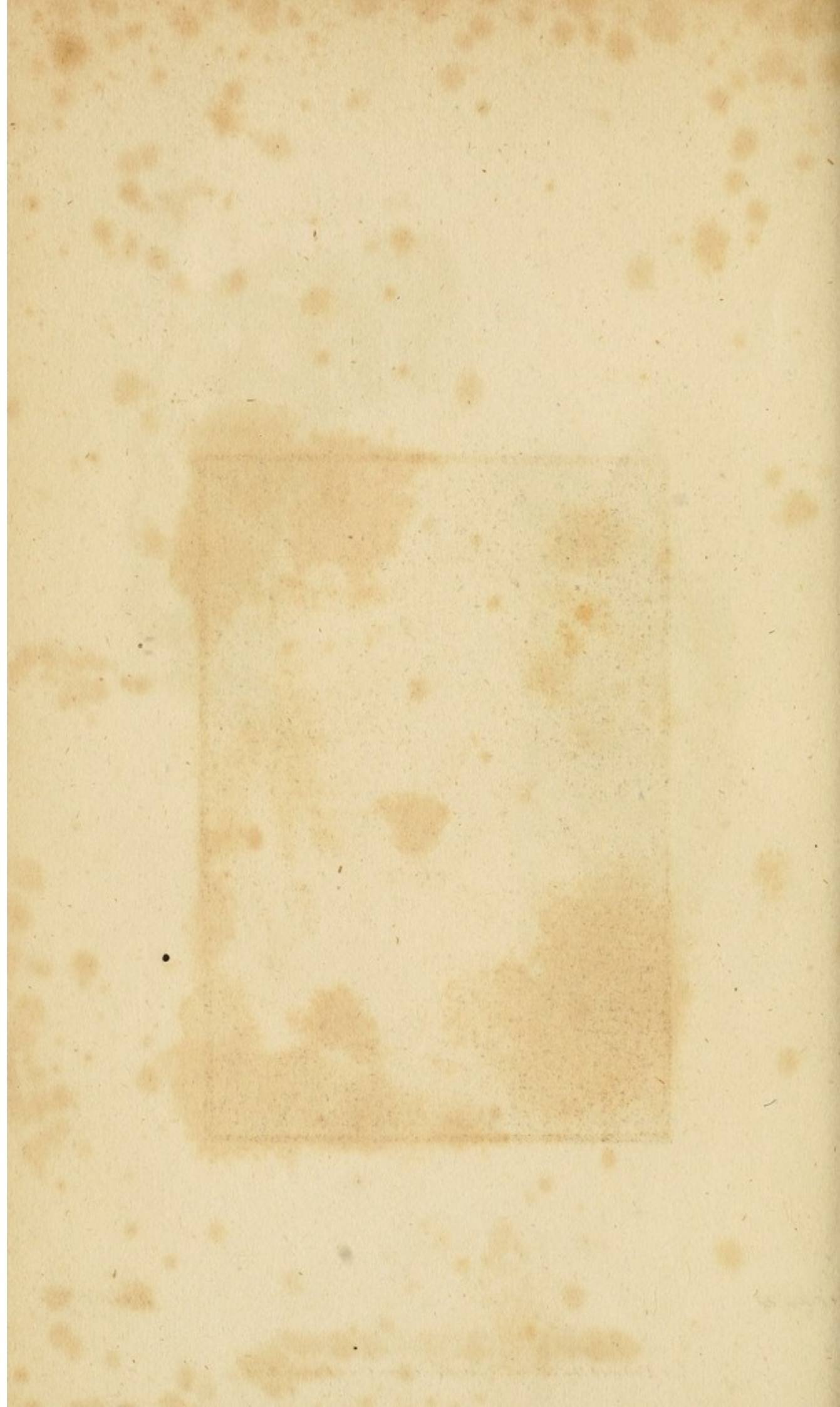


Fig. 2.







R. Fisher. del.

J. Sauter. sculp.



N O T E.

