

Observations on scrophulous affections : with remarks on schirrus, cancer, and rachitis / by Robert Hamilton.

Contributors

Hamilton, Robert, 1721-1793.
Royal College of Physicians of Edinburgh

Publication/Creation

London : printed for C. Dilly, 1791.

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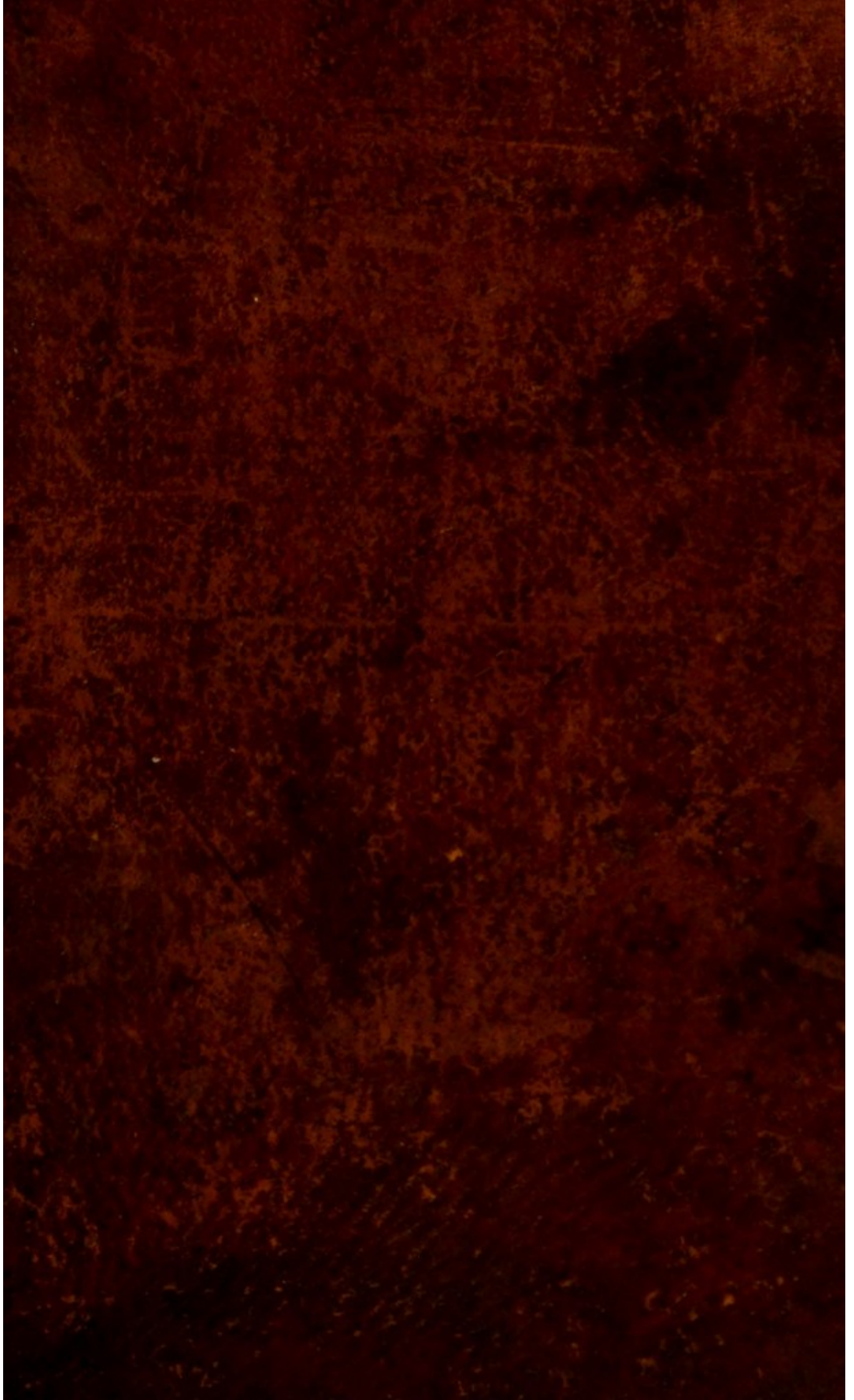
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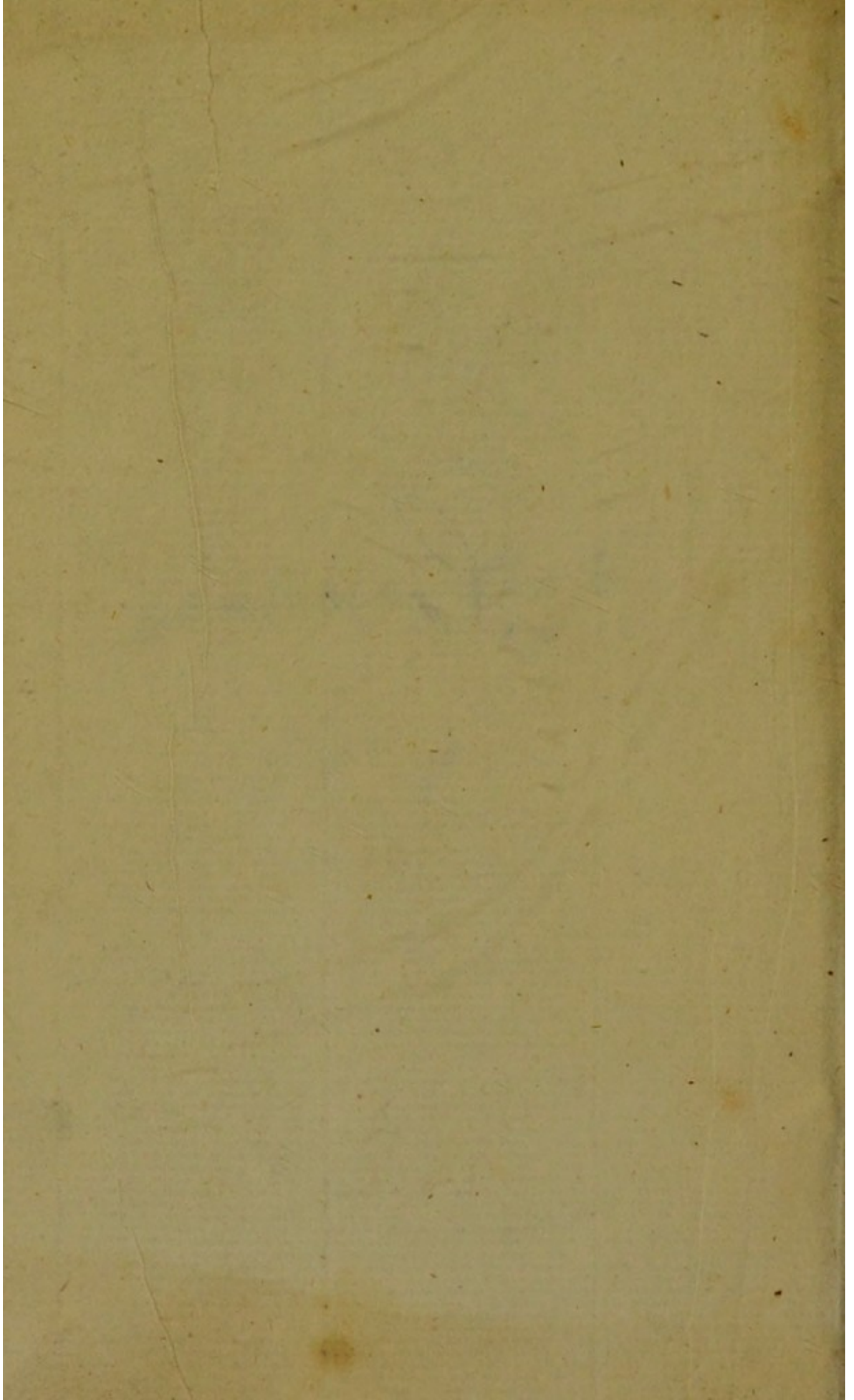
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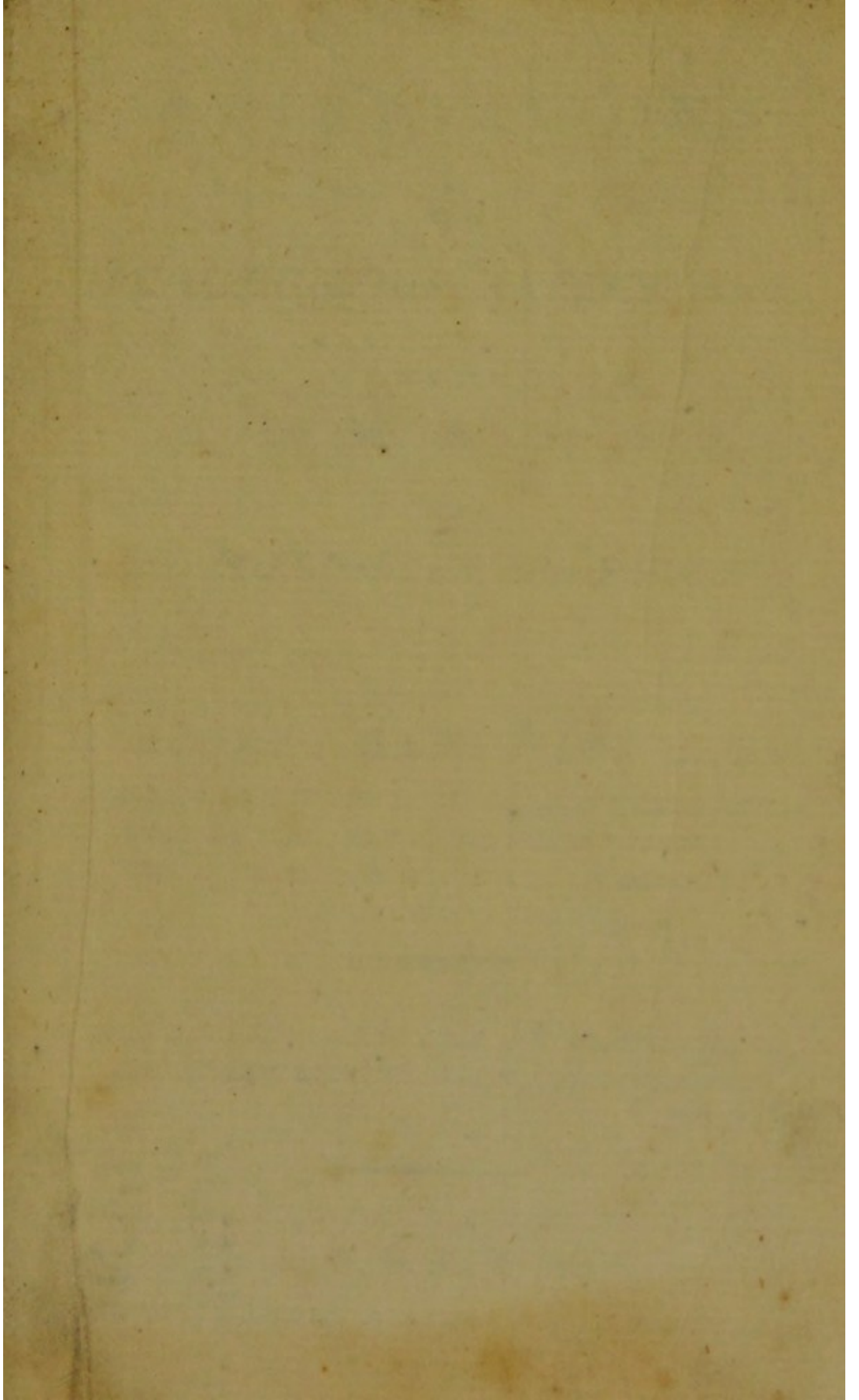
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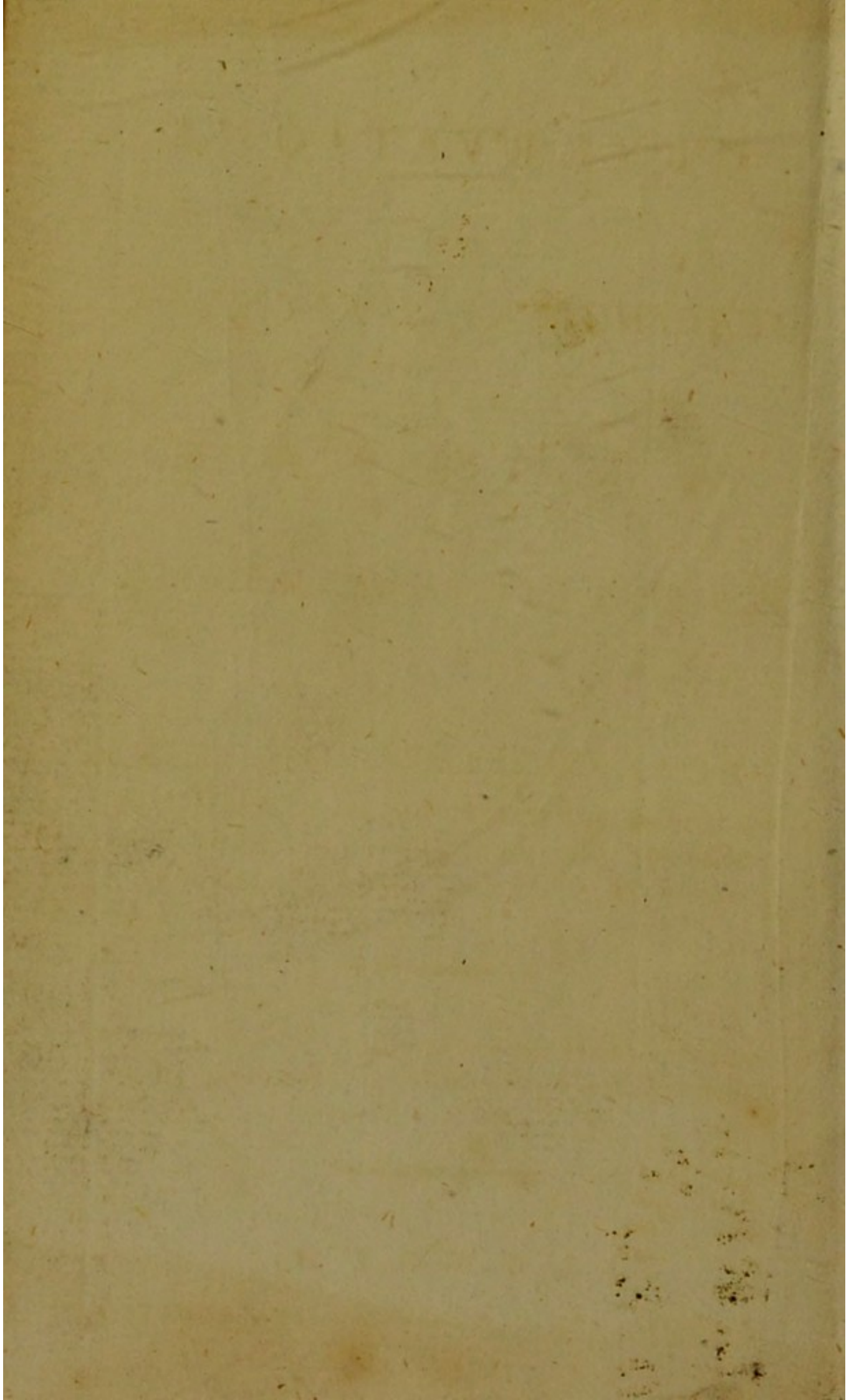