“ **Q**UIBUS à diuturno coxendicis morbo vexatis coxa excidit et rursus incidit, his mucus innascitur.” Hipp. Aph. Glasguæ, ann. 1748. Jans. ab Almeloveen.—“ Quibus longo coxendicum dolore conflictatis femoris, summum coxæ excidit rursumque recidit, iis mucrescunt.” Hipp. Aph. Vorstii. Ludg. Batav. ann. MDCCXXVIII.—“ Quibus ab ischiade diuturno vexatis ischium è proprio loco excidit atque rursus incidit, iis muci innascuntur.” Translatio Charterij.—“ Quibus longo coxendicum dolore conflictatis, femoris summum coxæ excidit rursumque recidit, iis mucosa ibidem pituita colligitur.” Translatio Hollerii.—Rejecting these translations, J. C. proposes his own in the following words: “ Morbo coxario diuturno laborantibus, femur extat, et retrorsum incidit; his superveniunt suppurationes.” “ In persons afflicted with a lingering disease of the hip-joint, the hip stands out, and falls in behind; in them suppurations follow.” The learned author observes, that Hippocrates uses the word *ἰσχύον* laxly; that *ἐξίσαμαι* signifies *extare*, to project or stand out, as *excidere*, to fall out; and that *πάλιν* as certainly signifies *retro*, *retrorsum*, and *contra*, *behind* and *on the other side*, as it does *rursus* and *iterum*, *again*.

According to my opinion, the sense of Hippocrates may be more accurately expressed in the following words: “ In

“ whatsoever persons afflicted with a disease of the hip-joint
 “ of long continuance, the hip-joint stands out (from its usual
 “ situation) and falls back again into it; in them, mucuses, or
 “ mucous secretions, are attendant symptoms.” For my in-
 terpretation of ἰσχίον I will quote Foësius: “ Interdum ὁμῶνυμον
 “ esse αὐτῷ καὶ τὸ ἄρθρον sic enim ἰσχίον ἐκπίπτειν dicitur, lib. de
 “ art. [pag. 638. 12. H. 825. 6.] ἀντὶ τῆ κατ’ ἰσχίον ἄρθρου,
 “ ut illic scribit Gal. Et. Aph. 59. & 60. lib. 6. τὸ ἰσχίον ἐξίσταται
 “ καὶ πάλιν ἐμπίπτει coxa cavitate suâ excidit, rursusque reci-
 “ dit, hoc est, τὸ κατ’ ἰσχίον ἄρθρον coxendicis articulus, ut illic
 “ scribit Gal. Sic enim de femoris capite et summo intelligitur
 “ quod coxæ inseritur, et excidere rursusque illabi potest quo-
 “ modo etiam lib. de art. ὥμῃ ἄρθρον elabi dicitur humeri ar-
 “ ticulus ἀντὶ τῆ κατ’ ὥμον ἄρθρου pro articulo qui est ad hume-
 “ rum. Ἀρθρον, namque eo aphorismo totam articulationem
 “ significat quæ complectitur et caput femoris rotundum ac
 “ læve et acetabulum et vinculum: idque totum ἰσχίον ibi
 “ dicitur.”

Because the English word “lingering” conveys the idea of
pain and debility, as well as duration, I would render χροῖνης of
long continuance. I admit that I see that *extat* more accu-
 rately represents the Greek word ἐξίσταται than *excidit*. It ex-
 presses the appearance of the diseased joint, and the effect of
 the disease upon it.

In regard to πάλιν, the passages which J. C. quotes from
 Homer, and those to which he refers in other writers, shew
 that it means *retro*; and I would observe, that *rursus* in the
 sense of *retroversus*, sometimes means more than the mere
 repetition of an act as expressed by *iterum*. But as in the
 case stated by Hippocrates, the joint returns into its former
 situation, I have endeavoured to avoid all ambiguity by trans-
 lating πάλιν *back again*. I do not agree with J. C. in render-
 ing the word πάλιν *behind*. Nor do I see how the English word

corresponds to the Latin word *retrosum*, which he has himself employed. But further, though it were granted that *πάλιν* sometimes means *behind* or *on the other side*, yet, in the passage we are now considering, I should not assign to it such a signification. For *ἐμπίπτειν*, though it well expresses the falling in of the bone to its proper situation, is very ill calculated to express the sinking in of the part of the hip opposite to that which stands out.—*Μύξα*, as appears from *Gorræus*, signifies that “*mucor qui est in articulis, aut in spatiis internis continetur,*” and not *suppuration*. I will subjoin the the words of *Gorræus*: “*Μύξα mucor, mucus dicitur ab. Hippocrat. humor*
“*pituitosus, lentus, et albus. Is in partibus exanguibus,*
“*ossibus, et cartilaginibus colligi consuevit, cùm ad eam im-*
“*becillitatem pervenerint ut alimentum suum nequeant con-*
“*coquere.*”