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OBSERVATIONS
ON
SCROPHULOUS AFFECTIONS,

WITH
REMARKS

ON
SCHIRRUS, CANCER, AND RACHITIS.

BY
ROBERT HAMILTON, M. D.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS,
EDIN.—F. R. S. EDIN.—HONORARY MEMBER OF
THE R. PH. S. EDIN.—AND C. M. S. LONDON.

*Ante omnia scire medicus debet, quæ insanabilia sint, et
quæ difficilena curationem hebeant, quæ promptiorem.*

CELSUS.

LONDON:

PRINTED FOR C. DILLY, IN THE POULTRY.

M,DCC,XCI,

WILLIAMSON
WILLIAMSON
WILLIAMSON

STATEMENT

MAJOR-GEN. JAMES HAMILTON

OF THE ARMY

FOLLOWING STATEMENTS

ARE HEREBY SUBMITTED

TO THE COMMISSIONERS OF THE GENERAL LAND OFFICE

AND HOW THEY AFFECT THE RIGHT

OF THE SAID MAJOR-GEN. JAMES HAMILTON

TO THE LANDS

IN THE DISTRICT OF

NEWCASTLE

ROBERT HAMILTON

OF THE ARMY

TO
MAJOR-GEN. JAMES HAMILTON,

THE
FOLLOWING SHEETS
ARE RESPECTFULLY INSCRIBED,

AS A
SLIGHT TESTIMONY OF HIS REGARD,
AND HIGH ESTEEM FOR HIM
AS A GENTLEMAN AND AN OFFICER,

BY
HIS AFFECTIONATE RELATION,

AND MOST OBEDIENT

HUMBLE SERVANT,

ROBERT HAMILTON.

LYNN REGIS,
August 1st, 1791.

ADVERTISEMENT.

THE following paper on SCROPHULOUS AFFECTIONS, &c. was laid before the Medical Society of London by the author's worthy friend Dr. Lettsom, with a view to its publication in the third volume of the Memoirs of that Society; but conceiving that it might be of too great length for insertion there, as he understood that a great part of that volume was already printed off, he requested that, if that should be the case, to have it returned; which has been done accordingly.

It was read at a meeting of the Society; the result of which will be best understood by the annexed copies of the Resolutions of the Society, and Letter received from the Secretary:

“ Medical Society of London, Monday, July 11, 1791.

“ Dr. SIMS in the Chair.

“ RESOLVED,

*“ That the thanks of the Society be unanimously
“ given to Dr. Hamilton, of Lynn, for his Dissertation
“ on Scrophulous Diseases.*

“ Signed, by order,

“ W. CHAMBERLAINE, Sec^y.”

“ Council

“ Council of the Medical Society, Monday, July 11, 1791.

“ Dr. WALLIS, Chairman, in the Chair.

“ RESOLVED,

“ That the thanks of the Medical Society be
 “ unanimously given to Dr. Hamilton, of Lynn, for his
 “ *very valuable and acceptable* Dissertation on Scrophu-
 “ lous Diseases; and that the Secretary be directed to
 “ address a polite letter to Dr. Hamilton, stating the
 “ reasons of its being returned.

“ Signed, by order,

“ W. CHAMBERLAINE, Sec^y.”

(Copy.)

A COPY OF THE SECRETARY'S LETTER.

“ SIR,

“ I have the honour to address this letter to you
 “ by order of the Medical Society, who have desired me
 “ to thank you in the most respectful manner, in the
 “ name of the Society, for the pleasure and information
 “ they received on hearing your truly valuable paper on
 “ Scrophula read. The Council are sorry that its ex-
 “ treme length precludes it from having a place in their
 “ Memoirs, as the insertion of it, from the room which
 “ it must take up, would necessarily prevent the commu-
 “ nications of a great many members, of an earlier date.
 “ At all events, were it even shorter, they must still
 “ lament the impossibility of getting it into the THIRD

“ volume of the Memoirs, as more than two thirds of
 “ that volume is already printed off, and all the matter
 “ arranged for the remainder.

“ I am, SIR,

“ With great respect,

“ Your most obedient servant,

“ W. CHAMBERLAINE, Sec.”

“ *Aylesbury-Street, Clerkenwell,*

July 15, 1791.”


For this very pleasing and honourable testimony of approbation, bestowed upon his small performance by this respectable body, the author, in this public manner, returns his warmest acknowledgments to the President, the Chairman, and Council; to his valuable friend Dr. Lettsom; and to the rest of the Members and Secretary of the Medical Society of London.

Lynn Regis,

August 5, 1791.

ERRATA.

- Page 10, line 18, *for* ramification *read* ramifications.
16, line 12, *for* inquirare *read* inquirere.
26, line 7, *for* each of the spine *read* each side
of the spine.
110, lines 8 and 23, } *for* splents *read* splints.
112, line 13, }
116, note, *for* drawing *read* plate.
-

 The plate is to face page 116.

CONTENTS.

SECTION I.

	PAGE
O BSERVATIONS on the causes of scrophula -	1
Its seat, the absorbent system, in both soft parts and bones.—Abscesses and ulcers—their danger, according to their site.—Internal abscesses sometimes burst into hollow viscera—a remarkable instance of this -	29
Lumbar or psoas abscess, mostly mortal - - -	33
Cases of psoas abscesses - - - - -	34
A case of lumbar abscess relieved by expectoration more than twenty years, when the matter descending made its way through two outlets, and destroyed the patient two years afterwards - - - - -	40
Three cases of hepatic abscesses - - - - -	46
Scrophulous affections of the eyes - - - - -	53
— of the organs of hearing - - - - -	56
— of the testicles - - - - -	60
— and of the bladder, rectum, uterus, ovaria, &c. -	61
Scrophula impedes menstruation, and causes barrenness -	63
Schirrus and cancer, consequences of scrophula - -	64
Cases of cancers in the breasts - - - - -	66

SECTION II.