That *μύξα* does not signify *suppuration*; that it does signify *mucous secretion*, and that the excess of secretion is injurious to the joints, will appear plainly and fully from the words of *Hippocrates*:—“*Μύξα παῖσιν ἐς τὴ φύσιν· καὶ ὅταν αὕτη καθαρή ᾖ,*
“*ὑγιαίνουνσι τὰ ἄρθρα, καὶ διὰ τῆτο διακίνητα ἐσιν, ὥστε ὀλισθαίνοντα*
“*πρὸς ἐωυτά· πόνος δὲ καὶ ὀδὴν γίνεται, ὅταν ἀπὸ τῆς σαρκὸς ὑγρασι*
“*ῤῃ πονησάσῃ τὸ πρῶτον μὲν πῆγνυται τὸ ἄρθρον· οὐ γὰρ ὀλισθηρὴ ἢ*
“*ὑγρότης ἢ ἐπιρρηνκυῖα ἀπὸ τῆς σαρκὸς· ἔπειτα ὥστε πολλὰ λίην νεμομένη,*
“*καὶ ἐκ ἀρδομένη ἐκ τῆς σαρκὸς αἰεὶ ξηραίνεται· καὶ ὥστε πολλὰ ἐῖσα,*
“*καὶ οὐ χωρὲντος τῆ ἄρθρου ἐκχεῖ, κακῶς πεπηγυῖα, μετεωρίζει τὰ*
“*νεῦρα, οἷσι τὸ ἄρθρον συνδέεται, καὶ ἄδετα ποίει καὶ διαλελυμένα,*
“*καὶ δια τῆτο χωλοὶ γινόνται· καὶ ὅταν μὲν τῆτο μᾶλλον γίνεται, μᾶλλον,*
“*ὅταν δὲ ἥσσον, ἥσσον.*” *Mucus omnibus à naturâ inest, et*
“*cùm purus fuerit, bene valent articuli, ideoque facilè mo-*
“*ventur, cùm sint inter se lubrici. Oboritur autem labor et*
“*dolor, ubi vexaverit quæ à carne fluit humiditas. Imprimis*
“*quidem rigidus fit articulus, neque enim lubrica est quæ ex*
“*carne effluxit humiditas. Deindè sua copia valdè dispersa,*

“ neque à carne irrigata, semper resiccatur ; cùmque eam ob
 “ multitudinem articulus capere non possit, effluit, malèque
 “ concrescens, nervos quibus articulus connectitur, attollit,
 “ elaxat, et dissolvit ; eamque ob causam vel majus, vel mi-
 “ nus, claudi fiunt.” Hipp. p. 411.

As to the concluding word in the aphorism of Hippocrates, I conceive that neither *innasci* nor *colligi*, which occur in some of the translations, convey the meaning of ἐπιγίνεσθαι. I should object also to the English word *follow*, proposed by J. C. because it seems to denote mere succession. The Latin word *supervenire*, which J. C. has employed, appears to me less objectionable. But the real and appropriate sense of the Greek word will be best collected from the two passages I shall quote from Gorræus and Foesius : “ Ἐπιγίνημα idem quod συμπτωμα,
 “ quanquam aliqui ita distinxerint ut symptoma esset quic-
 “ quid præter naturam animali accidit : ἐπιγίνημα verò non
 “ omne sed quod solos morbos necessariò sequitur.

“ Hoc vocabulum purum est in usu apud Græcos, ait Gal.
 “ lib. de different. symptom. Ab illo factum ἐπιγίνεσθαι quod
 “ apud medicos de symptomatibus dicitur quæ ipsius morbi
 “ augescentis ratione accidere solent, ait Gal. Aph. 35. lib. 6.
 “ Μεταπίπτειν verò, cùm, soluto priore affectu, alter novus inci-
 “ dit, ut notat Gal. in Aph. 11. l. 7. Gorræus.” — “ Ἐπιγίνεσθαι
 “ est supervenire, succedere, et de iis dicitur quæ in morbis
 “ accidunt, proprièque de his quæ morbi ratione et auctæ
 “ passionis nomine succedunt. Gal. Com. ad Aph. 35. lib. 6.
 “ ἐπιγίνεσθαι τοῖς πάθεσιν ἕτερα πάθη τε καὶ συμπτώματα τοῖς
 “ παλαιαῖς ἰητροῖς ἔθος ἐστὶ λέγειν ὅσα κατὰ τὸν αὐτὸν πάθεσιν λόγον
 “ αἰξανόμενα συμβαίνειν εἶωθε.—Morbos et symptomata morbis
 “ succedere veteres medici dicere consueverunt quæ ipsius
 “ morbi augescentis ratione accidere solent. Hinc ἐπιγίνομεναι
 “ dicuntur quæ morbis necessariò, eorumque increscentium