Effects of scrophula on the bones - - - - -	74
Scrophulous carious bones are removed either in a solid form in their whole substance, and their place supplied	

	PAGE
by callus, without much injuring the motion of the limb; or, crumble insensibly away; or, are dissolved in a fluid, and the parts suffer mutilation	80
Caries of the bones of the articulations, and the process of anchylosis considered	82
The removal of bone by absorption in a solid form, improbable; but, in a state of actual solution in a fluid menstruum, easily comprehended	84
The secretion of solids in a state of solution in the urine, a proof of this	87
Scrophula often attacks one articulation only, whilst the rest of the body is in appearance free from disease, and its growth goes on in the young subject with little interruption	91
Caries of the bones of the joint of the knee	92
Caries and anchylosis of the coxendix with the femur	93
An encysted dropsy of the thigh, in which the solid os femoris was found to be dissolved in the fluid contents of the cyst	95 & 100
A case of the internal structure of the os femoris being destroyed, and reduced to the external lamina, whose cavity was filled with hydatids, floating in a fluid, after this bone had suffered several fractures, explored by dissection, with a plate of its remains	108 & 116
Effects of scrophula on the carpus, metacarpus, fingers, elbow, and shoulder	120
On the bodies of the vertebræ	121
Mollities ossium induced by scrophula, and its consequences in young subjects	123
Distortions of the spine considered, and the cause, stiff stays and strait-lacing of young females, pointed out, and exposed	124
Spring steel backs and collars, pernicious	134
Dancing-masters stocks hurtful	136
Remarks on the rickets	137

SECTION III.

	PAGE
Treatment of scrophula - - - - -	141
Intentions of cure, and remedies - - - - -	142
Cases of successful treatment - - - - -	144 to 154
Indurations in the breasts of young females - - - - -	155
Bronchocele, or Derby-neck - - - - -	156
Scrophulous tumefactions, and ulcerations of the nose and upper lip - - - - -	157
Virtues of sea-water internally, and sea-bathing con- sidered - - - - -	158
Burnt sponge, <i>æthiops vegetabilis</i> - - - - -	166
Madrepora, corallines, corals, &c. - - - - -	167
Squills, millepedes, and mercury - - - - -	168

SECTION IV.

Simplicity in the chirurgical treatment of scrophulous abscesses, ulcers, &c. best - - - - -	170
Abscesses should be left to burst spontaneously, unless situated near large blood-vessels or bones - - - - -	171
Setons, in sinuses deep-seated, of use—an instance of one passed behind the zygomatic process attended with benefit - - - - -	172
Amputation, in scrophulous diseases of the joints, con- sidered - - - - -	174 & 176
Treatment of diseased articulations from scrophula, by mercurial friction, blisters, and caustics - - - - -	177 to 179
Cases of scrophulous knees, - - - - -	179 to 184
Treatment of scrophulous elbows - - - - -	185
Of carpus and metacarpus - - - - -	186
A suppression of urine caused by an encysted lymphatic tumor pressing on the neck of the bladder, relieved by its being pierced with a trocar, introduced through the anus,	

	PAGE
anus, on the supposition that it was the distended bladder. But the diseased patient died twelve days after the operation, and the parts were examined by dissection - - - - -	193
Tenea capitis - - - - -	196

SECTION V.

Treatment of schirrus and cancer - - - - -	199
A threatening phagedenic ulcer on the scrotum, cured by the hemlock bath - - - - -	200
A complex case of lues and scrophula - - - - -	206
Hemlock bath, and injection, proposed for cancers in the uterus, bladder, rectum, &c. - - - - -	211

SECTION VI.

The extirpation of cancerous tumors by what is termed the extraction; with the different escharotics of Reverius, Plunket, Guy, Justamond, Martin (related by Dr. Rush) and Dr. Mosely for this purpose - - - - -	217
Considered; and by the knife the safest - - - - -	226

SECTION VII.

The methods employed for curing distortions of the spine, considered—which are easier prevented than cured - - - - -	232
No distortions of the spine are to be found among nations called savage - - - - -	234
Treatment of rickets - - - - -	235

OBSERVATIONS
ON
SCROPHULOUS AFFECTIONS,
&c. &c.

IT is not my intention to treat systematically on either the scrophula, scirrhus, cancer, or rickets; but only to offer some observations in this paper on the various appearances of scrophulous affections, which have occurred to me in a long course of practice, a few from reading, and such remarks on scirrhus, cancer, and rickets, as have induced me to think, with others who have written on these diseases, that the three last have a strong relation to scrophula, if they are not in reality certain modifications only

of the same disease; and which have long convinced me that scrophula is the cause of many morbid phenomena in the human body, which are little suspected to owe their origin to this distressing distemper.

Although I do not pretend to offer remarks that have not occurred to other physicians, yet perhaps some particulars may be found which have not been generally attended to: and as the facts are related with the strictest fidelity, either in respect to their successful or unsuccessful terminations, it is to be hoped that they may be of some utility in practice.

Scrophula has long been supposed to be a hereditary disease; most writers on the subject have esteemed it so; and some have thought it endemial to some countries, as the northern parts of Europe, alpine situations, Spain, &c. *;—and others, that it may be acquired.—This last opi-

* Fred. Hoffman, Supplement. pars prima, centur. secunda, pag. 58.

nion has of late been revived; and it has been by some denied to be at all hereditary, and affirmed that it owed its origin wholly to either external injuries, or to some accidental cause, deranging the lymphatic glandular system.—No arguments however have yet appeared, that have been able to convince me that it is not a hereditary disease: and must observe, that its having any other origin in the human frame, than certain morbid stamina, conveyed by descent from parents to their children, remains still problematical.

Two of the reasons alleged in favour of its being an acquired or adventitious disease, only, are, that one child in a numerous family has been attacked with the scrophula*, whilst the rest have escaped; and that blows and hurts have been known to bring on this disease: neither

* Fred. Hoffman relates the case of a young lady, cured by him, who was afflicted with the scrophula almost from her cradle, whilst her brothers and sisters had firm constitutions, enjoyed good health, and were quite free from the disease; and that the parents were perfectly sound.

of these instances, however, amounts to a proof.—One child, for example, may, from particular circumstances, be of a very weak habit, which may have been further injured by the ravages of some epidemic disease; as the small-pox, measles, tussis convulsiva, &c. in the extreme, whilst the rest of the family may have been naturally more robust, have had the epidemic mildly, and therefore have been more able to resist the appearance of the constitutional malady. It is well known that individuals in a scrophulous family are very differently affected with the distemper: whilst some have hardly any symptom of it, others have it but slightly, and others become martyrs to it. Accidental blows, contusions, &c. have, it is true, produced scrophulous abscesses in children, but very seldom in grown people; and these generally happen to parts where the bone is but thinly covered, as about the verge of the orbit at the outer canthus of the eye, the zygomatic process,

process, the angles of the lower jaw, the lower edge of the ulna, the ridge of the tibia, &c. and seem to corroborate the opinion, that this disease arises from adventitious causes, and not from hereditary descent. But I have always observed, that those accidental imposthumations happened most commonly before the age of puberty, and to children whose descent from scrophulous parents could be easily ascertained, and were attended with that languid maturation, and crude discharge, incident to scrophulous suppurations; which never occurred when similar accidents have happened to young persons of sound constitutions, free from every suspicion of a scrophulous hereditary leaven. There is an instance here of a youth of eighteen, of a scrophulous descent, (I.) who, when a child, was dangerously burnt by his shirt catching fire: he never had any symptom of the disease before this accident happened; but has been harassed with scrophulous imposthumes and ulcers ever since.

I do not pretend to take upon me to determine the question, Whether scrophula is wholly a hereditary, or wholly an adventitious disease, or originates from both causes? I shall only beg leave to observe, that some facts seem to decide in favour of the opinion that the scrophula is wholly a hereditary distemper, entailed upon posterity by long descent for ages, in a direct line, which no theoretic reasoning can do away. These facts come within our own knowledge, and present us daily with instances where the scrophula has descended in families for several generations, and may have done so in many more in the same house, far before the date of our remembrance. I know one family where it has passed downwards in four successive generations from one origin, with numerous offsprings in each, in succession; and have seen scions from this fruitful stock engrafted on branches of other families, where this disease apparently had no existence before,

I which

which has contributed to extend and perpetuate the calamity. From these unions there seemed however to appear some mitigation of the power of the morbid affection in the offsprings. These children were in general more robust, and less affected with the disease, than their scrophulous parent; which led to an opinion, that some of them partook wholly of the father's constitutions, whilst the others did of that of the mother, with what foundation in truth, I shall not pretend to decide; but am afraid this is delusion, and that the children of such parents will indiscriminately convey the distemper to their descendents.

The lymphatic glands have long been supposed to be the seat of the scrophula. Barbette describes the cause of this disease in the following words:

“ *Causa. Glandularum totius corporis*
“ *munus (quod certissimum esse puto) est*
“ *lympham transcolare; necesse ergo est*

“lympham crassiozem hujus affectus esse
 “causam, unde illarum primò durities
 “postea sensim accressens pertinaxque
 “tumor*.”

There is little doubt but the scrophula is confined solely to the absorbent system: and as the process of absorption may not only be impeded, but totally suspended, by this morbid affection attacking particular parts of this system, obstructions and tumors will, in consequence thereof, form, not only in the glands, but in other parts where the distribution of lymphatic vessels through the body is to be found: and as this is universal, and almost infinite, the site of scrophulous affections in these vessels and their glands must be unbounded; and is to be met with not only near the surface of the body, but deeply seated in the interstices of the muscles; in the cells of

* Cap. II. De Scrophulis, paragr. III. Mangetus's edition of this author's works is dated Geneva, 14 Martii anno 1688.

the tela cellulosa; in the different cavities of the body, and the several viscera in these cavities; in the bursæ mucosæ, the capsulæ of the joints; even in the internal structure of the bones themselves; and in short every where, where absorption is carried on, of lymph for the several purposes of the animal economy, and chyle for the nutriment of the body.

Scrophulous affections of the soft parts commonly produce either distinct or diffused tumors. The distinct are chiefly confined to the glands, but many are also generated in one or more of the cells of the tela cellulosa: and probably some of those with which the membranous viscera are often studded are of this kind. The forms of them are various; some are globular, others oblate spheroids, oval, &c. So far as the late discoveries in the absorbent system have gone, by which the lymphatic glands have been rendered more conspicuous, they by no means appear to the naked eye to be so numerous as to furnish

furnish sites for the multitude of scrophulous tumors, or tubercles, dispersed in the vast groupes found externally and internally, in the dissection of bodies dying of this disease.

As we know that there are hundreds of living animalcules, with systems of vessels and circulating fluids in them, detected in a single drop of putrid water, by the common microscope, but are rendered more evidently conspicuous by the solar microscope, whose very bodies are too minute to be visible by the naked eye; and as the mouths of the lymphatics in the human body are even too minute to be discovered by glasses of great magnifying powers; it can be no stretch of probability to suppose, that there are not only ramification of lymphatics, and glands also, which are invisible to the naked eye, which may be rendered obvious to our sight, by being enlarged by disease. But be that so, or not, is immaterial to the present subject, as the cellular texture, under the
morbid

morbid actions of this disease, furnishes ample scope for the site of such tumors, and also materials for the several coats within each other, with varied contents, from the centre to the circumference of them.

To the morbid action, then, of this peculiar constitutional malady on the absorbent system, are we to look for the origin of these tumors; and from the nature of the compound fluid, as I presume the lymph is, which is secreted from the blood for the purposes of the animal economy, are we to account for the different matters contained in them.

All the several materials which are necessary to constitute the different parts of the living animal must be furnished from the nutriment taken into the stomach; and what is necessary for this important purpose is separated from the more feculent matters, by the processes of digestion and chylication; and enters the absorbent system by the lacteals, and is carried
into

into the mass of blood by means of the thoracic ducts opening into the left sub-clavian vein, so near the heart as to be readily mixed with it. . It is not my purpose to describe this process; it is sufficient to say, that it is generally understood to be so. Now the inference to be drawn from it, for the elucidation of our subject, is, that the blood charged with these materials must, in the course of circulation, part with those which are destined for the recruit and support of the different component parts of the animal body; whilst those which are superfluous, or having done their office, become effete and useless, and therefore are separated from the mass by different secretory organs, and carried out of the body by the proper emunctories.

From this state of what we suppose the fact, we may readily conceive that the lymph, and other secreted fluids, are charged with the several materials above named; and thus loaded may stagnate in glands or cells, where the absorbents, from
the

the influence of this disease, are obstructed, and unable to take them up, and transmit them in the proper state of solution, in which they are when secreted or separated from the blood: and that when stagnant in these cavities it is easy to comprehend that a decomposition of this, what we have supposed a compound fluid, may take place, and new combinations form; and, according to the nature of the different materials, the contents of these tumors may be gelatinous, milky, caseous, cartilaginous, earthy, &c.; all which are to be met with, even in the same body, loaded with this disease in the extreme: and according to the degree of this morbid state of the parts is the distemper to be relieved by art, or rendered incurable, and mortal.

It appears from the dissections of subjects who died of the scrophula, which are recorded by different authors*, that in those

* Vide many collected in Bonetus Sepulchret. Anatom. tom. III. lib. iv. sect. 2. p. 263. — Freder. Hoffman's Supplement. pars prima, Observat. & Annotat. Centuria Secunda,

those, where the external parts, as the neck, axillæ, inguina, &c. were loaded with scrophulous tumors, all the internal parts were found to be equally affected, as the lungs, liver, pancreas, spleen, kidneys, the glands of the mesentery, the internal lymphatic glands in every cavity; and many tumors, where no lymphatic glands were visible, occurred on the different membranes, and different hollow and other viscera, which could only take place in the common connecting medium, the tela cellulosa. These tumors were found of various sizes, from that of a man's fist, in gradation, to that of a coriander seed, or less: and upon making longitudinal incisions through the common integuments of the neck, in one case (a young Austrian nobleman, quoted from Platerus by Bonetus and Hoffman, who died suffocated in consequence of this disease) the adipose membrane was found, in three different places, three

Secunda, p. 58.—Magnetii Bibliotheca Chirurgica de Tumoribus.—Hildanus, Ambr. Parey.—De Haen.

fingers

fingers breadth in thickness, firm and white, like the lard on a hog's back, with a conglomeration of numberless small glands, adhering to each other, dispersed through the whole of this seat of white, thick, mucagenous matter; which seems to have arisen from the inspissated coagulable lymph, infarcting the cells of the tela cellulosa, by the absorbents being obstructed which open into these cells.

Hoffman adds, in his note containing the young Austrian's case, these words:
“ In talismodi subjectis videtur nimirum
“ lymphæ tota ad coagulum prona esse,
“ quapropter observatum ab authoribus,
“ quod scrophulosi in interioribus parti-
“ bus maxime in mesenterio induratas
“ glandulas et strumas facta anatome
“ plerumque habuerint.”

Encysted tumors are confessedly seated in the cellular membrane, and their coats are evidently composed of that substance, thickened by diseased distension; and the contents, whether like those of the steatoma,

toma, meliceris, atheroma, or of mere lymph, are also to be met with in scrophulous tumors; from whence it should appear, that encysted tumors have a manifest relation to scrophula.

De Haen* gives a distinct detail of scrophulous tumors in various parts of the body, yet does not distinguish these morbid appearances by the name of scrophula.—Take his own words:

“Inflammatorii tumores qui generentur, hinc inquirare non est animus; sed quid de lentis quibusdam tumoribus, tarde crescentibus, diuque obtinentibus, cogitandum sit, indagare.

“Tales namque in collo multi gerunt plures, minores; variæ magnitudinis, duritiæque: ita nonnunquam, ut totum in ambitu collum conglomeratis ejusmodi tumoribus maxime difforme fiat. Abdomen, thorax, totumque denique corpus, nonnunquam iisdem scatet.—Substantia

* Ratio medendi, cap. xx. pag. 127, de vario Tumorum genere.

eorum diversa; diversa, quam contineant, materies, haud in variis duntaxat hominibus, sed eodem etiam in homine et quidem ita, ut in eodem corpore trium, quatuor, quinque, specierum variarum habeantur tumores; quorum quandoque nullam vix aliquam curationem admittant; in aliis nonnulli tumores ægre, facile alii, curentur; in nonnullis longo molimine sanentur omnes; denique curatorum multi non raro postliminio repullulent. Ex multis unam alteramve historiam descripsisse juvabit, et de eorum genio, naturaque, cuique constet.

“ Puerum 10 annorum, multis in collo, et sub axillis, tumoribus (II.) scatentem, mucro turgidum, ventre tumidum, cachecticum totum, progressi anni autumno ad me attulerant. Post expletas decem in nosocomio septimanas, calamitosam vitam terminavit. Aperto abdomine mesenterium tum vehementer tumidum fuit, tum penitus nudum ac conspicuum, intestinis omnibus quasi natura-

liter versus ambitum remotis. Tumores mesenterii magni, durique iidem & solitarii, cum peritoneo vero, et ligamentis vertebrarum lumborum, adeo intime concreti, ut mesenterium citra dilacerationem haud potuerit a vertebris solvi. Quoad naturam tumorum, in quibusdam medium folliculum occupabat alba materies, aut grisea, unita, æquabilis, crassa pulve durior, mollior lardo, & in meditullio veræ pulti similis. In aliis materies tum albidior erat, tum etiam in meditullio durior. In aliis tota iterum dura, æquabilis, scissilis. In nonnullis veluti calx aqua mista oculis adparebat, digitis nullam exhibens asperitatem. Denique, in una alterave, vera calcarea materies, dura, tactu aspera, ceu in fungosum lapidem concreta. Ad vasa iliaca utraque, ad pericardium, sternum, diaphragma, supra asperam arteriam ad jugulum, ad axillas, ubique ejusmodi reperiundi tumores erant. Multa in thorace, & abdomine, aqua.

“ Ad monstrosum nunc collum verso
examine,

examine, tumores non amplius solitarii, sed et pluribus minoribus, sibi incumbentibus, accumbentibusque, et communi cellulositate circumdati constabant. Membranas alii tenues, crassiores alii, nonnulli denique prope cartilagineas, habebant. Intercurrebant per tumorum intercapedines, supraque eosdem, arteriæ, venæ, nervi multi, per tunicarum substantiam dispersi. Tumore prudenter aperto, vasa eadem in minores, quibus massa major componebatur, tumores, se dividebant:—tumorumque multi vasis in collo majoribus tam firmiter increverant, ut sine alterutrorum læsione separari non possent; vasa tamen illa majora a tumoribus non videbantur notabiliter comprimi. Encephalon solum ab his malis immune fuit. Ubique in colli tumoribus diversitas materiæ: imo aliquot ante mortem septimanis ingens adparuerat tumor, suppuraverat, disparuerat. Plerique vero quasi una cartilaginosa substantia erant, vel atheromata.

Sedes porro omnium aut glandulæ erant aut adiposi folliculi.”

And in the examination of a tumor extirpated from the back part of a woman's neck, he says, “ Libere hærentem chyrurgus enucleavit, globo simili, levem. Exscissum tumorem examinantes, plures membranaceas lamillas, vasculis multis refertas, primo separavimus; dein ad duritiem semicartilagineam sesquilinearis crassitudinis pervenimus, quam intus investiebat durior compages, in plagis quibusdam perfecte cartilaginea. Magnus tunc sequebatur folliculus, plenus materie pellucidissima, gelatinosa, subflava, tunc sanguis fluidus, coccineus, per tremulum hoc gelatum filatim quasi dispersus, vasis non contentus tamen. Portio vero quedam rubicunda, gelatinosa, uno in loco ad internum folliculi parietem hærebat, quod quidem affixa, sed veluti leviter agglutinata. Vas vero, quo ejusmodi duplex materia in cavum folliculi intrasset, nullo scrutinio patuit.

patuit. An durum tumoris putamen, post enucleationem contractum, vasa in cavum penetrantia compressisset, rubrum partim in cavum, partim retro expulisset? Sicque vasis conspectum ademisset? Saltem microscopio examinata materies hæc, et undique percussa, non nisi homogenea vasisque orba, adparuit."

The diffused scrophulous tumors are sometimes composed of a congeries or conglomeration of distinct small ones dispersed through the cellular texture; which is at the same time infarcted with viscid coagulable lymph; as in the case of the young Austrian nobleman above-mentioned. At other times there are no indurated knots to be found, but the cells of the tela cellulosa, with the contiguous bursæ mucosæ, filled with coagulable lymph, become the seat of the diffused tumor; and this kind frequently takes place in the vicinity of the articulations of the extremities. In those cases the con-

stitutional morbid cause seems to have seized the lymphatic system in these parts, absorption is impeded, and the lymph, detained in the cells, becomes gelatinous and glary, consisting of the coagulable part; whilst the finer and more subtile fluid matter may be absorbed in a partial and imperfect manner.

Of this kind of diffuse obstruction in the lymphatics of the tela cellulosa, seems to be that which takes place in the membranous parts of scrophulous subjects, wherever this connecting medium cellular membrane is to be found, as in the eyes and hollow viscera; which may account for ophthalmia in the first, with the train of mischiefs which but too often follow this affection: and the inflammation subsequent to it thickening, and contracting of the latter, ending in those schirrous affections, sometimes in the bladder, stomach, and intestines, particularly in the rectum, which most commonly become cancerous and mortal. And these misfortunes have,

as far as my observation goes, always happened in subjects with constitutions which have been tainted deeply with scrophula from early life.

Scrophulous tumors, whether distinct or diffused, are liable to imposthumation: and those, particularly of the latter kind, frequently form in the middle of the extremities, where no glands obvious to our sight are to be found; therefore they must form in the tela cellulosa: and the lymphatic vessels, passing through, or in the vicinity of those abscesses, are found rigid and inflamed, and their course from these circumstances has been well defined.

Scrophulous abscesses become dangerous from their situation or number; and are generally most hurtful about the age of puberty. The constitution at this period has the most severe conflict with the disease, especially if there is a large quantity of it.

When those abscesses are situated near the surface of the body, though generally

attended with much inconvenience, they are seldom dangerous. The tumor is slow in progression, the inflammation late in appearing, and is dusky, or livid, and rather of a colour inclining to purple, than of the vivid red of the common phlegmon. The suppuration, of course, is languid and imperfect; and whether the tumor bursts spontaneously, or is opened by the surgeon, the discharge is crude and curdled, and consists of a caseous-like matter, not unlike soft cream-cheese, partly dissolved in, and mixed imperfectly with lymph, and also lymph in a separate state from this mixture, and little or no real pus. That much lymph is discharged, is evident, by the coagulable part of it hardening the linen like glue. All the discharges are for some time of this mixed kind; and the flesh which is at first generated is not a vivid red, and granulated, but pale, flaccid, and smooth; yet in time these ulcers digest, firm and vivid granulations appear, and the ulcers heal; and

and after a numerous succession of superficial imposthumes of this kind, for several years, in every part of the body, sometimes near bones which have become carious and exfoliated, the patients have got well, with no other inconvenience than the indelible marks of the ulcers in very uneven and unseemly scars, which remain for the rest of their lives; and although not absolutely freed from the disease, have acquired strength, and lived many years.