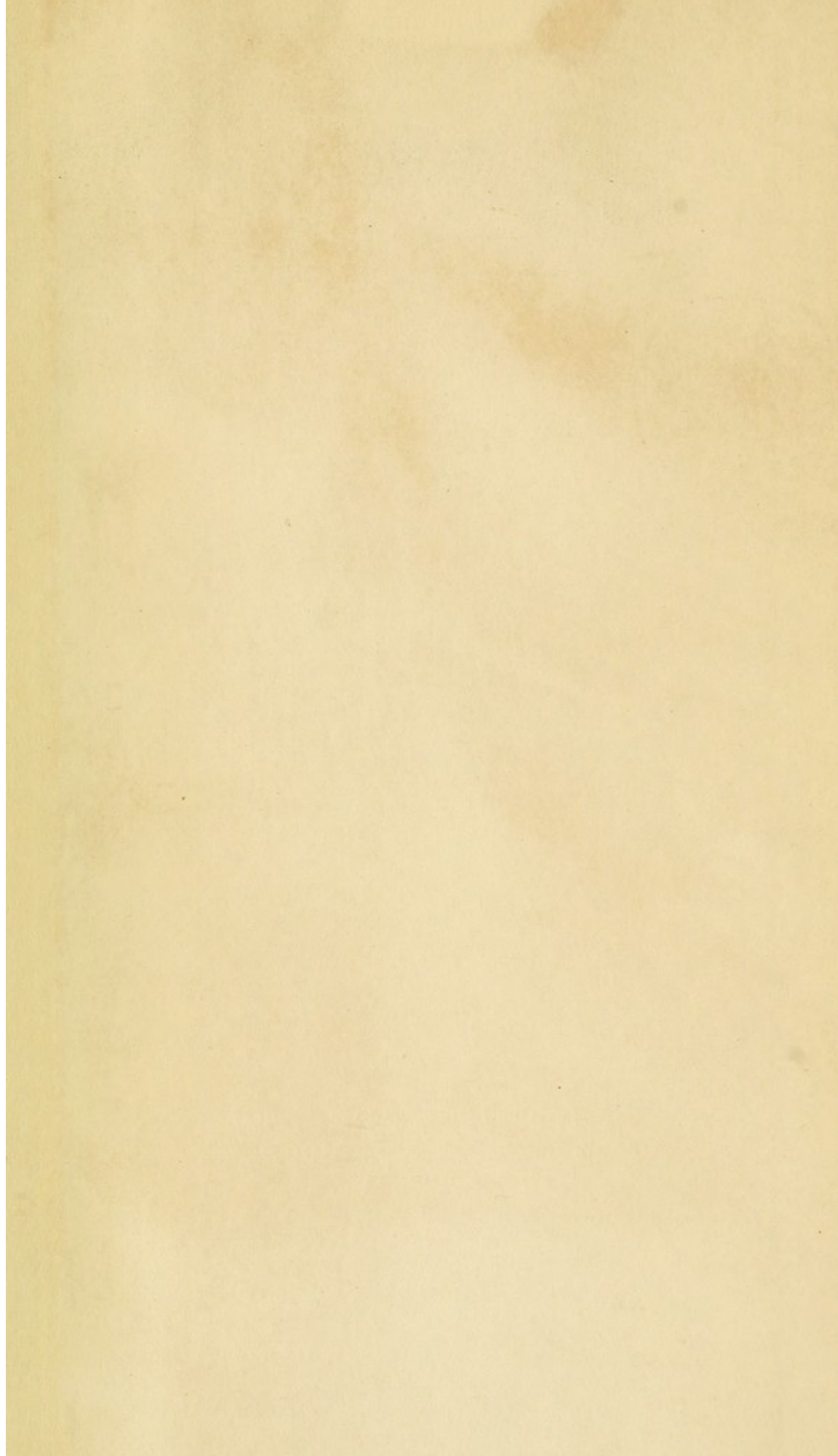
“ ratione succedunt, eosque ex necessitate comitantur non
“ symptomata simpliciter.”

I doubt whether the English language has any single word which definitely and completely expresses the meaning of *ἐπιγίνεσθαι* as used by Hippocrates, and therefore, with the advice of a learned person, I have said “ are attendant symp-
“ toms.” But I wish the medical and the critical reader to observe that *ἐπιγίνεσθαι* implies not merely the *concomitant*, but necessary and aggravating circumstances of a disease.

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