When the imposthumations are deep seated among the muscles, and are repeatedly, and with little intermission, occurring in different places in succession, and several of them arising in this manner at the same time, if they are large, the matter acrid, and long confined in wide and extended surfaces for its absorption, it then becomes a very dangerous case; for the hectic fever, superinduced by the large absorption of this acrid matter, very frequently destroys the patients, after they have lingered in painful existence for some
years.

years. I have seen instances about the age of puberty where every part of the several extremities has been alternately loaded with matter, large collections under the glutæi, under the scapulæ, first on one side and then on the other; in different places on each of the spine externally, and internally forming the psoas or lumbar abscess; which although happening at different periods in a succession of several years; till the miserable patient, at length, exhausted by the immensity of the discharge, has sunk into his grave. If those abscesses happen to be in the vicinity of large blood vessels, the catastrophe may be hastened by the matter's corroding the coats of the vessels, and the hæmorrhage which may ensue the rupture of them: if near a bone, caries will follow, with all its concomitant mischiefs, according to the circumstances of the situation, texture, magnitude, and importance of the bone affected.

Although collections do not often hap-
pen

pen from this cause within the scull, yet I have known some instances which proved fatal.

If any one of the numerous glands with the thorax becomes the seat of scrophulous imposthumation, it is attended with great danger, and in general terminates fatally; but in no instance more so than when the lungs become the seat of the disease; and when lymphatic glands and the plexus of innumerable lymphatic vessels are attacked, with suppuration from this cause, in this viscus, few or none, I believe, escape from dying of a phthisis pulmonalis; and I am fully of opinion that at least nine in ten of those who die of consumptions are scrophulous subjects. I apprehend that the tubercles which form in the lungs are entirely of scrophulous origin; they are at first hard, and slow in advancing; one or more, however, increase in magnitude; they suppurate, and burst, and are converted into fordid ulcers, with an acrid discharge, which produces

duces from absorption the mining hectic fever, which sooner or later destroys the patient. I have more than once known a large vomica, in a scrophulous hectic person, burst in the action of coughing, and suffocate the patient directly.

If one or more of the absorbent glands within the cavity of the abdomen become the seat of scrophulous imposthuration, it must always be attended with danger; for if the abscess bursts into this cavity, the acrid matter will speedily bring on peritoneal inflammation, and probably destroy the patient in a few days. If it is within the reach of surgery this may be prevented by an external opening. And sometimes a spontaneous rupture into some one of the hollow viscera has saved the life of the patient. The glands of the mesentery, or mesocolon, are perhaps more frequently affected than the lymphatic glands, on or about the peritoneal lining of the abdomen and pelvis. When imposthuration fortunately happens to be in
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the vicinity, for instance, of the colon, or rectum, and is united to the intestine by inflammation, the matter may burst into the gut, and be discharged by the anus. A remarkable instance of this kind fell under my care about twelve years ago, of which I have subjoined an account.

IV.

A married woman, of about thirty years of age, of a scrophulous habit, and mother of several children, was attacked with a puerperal fever, soon after her delivery of one of them; but on recovering from this disease she complained of much pain in the lumbar region, and soon became so lame of both her lower extremities, that she could not walk, nor even support herself in an erect posture without crutches, and at length not with their assistance; and at last could not even bear to sit any length of time in a chair; for which reason she was confined to her bed more than seven months, the greatest part of which she

she laboured under hectic fever and night sweats, became extremely emaciated, and her life was despaired of: when one day, in straining to discharge the fæces, she felt, she said, something give way within her, and presently afterwards evacuated near a quart of matter by the anus, which gave her immediate relief. This purulent discharge continued to pass in considerable quantities daily, and she gradually recovered her health, and the strength of her lower limbs as before. She has had two children since that period, and several returns of this glandular abscess, which has always the lameness attending, the concomitants of suppuration, with the fever and night sweats; and upon the discharge taking place per anum, these symptoms leave her, and she very soon recovers. The last attack of this kind was in the beginning of the year 1789. —

(V.) Her only son, now at the age of puberty, is sinking under the immense discharge of several scrophulous abscesses,

abscesses, with a succession of which he has been grievously afflicted for several years.

Collections of pus, or something like a purulent fluid, are said to have been found in natural cavities, where no apparent disease existed in those cavities; and have been thought to have remained in them perfectly inoffensive, and have not produced the hectic fever of absorption, whilst thus confined from the external air. But those collections probably did not arise from any specific disease, but in reality consisted of lymph, detained in the natural cavity from an error of absorption, and has taken on a purulent appearance, by suffering in this quiescent state, out of its proper vessels, a peculiar decomposition, the process of which we are ignorant of. And as all animal fluids, exposed to the air, out of the course of circulation, are liable to putrefaction, this, by an opening made into the cavity where it is lodged, will undergo this change,

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and

and occasion inflammation, ulceration, and more or less hectic fever of absorption, in proportion to the extent of the ulcerated surface. But there must be a great difference between collections of this kind and those arising from a morbid constitutional cause; where, as in scrophula, there is a peculiar acrimony, and great destruction of parts, an extended ulcerated surface, and large absorption from it; which is found by experience to produce a mining hectic fever, whether the cavity is exposed to the air or not.

It has been supposed that after puberty the symptoms of scrophula decline, and at the acmé, or perfection of full growth, leave the patient, and do not appear again till the decline of life, and then but seldom and slightly. But the scrophulous phthisis pulmonalis, which happens at all periods of life, and the psoas, or lumbar abscess, generally happening after manhood, with the scrophulous ophthalmia, and some other affections which so often
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take place, before and after the middle age, particularly deafness, seem to prove that this disease is by no means dormant in the constitution after puberty, but exerts its influence in a variety of forms, in every subsequent period of life

The lumbar or psoas abscess, for instance, seldom or never appears till after the full perfection of growth is attained, that is, between twenty and thirty years in some individuals, and in every period afterwards. This distressing imposthuration is, I apprehend, generally seated in the lumbar, or the sacral lymphatic glands, and always in a scrophulous constitution; at least in a number which I have seen in a long course of practice, I never beheld one but in a scrophulous subject. I have seen many of a vast capacity, as appeared from the large quantity of matter discharged, either when they bursted spontaneously, or were opened by the knife: the following is one of the number.

VI.

A lady of upwards of fifty years of age, who had been married near thirty years, and I believe never had been pregnant, had complained for several months of what was called a lumbago, with a sensation of fulness within, and accompanied with fever. She was of a scrophulous habit, and from every external circumstance seemed to possess a quantity of the disease in the extreme. The symptoms gradually increased, her lower extremities swelled, and became anasarca; which symptom extended by degrees through the cellular texture every where, and was accompanied with hectic fever and night sweats, which exhausted her exceedingly. She was treated for the anasarca, without any internal collection of matter being suspected. But soon afterwards the continuation of the wasting hectic fever led to a suspicion that an absorption of acrid matter, from a deposit within, was the cause

cause of this symptomatic concomitant; which depofite at length became evident, by an elevated tumefaction appearing on one fide of the vertebræ of the loins, in which matter was felt to fluctuate, and to point outwardly, with no other covering than the integuments, which were juft ready to burft. It was therefore thought neceffary to make an opening to difcharge the matter, which instantly gushed thro' the aperture, in a jet of fome feet in length; and between two and three quarts of an acrid, fœtid, purulent matter was difcharged, which changed a filver instrument paffed into the opening black. Upon examination it was found that this matter came from an immense cyft, which feemed to fill the capacity of the pelvis; and in all probability the preffure of this cyft, full of matter, upon the iliac veins, was the caufe of the anafarcous fwellings in the lower extremities, in the fame manner as that of the gravid uterus does in pregnant women.—The lady was relieved, and remained eafier for two or three days; but as there was not

the least shadow of hope for her recovery from such a malady in her emaciated condition, she sunk gradually under the profuse discharge, and died in about ten days after the operation.

*Lumbar
Abscess*

In the lumbar or psoas abscess the matter generally descends, and presents itself on the thigh, below Poupart's ligament, in the form of a tense tumor, on the course of the crural vessels. Sometimes it descends lower, and appears on the back of the thigh towards the outside, and sometimes under the glutæi muscles. In either of these determinations it generally ends fatally. Indeed I never knew but two persons escape from the fatal consequences of this very dangerous imposthuration; and those were where the tumor pointed on one side of the lumbar vertebræ.

VII.

The first was a Captain J. M. in the merchants' service in this port, who consulted

sulted me respecting a tumor on his loins in December 1778. It was on the left side of the last vertebra of the back, and the first of the loins: it was of a hemispherical figure, about three inches in diameter, and full of matter. It was opened by his surgeon*, and three times the quantity of matter was discharged than this tumor, from its external dimensions, could possibly contain. The cavity of it was examined by the finger, but its bottom could not be reached, and appeared to be far beyond the fleshy muscles of back and loins, and also the vertebræ; and in short appeared to be a lumbar or psoas abscess. The opening was treated in the usual way; and after a long attendance of his surgeon became from a lymphatic discharge fistulous. And as surgery could not explore the bottom, a silver canula was placed in it, to prevent any accumulation of matter from the shutting up of the external orifice, and it was left to nature.

* Mr. Crawforth.

Matters remained in this state, and Mr. M—— enjoyed good health, and followed his professional avocations at sea without any inconvenience; when, in 1785, after a feverish indisposition, which turned out to be symptomatic, a tumor appeared two inches and a half above the fistula, where the canula was. This tumor, when it was fully matured, was opened, and rather more matter was discharged than from the former, and with it a calcareous concretion, of the size and shape of a horse-bean, freeable to pressure, and without laminæ. This opening remained fistulous also for some time, and then healed. Some eighteen or twenty months afterwards another calcareous concretion* was taken out of the fistulous opening where the canula was lodged. Since that time the lymphatic discharge has gradually decreased, has become more purulent for many months, is much lessened in quantity; and at present (February 1790)

* I have seen many similar concretions taken out of the salivary ducts.

nothing but pure pus passes through the canula. The parts around it are found and firm; and this first fistula, which is of little inconvenience to him now, will in all probability fill up and heal.

VIII.

The other instance was in a woman of about thirty-two years of age, who, after the birth of her fourth child, suffered much from a puerperal fever; but escaping from this dangerous disease, she complained of what was called a lumbago, with a privation of motion in the lower extremities. These complaints in a short time were accompanied with fever, which soon evinced itself to be the symptomatic fever of suppuration, and afterwards that of absorption. A tumor at length showed itself on one side of the lumbar vertebræ full of matter: it was opened, and attended by Mr. Crawforth, and discharged a large quantity of very foetid pus. This discharge continuing, she was

wasted to a shadow, and remained so lame as to use crutches for near three months. At length, tired of physic and surgery, she went into the country for change of air, and an opportunity of getting good milk, and returned, after an absence of near two months, perfectly well; has had two children since, and enjoys as good health now (February 1790) as ever she did in her life.

But the most extraordinary instance of a lumbar abscess which I ever saw I shall now relate. In this case nature manifested a wonderful power of relieving herself at different periods, and of preserving this patient's life for near thirty years.

IX.

A gentleman of this town, of a thin habit, and lively disposition, had in his youth, for some years before and after puberty, been subject to scrophulous imposthumations in the lymphatic glands in the neck and groins, but mostly in the latter; which

which had reduced him so low as to threaten a consumption; ceasing at length to return as he approached manhood, he perfectly recovered his health at that period, and therefore flattered himself that he had outgrown every danger from this disease. The contrary, however, soon appeared. After he had attained the acmé of full growth he was affected with an obtuse pain in his loins, which was attributed to gravel in the kidneys, and was disregarded for some time. But the pain growing worse, and being attended with frequent chilliness, and subsequent feverish heat, he was obliged to keep the house, and apply for medical assistance; but he received no relief from this aid, and his breathing became affected, accompanied with a dry cough. He went on thus for some time, growing daily worse, with the increasing difficulty of respiration, which, with the hectic fever and night sweats, became very alarming, and reduced him extremely. When, being
feized

seized with a more violent fit of coughing than usual, he pumped up from the lungs a large quantity of foetid purulent matter, without any pain; and although the expectoration was very copious, and continued long, it came up gently; and, instead of fatiguing, always relieved him, by giving more freedom for respiration. The expectoration continued many days, but gradually lessened in quantity: his fever and night sweats left him; his appetite returned; and, after some weeks, the expectoration ceased, and he soon recovered his health and spirits. From this time he became extremely cautious in the article of diet. His food, which was plain, had a large share of milk in it, and he drank water for his only beverage all the rest of his life.

About two years after this escape he was attacked exactly in the same way, and with the same event. And this extraordinary disorder returned every year or two for the remainder of his life, except with-

in about eight or ten years of his death, when he had a truce of between four and five years; which was attributed to the discharge of two large issues, which held about five peas or three horse-beans, one on the inside of each thigh, a little above the knee; and it is astonishing with what activity this man used the exercises of walking and riding, when well, notwithstanding those large issues. He derived great benefit from asses milk after every paroxysm, if I may so call it, of his disease, in recruiting his strength.

I did not attend him professionally for many of the first years of this very singular case; but living in the habit of intimacy with him, I have seen him many times during those returns, have repeatedly had the history from himself, as well as from his physician, the late Dr. Taylor, of this town, who conversed with me concerning this uncommon case every time it returned; and therefore I can vouch for the truth of what is here related,

ed, as coming within my knowledge, for a succession of more than twenty-three years of this gentleman's life.

In January 1771 he consulted me about a swelling on the outside of his left thigh behind the trochanter major. It was a round elevated circumscribed tumor, about three inches in diameter. It appeared to be full of matter, but neither inflamed nor painful. It was poulticed some days, the skin became thinner, with little discoloration; but it had not increased in dimensions when it was opened by a surgeon of character here*. The matter which issued from the opening was too large in quantity to be confined in a tumor of this size; and from the foregoing history it was not difficult to guess from whence it came. It went on discharging immense quantities. He wasted daily, and could only move with crutches.—In July following another tumor appeared below the groin, which being opened dis-

* Mr. Robertson.

charged also a great deal. There was now no longer a doubt but this was a true lumbar abscess: and that the matter which had occasionally collected for so many years, and had been pumped up through the lungs, had formed always in the left side, had now by its gravity found its way downwards by the psoas muscle, and made its appearance externally. This poor gentleman gradually declined from the vast discharge, and died tabid January 1773. Not being permitted to examine the body, all that we can say relating to the original site of the collection of matter must be founded on conjecture, as must also the way that the matter found its way into the lungs. I shall leave anatomists to account for this wonderful economy of nature in relieving this man; I shall only remark that the pus was never streaked with blood which was coughed up from the lungs.

Liver

Collections of matter in the liver have generally been ascribed to the termination
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of the hepatitis, or inflammation of that viscus in suppuration; both in this country, and in all countries between the tropics, either in the East or West Indies, where this disease is particularly endemical to the climate. As, however, imposthumes sometimes happen in the livers of scrophulous subjects, without any very acute concomitant inflammatory symptoms, we may without straining probability, as the liver is furnished with numerous lymphatic vessels, and several lymphatic glands, refer those collections to a scrophulous origin. I have seen several cases of this kind in scrophulous constitutions, which led to this conjecture.

X.

J—— W——, Esq. about fifty-eight years of age, of a scrophulous habit, from which cause his head, but more particularly his eyes, had been considerably affected after manhood, and for which he had many years two issues in his back, was
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in February 1756 attacked with an obtuse pain in the right hypochondre, with febrile heat and thirst, but was not confined to his bed by it. Many means were tried in vain by his physicians to relieve him. A manifest enlargement of the side having taken place, I was desired to visit him, and found a fulness, with heat and tension, in the side affected, painful to the touch, with an obscure fluctuation of matter deeply seated under the abdominal muscles: wherefore it was agreed, in consultation with the late Doctors Lidderdale, Tayler, and Mr. Young, his surgeon, all respectable for their professional knowledge, to have it opened; which accordingly was done by incision the next day, in a slow dissecting manner through the teguments and muscles, until the peritoneum was laid bare, and the matter seen plainly through it. Upon opening the peritoneum near a pint of purulent matter of a yellowish tint, something like the yolks of eggs, rushed out. The aper-

ture was dilated on the finger introduced as a directory; and this finger readily distinguished the surface of the liver, smooth and even for a large extent, without any opening in it. So that this collection appeared to be contained in a space between the liver and peritoneum, where they had been united by an inflammatory cohesion; and had it not been timely discharged the matter would have burst the boundaries of its confinement, between the two surfaces, escaped into the cavity of the abdomen, and destroyed the patient.

The fever left him in a day or two, and every thing went on well, the wound contracted daily; but from an open lymphatic, that discharged a prodigious quantity of lymph, which no art could restrain, it at length became fistulous, and was left to nature. It was, however, thought proper for him to wear a silver canula to give vent to the lymph; for if the external orifice happened to close, which it did
twice,

twice, pain, tumour, and inflammation ensued; which was not removed but by a discharge of the impacted lymph, which generally became purulent by a day or two's confinement.

After wearing the canula near nine months the lymphatic discharge stopped, the ulcer filled up, forced out the canula, and remained well all the rest of his life. He lost his sight, and became paralytic in the organs of speech, about 1778, and died in 1780, being gradually worn out by his infirmities, in the eighty-second year of his age, and twenty-four years after the operation was performed.

XI.

In 1757 a poor vagrant boy was brought into Lynn workhouse to be taken care of; he was about ten years of age, of a deep scrophulous habit, and was ill of a fever. Two days after his admission he shewed me a tumor about the size and shape of half a common orange, situated

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below the cartilago xiphoides on the right side, and occupying a space contiguous to the cartilages of the three first bastard ribs, reckoning downwards. There was a fluctuation of matter under the integuments, but as they appeared to be thick, a suppurating poultice was applied two days, when it was opened by incision, and above twelve ounces of purulent matter was discharged. This large quantity, far exceeding the contents of a tumor of such external dimensions, led to a suspicion that the abscess was deeply seated. In order to be satisfied in regard to its real site, a finger was passed in to the opening, by which it was found that the matter had actually issued through an aperture it had made in the abdominal muscles. The openings in the teguments and muscles being enlarged, the bottom of the abscess came in view, and was found to be in the substance of the right lobe of the liver. From this investigation it seemed to appear that the strong inflammatory
adhesion

adhesion of the circumference of this hepatic abscess with the contiguous peritoneum, was superior to the texture of the abdominal muscles, which had given way to the suppurative power of the matter in this curious case.

Notwithstanding the deep scrophulous constitution of this boy, he recovered rapidly, the abscess filled apace, and was well when he was discharged, about two months after his admission.

XII.

In company with the late Mr. Young, of this town, I examined, on the 11th of December 1758, the body of M. Parker, a woman of about forty years of age, of a scrophulous constitution, who died tabid, from the immense discharge of a hepatic abscess, which had been opened by Mr. Young about six months before. The external aperture of this abscess was on the right side of the linea alba, a little below the xiphoid cartilage.

The discharge had been very large and crude for a considerable time, particularly when she was in a recumbent posture.

On opening the abdomen we found the omentum devoid of fat, and of a dark colour. The stomach was preternaturally thickened, and displaced, and white like a bag of matter. The liver adhered firmly to the diaphragm above, and to the stomach, colon, and mesocolon below, which were also united to one another. In tracing the sinus from the external aperture, we found the matter lodged in a sac, whose beginning was in the fissure, which divides the liver into the greater and lesser lobes. This sac was very large, and extended itself backwards over the stomach, to the course of the large blood vessels, passing downwards within the doubling of the mesentery, at its rise from the vertebræ; and all the neighbouring viscera were united to it, or rather contributed, by their union (by inflammation) to each other, to form a sac or receptacle of very

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capacious

capacious dimensions, there being at this time more than two pounds of matter in it. The substance of the liver was full of matter, for pus issued from every incision made into it. The gall-bladder was a complete sphere; its coats were thickened and white, and its cavity was filled with a clear limpid fluid. No vestige of the ductus cysticus was to be seen. These appearances were all we observed; for the offensiveness of the putrid matter contained in the sac prevented any further prosecution of our enquiries.

Scrophulous inflammations in the eyes appear at every period of life; and this kind of ophthalmia frequently leaves what the common people call a speck in the sight. This is occasioned by an ulceration of the cornea of different dimensions, which continues open, and discharges for some time. When this ulceration heals there is generally a loss of substance in the surface of the cornea, and the cicatrix is depressed below the convexity of

Eyes

this coat; and by this alteration in its shape the direction of the refracted rays of light to the retina is changed, the picture therefore becomes imperfect, and vision confused: and the opacity which frequently remains in the scar adds to the confusion, by obstructing the passage of many of the rays of light, which are reflected instead of being refracted. But worse consequences than these happen: the whole of the cornea is sometimes involved in the ulceration, and becomes totally opaque when healed, and not a single ray of light can enter the pupil. Indeed some instances occur where the whole of this coat is destroyed; the aqueous humour of course is gone for ever, the iris is left naked, and the crystalline humour, projecting half way through the pupil, is become dense, and of a milky hue. And sometimes the intense heat of the inflammation as it were bakes the crystalline, when there is no external ulceration, and renders that humour opaque,
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and totally impervious to the rays of light. The inflammation on the conjunctiva and ulceration are sometimes productive of a kind of an adventitious carneous covering, which not only envelopes that coat, but the cornea likewise; and by confining the acrid discharge under it, has occasioned those irreparable mischiefs which have been mentioned. But one malady is perhaps more distressing than any yet named, to which the eye is subject; and that is a suppuration taking place within the globe of the eye itself, which, after destroying the beautiful symmetry within, the ball bursts, the whole contents are evacuated, the eye sinks, and vision is gone for ever. And another misfortune is, that when one eye has suffered in this manner the other sometimes shares the same dreadful fate.

Such are the destructive effects of scrophula on this wonderfully beautiful and delicate organ: all which I have seen, and can with truth affirm that there is no exaggeration in the relation.

Ophthalmiæ, with ulcerations on the cornea, sometimes happen after the small-pox; but these occur chiefly in scrophulous habits, unless unfortunately a vario- lous pustule should arise on the cornea it- self; instances of which I have sometimes seen, which left a scar and opacity, even in a mild variety of the disease.

The scrophula commits no less havock on the organs of hearing than it does on those of seeing, both before and after manhood, and sometimes after the meri- dian of life. The suppurations in the ear destroy the tympanum; the malleus, sta- pes, and incus come out. The delicate expansion of the auditory nerves, in the membranous linings of the different cavi- ties of the vestibulum, cochlea, semicir- cular canals, &c. are either partly or wholly destroyed, and with those linings part of the os petrosum sometimes falls a sacrifice; and either a partial or a total deafness ensues, according to the parts destroyed.

XIII.

In the case of a youth of seventeen years of age, a large portion of the carious os petrosum, which had been destroyed by repeated scrophulous imposthumations, exfoliated, presented itself in the meatus auditorius externus, and was extracted by his surgeon, Mr. Crawforth, in my presence. It seemed to be a fragment of another loose portion of the bone, which remained, and which could not be got at without considerable violence, and therefore was left to time. A fungus excrescence shewed itself soon afterwards in the meatus externus, and filled it up. Upon touching of this excrescence a sense of giddiness came on; and if the finger was pressed upon it but gently a slight stupefaction followed, which clearly evinced its contiguity with the brain.

In about six months afterwards this youth had a fresh attack of inflammation and suppuration in those parts; and from
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the concomitant phrenzy, the meninges, or the brain, seemed to be involved in the calamity. This attack proved fatal, and upon examining the contents of the cranium, by the gentlemen who attended, it was found that a large suppuration had taken place in the meninges and brain on that side, and that a large quantity of matter was deposited at the base of the cavity of the scull there, and a portion of the os petrosum was found carious. As I did not see this myself, I relate it from the information I received from the gentlemen who were present.

The father of this youth, who by the number of scars on his neck carried evident marks of the havock which the scrophula had committed there in his youth, was deaf, and subject to frequent suppurations in his ears, as also to ophthalmiæ. I attended him and his wife and children a great many years, and was witness to the destruction made by the disease in this scrophulous family. The mother of this youth

youth bore also many similar marks to those of the father, was subject to ophthalmiæ, and died of a scrophulous phtisis. Of the ten children, who were the product of this marriage, one only arrived at man's estate. He is still living, but is deaf, subject to frequent imposthumations in his ears, and to ophthalmiæ. Yet this young man was apparently the most infirm of their offspring; he was the youngest, and the most unlikely to live of the whole number. The rest of the family died at different ages, chiefly of consumptions. Two of the girls, of eight and ten years of age, of imposthumations of the brain, similar to that of their brother before mentioned. All of them, besides glandular suppurations in other parts, were subject to imposthumes in the ears, deafness, and ophthalmiæ.

I have seen the organs of hearing destroyed by the acrid matter in the angina maligna, and scarletina anginosa, passing from

from the fauces through the Eustachian tubes into the ears, and producing corrosion and ulcerations of the parts there. The matter in those cases finds its way out through the meatus auditorius externus, and with it commonly the small bones of the ear are evacuated.

The testicles being largely furnished with lymphatics are liable to be affected in scrophulous subjects. I have known instances where they have suppurated and burst from this cause, and foul ulcers have remained some months in them.—Some (XIV.) years ago a man of about fifty years of age consulted me in a case of this kind, and both the testes were affected in succession in this manner. The first that was attacked remained several months in an ulcerated state. In about the space of a month or six weeks after this testicle got well, the other was attacked in the same way: it suppurated and burst also, but healed much sooner; and this man has remained well ever since.

But scrophulous affections of the testicles terminate more frequently in schirrus than in suppuration; and it is well known that this last morbid affection ends often in cancer. And all the absorbent glands in the body are liable to partake in succession of those different morbid affections.—Mr. Cruikshank found the lumbar glands in the body of a man, whose left testicle had formerly been extirpated for being cancerous, as large as a child's head at the birth, and inclosing the vena cava inferior and the aorta descendens some way.—I knew an instance of a woollen-draper and taylor who had been many (XV.) years affected with an obstruction to the expulsion of the fæces, which, upon examination by a finger in ano, was discovered to proceed from the pressure of some bodies of a firm texture against the rectum (which, upon further investigation, were found to be hard schirrous glands) attended with great pain, upon every exertion in going to stool. These gradually increased

creased in magnitude, and at length totally prevented the descent of solid excrement, nothing but a scanty discharge of liquid matter passing for several years. This poor man, after being emaciated to a skeleton, and suffering excruciating torments for more than eight years, was at length released by death.

Large masses of scirrhous glands about the uterus, bladder, and rectum, must, in numerous instances, prove fatal. Mr. Cruikshank tells us that the late Dr. Hunter attended a woman in labour, who could not be delivered in the natural way, by reason of a tumor on the side of the pelvis, which prevented the child's head from coming down. After she was completely exhausted, and the pains gone, he was obliged to deliver her with the crotchet. The child of course was lost. The mother fell into a fever, and died.

The ovaria in scrophulous females are particularly

particularly subject to be affected by the disease, and from the morbid state superinduced by it are liable not only to suppurate, but to become dropfical: and likewise to become schirrous, and afterwards cancerous.

In some female subjects menstruation never takes place; and the barrenness attending such females seems to be owing to the diseased state brought on in the ovaries, by scrophula and its consequences. Such subjects have generally a leucorrhæa, and the uterus in them is liable to become schirrous and cancerous, and to destroy the patient. Those subjects who are afflicted with these morbid affections have commonly also diseased groupes of enlarged and indurated lymphatic glands, either in the inguina, about the mammæ, the axillæ, sometimes on the neck, and no doubt in many places internally. Many expedients have been tried in vain to bring on the catamenia, and remove barrenness; and the mineral waters
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of this country, as well as those on the continent, have proved equally ineffectual with medicines.

Many women have but a scanty appearance of the menses at all times, and the discharge is not only small in quantity, but of short duration; perhaps for twenty-four hours, frequently less. All the subjects of this description, that I have seen, were deeply affected with scrophula, were barren, subject to leucorrhæa, and also sometimes to a schirrous uterus, indurated strumous glands every where, and there is little doubt but the ovaria were involved in the calamity.

From the foregoing remarks, it seems to appear that schirrus and cancer are consequences of a scrophulous habit. It has already been observed that schirrus frequently happens to a strumous gland, and that it seems to be the other of its terminations, when the gland does neither dissolve and discuss, nor suppurate: and that cancer is known to succeed schirrus.

Therefore

Therefore those morbid states of the lymphatic glandular system, from those circumstances, seem to be only varieties in gradation from one to the other, in particular constitutions of some scrophulous subjects, although they appear to take on, in succession, new forms, and have different conclusions. I am the more induced to believe this, because I never knew either a schirrus or a cancer take place, but in a scrophulous habit.

There is a wonderful conformity in the appearance of the incipient external progress of scrophulous affections, and the effects of cancer. The lymphatic glands of young subjects, before or at the time of puberty, are generally affected in a very conspicuous manner, and this appears externally, and obvious to the senses. The same system of glands is particularly affected in the adult subject labouring under cancer. A concatenation of obstructed glands is visible in the neck and other parts of the young scrophulous subject.

A chain of a similar kind reaches from a cancerous breast of an adult to the axilla. And instances occur of this kind of morbid affection in cancerous patients extending over the whole external glands of the lymphatic system, in large groupes (especially in females, after menstruation has ceased) and it may be concluded over all the internal ones also. The morbid affection of the juices appears, however, to be very different in different subjects. Schirri sometimes remain many years indolent, and give no trouble; and even when those schirri become cancerous they are frequently inactive for a certain given time. And hence it appears that these morbid dispositions of the juices are, according to some unknown quality inherent in them, sometimes slow and sometimes rapid in their activity and progression. A cancer frequently lies dormant many years. I knew an instance of one that remained so near fifty years.

(XVI.) This lady consulted Mr. Chefelden and Dr. Mead. The knot

knot was in her left breast, and was declared to be an occult cancer. She was advised to do nothing to the breast, but to avoid every pressure or irritation upon it; to take the millipedes, which she did all her life afterwards, and usually swallowed them alive; and to use a milk diet. At length, when she was upwards of seventy, a sanies collection formed in the breast, it burst, ulcerated, and the absorption of the acrid matter disordered the whole lymphatic system; and the patient, after suffering excruciating torture for seven or eight years, died actually tabid.—I have seen several similar cases, and no doubt many such happen frequently in practice.

XVII.

About twelve years ago a gentlewoman, of thirty-four years of age, of a thin, and very scrophulous habit, who had been married many years, and never had been pregnant, whose periodical discharge of catamenia was very scanty, and of short duration;

duration; and who, in the intervals between the periods, was distressed with leucorrhœa, asked my advice respecting a small knot, of about the size of a pea, situated immediately under the skin, at a little distance from the edge of the right mamma, towards the axilla. The glands of the breasts were meagre and flat, very little fat was in the cells of the adipose membrane, and not a single obstructed gland was to be felt any where near it. A few indeed, a very small degree enlarged, were on each side of the neck, a little below the ears. As it gave no uneasiness, nothing further was directed, but to avoid compression and irritation of every kind, and to pay some attention to her diet. I did not see her afterwards for several months; and then found that the knot had increased considerably in magnitude, and alarmed her. It went on increasing gradually, and at the end of twelve months from my first seeing it it had become as large as a hen's egg, but
of

of a different shape, and had taken on a livid cancerous aspect, attended with great pain. It was therefore determined in consultation to have it removed by the knife, which was accordingly done. Upon cutting it afunder afterwards, to examine its texture, it was found to consist of several coats, with a fluid between them, and adhering to each other in different places, the external of which was of a callous hardness, more than one eighth of an inch in thickness; the rest were neither so hard nor so thick as this, and within the innermost there was near an ounce of a lymphatic liquor. The wound healed without trouble in a short time.

In about three years afterwards this lady was alarmed by the appearance of another glandular knot, similar to the former, at the upper margin of the scar. This likewise advanced gradually, became much larger than the former, and more alarming in the space of a year. This tumor was also extirpated, and the wound

healed without much trouble. But in little more than a year after it healed the mamma itself became greatly diseased, and adhered to the parts beneath it. The chain of glands from it to the axilla became enlarged. The breast, now become a cancer, ulcerated, and discharged a corrosive ichor. The ulceration spread, the absorption from it was considerable, and not only infected the other breast, but all the absorbent glands in the body, with this cancerous disposition, and destroyed her in about three years after the ulceration of the breast took place. I saw her about a month before she died, and think there could not be a more distressing object. She was in constant torture; a scruple of opium, once in twelve or fourteen hours, hardly afforded a small truce to her sufferings. Her head was motionless, from a concatenation of large diseased glands on each side of her neck, from the head to the clavicles, breasts, and axillæ. The tone of her voice was changed, she spoke with difficulty,

difficulty, and could scarcely swallow. Which last affections appeared to arise from large and indurated tonsils, and the pressure of the tumid glands of the neck upon the trachea and œsophagus. The abdomen was turgid, and groupes of diseased glands appeared in the inguina. And there cannot remain a doubt but the mesenteric, and all the internal absorbent glands, were equally affected, and particularly those in the vicinity of the rectum, as she had much difficulty in voiding the fæces.

I have seen the viscera in morbid bodies studded in several parts with hard tumors of different dimensions, which at first sight appeared to be hydatids, but upon cutting them in two were found to be similar to the first schirrous knot that was extirpated in the above case, only that the external coat was of a cartilaginous hardness. Those subjects appeared to have been scrophulous, from the scars of glands

which had suppurated, to be seen in the neck and other places*.

I am inclined to think that schirrus in the lungs, with or without tubercles; in the liver, which is frequently found of an immense size from this morbid affection; in every conglomerate gland; in the kidneys; and in every conglobate gland of the mesentery, mesocolon, or any where else within the abdomen;—and also in all the hollow viscera, as the stomach intestines, particularly the colon and rectum, and likewise in the bladder, originates chiefly from a scrophulous cause; as I never knew those schirrous affections exist but in a scrophulous habit, as has been already noticed.

It may be urged that schirrus of the liver, and subsequent dropsy, often arise from hard drinking. This certainly is sometimes the case; yet those hard drinkers may be of scrophulous habits. On the other hand, we frequently see hard drinkers,

* Vide case xxxiv.

particularly

particularly of ardent spirits, neither afflicted with schirrus of the liver nor dropfy, but die some of apoplexy, others of phrenzy, and others very commonly sink under an atrophy, from mere inanition, by the tone of the stomach being destroyed, and digestion and nutrition prevented, by this pernicious practice.

Having gone through some of those morbid affections in the soft parts which have come within my observation from scrophula, I shall now advert to others to which the bones are liable from the same cause.

SECTION II.

ANATOMY has taught us, that wherever there are arteries and veins there are lymphatics distributed through the system, for the purposes of the animal economy. It has been already observed that lymphatics, therefore, are dispersed through the bones, as well as through the soft parts of the body; consequently, when these lymphatics are injured by the scrophula, and unable to perform their functions, the bones will become affected nearly in a similar manner, *mutatis mutandis*, to other organic parts. The bones therefore in scrophulous subjects are not only liable to be affected, by being exposed externally to the action of the matter in suppurations of the soft parts contiguous to them, but also by the action of the specific disease internally upon the vascular

vascular system within their substance, and the follicles of the membranes containing the marrow, and producing in them inflammation and suppuration: or by this disease attacking the structure of the bones themselves, and superinducing a lax texture, a molleties ossium, and thereby distortions of them.

Whether the bones are attacked from the contiguity of scrophulous ulcerations without, or from the inflammation and suppuration of the membranes and vessels within their substance, a caries is the consequence; and that, from the internal cause, is generally termed a spina ventosa.

These carious bones exfoliate commonly, and the whole of the diseased part is either separated in one or more solid pieces, or crumbles away in small portions, whose solidity is destroyed, or suffers a kind of solution in the pus, and is discharged with it imperceptibly; facts that are well known to surgeons of experience.

In either of these ways the part of the bone affected is totally removed, and the remaining sound part of it suffers in general a considerable diminution, and the long bones of the extremities, if the caries has been in them, of course become shortened.

The whole substance of the long bones is sometimes removed by exfoliation, and replaced by a callus, even in scrophulous habits; which callus consolidates into bone, not perhaps so well formed as before, but able to give stability to the limb afterwards.

XVIII.

I saw, about five years ago, a caries tibia in a scrophulous girl, about fifteen years of age, under the care of Mr. Helsham, an eminent surgeon, at Stoke. A large abscess had been forming in the leg several weeks before this gentleman saw it. When she was brought to him, it was deep seated, full of matter, and possessed

ferred the whole leg. Upon opening it, he found the tibia denuded in nearly its whole length, exposed to the action of the matter, and carious. After treating it with great attention many months, the bone, which had separated in its whole substance by exfoliation, came away: it is five inches and a quarter in length, it is jagged and uneven at the extremities, and shorter and more irregular on one side than the other, as most bones thus separated generally are, and is in Mr. Helsham's possession. The girl can walk with a stick, the joint of the knee remains ankylosed, the new bone is crooked, and bent in towards the other leg.

Mr. Rand, a surgeon of eminence, at Snettisham, had a case of this kind under his care many years ago, attended with similar success.

There are many cases of this sort worthy our observation upon record. There is
a curious

a curious instance, in the first volume of the Medical Essays of Edinburgh, of an exfoliation of the whole body of the tibia in a girl seven years old, with no other injury than a bending of the new bone, by walking too soon, before its consolidation. From an ulceration and exfoliation afterwards of some fragments of the bone of the humerus in this subject, there can be little doubt but it was owing to scrophula. There is another in the same paper, of a boy of twelve years of age who had seven inches of the tibia exfoliated, who could walk without any other inconvenience than a stiffness at the heel. The case of the boy recorded in the second volume of Medical Inquiries of London, who had a large portion of the femur cast off, and afterwards was a miller, and a strong hearty man, with no other defect than a small bend of the thigh, is another extraordinary instance of the resources of nature to restore parts destroyed. And the Supplement to this paper, by the late
Dr.

Dr. Hunter, containing an account of a carious tibia, with the exfoliation contained within the new callus, is another extraordinary instance of nature's efforts.

It will take up too much of the reader's time to give other instances from authors of this kind: one observation is obvious, they all happened in young subjects, mostly before or about the age of puberty, and most probably from a scrophulous cause, although that circumstance is omitted in the relations.

It appears from the above observations, that when the substance of the diseased bone exfoliates in a solid form, the lost part is renewed by a callus, which consolidates; and the patient suffers little inconvenience afterwards, but what arises from a deformity of the new bone, which might be prevented by keeping the limb in a natural position, and not attempting to bear upon it until it has acquired due solidity and firmness. But when the carious bone crumbles away, and is in a manner
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dissolved in the pus, the case is very different: there does not appear to be materials furnished equal to form a callus to supply the place of the bone thus removed; the limb diminishes in size, and is sometimes shrunk to one third of its natural dimensions. There are instances where the fluid is confined in contact with the solid bone, and there is no external ulceration, or communication with the cavity of the tumor. This solid substance actually dissolves in the fluid, and is annihilated, as shall hereafter be particularly noticed.

If the scrophulous caries is seated in any of the small bones of either extremities, the bone affected is soon destroyed; and if more than one, they cast off in succession, and the member of which they form part is mutilated and deformed for ever after.

The articulations, like the bones, are attacked externally and internally by the scrophula. The internal affections which

I have

I have seen, had their seat either in the glandular or the adipose parts and absorbents within the capsular ligament, or in the spongy texture of the ends of the bones themselves. The external occupied the burfæ mucosæ, tela cellulosa, and lymphatics communicating with them: and the danger was more or less according to the parts affected. Those seated within the cavity of the joint, or within the texture of the bones, were the most dangerous and difficult to manage: the caries, when deeply seated among the cancelli of the bones, seldom admitting of a cure; but that caries produced from suppurations within the capsular ligament sometimes did; but this was in consequence of an anchylosis.

It is not easy to say how the anchylosis is brought about, but it is probably in the following manner. The cartilages being eroded by the matter, the surface of the bones, now exposed to its action, become superficially carious, and suffer an insen-

sible exfoliation of this diseased part, which, with the morbid sloughs of the cartilages, and other, viz. the soft parts, may be dissolved in the pus formed by suppuration, absorbed with it (the absorption of the pus being evident from the concomitant hectic fever) carried into the course of the circulation, secreted and discharged with other effete parts, by the proper emunctories; and an anchylosis is formed by the osteogeneous materials, issuing from the vascular system, employed in carrying nutriment to the different bones concerned in constituting the diseased joint, and the aggregate of the different constituent parts of it consolidates into one mass; in short, forms one bone in a manner exactly similar to the formation of the callus, which unites and consolidates into one the separated fragments in compound fractures of the large bones of the extremities (*e. g.* the tibia) where there is a loss of substance of the bone; a process rendered evident to every surgeon in those cases,

by an ocular demonstration of this curious fact; where a mass of carneous matter of a vascular texture, possessing the living principle, is first formed, which in due time gradually takes on the solidity of bone.

Effete or diseased solid parts, which are become unfit for the purposes of life, are believed, upon good foundation, to be removed by absorption; but the process by which this is effected is not perfectly agreed on by physiologists. Some think that they are taken up in a solid form, but do not say how they are to pass the secretions and be carried out of the body. That the soft minute mouths of the lymphatics, invisible even with the aid of the microscope, should be calculated to abrade and gorge (if I may be allowed the expression) the solid substance of bone, cartilage, &c. I own is incomprehensible to me. And if this was really the case, how are those solid matters to pass through the course of the circulation, in capillary ves-

sels, without causing a new disease? Or how are they to pass through the secretory organs? I therefore think that this is not the fact; but that the solid parts first undergo a solution in a liquid menstruum: and in this fluid form are absorbed by the lymphatics, mixed in the natural course of the lymph with the circulating blood, secreted from it in a fluid state afterwards, and expelled thro' the proper emunctories. — I shall not enter into a discussion of this matter, I shall only observe, that we can easily conceive the possibility of solution and subsequent absorption to be the most probable economy of nature in this business. We certainly know that, by the process of digestion and chylication, the materials for the nourishment of the body, and supply of the waste effete parts, which are removed as useless, is furnished in a fluid form; and that they are selected and separated from the mass of blood in circulation by the unerring hand of nature, in a way which we are ignorant of. As, however,

however, these must pass through the minutest series of vessels to fulfil their destination, it is natural to suppose that when this is effected the redundancy and removed parts should as readily pass off in a state of solution in a fluid form by the small lymphatics, and be expelled in the natural way by the secretory organs, as the nutritive matters were conveyed into the habit.

It may be urged that solid matters are often found in the absorbent system. True. But this never can be the case in a healthy state of the functions; but is undoubtedly the effect of disease, and most probably of that which is the subject of this paper. The case related by Mr. Cheston, of Gloucester, in the seventieth volume of the Philosophical Transactions, of the thoracic duct being plugged up by an ossification, was evidently owing to a morbid state of the absorbent system, and the number of tumors in a confused mass filling up half the pelvis,

and containing scirrous cartilage, bone, and stone. The scirrous coats of the bladder, and numberless other morbid appearances, seem to evince the original existence of a scrophulous diathesis in this subject; and cannot be adduced in proof of the power of absorbing of solid matter in a solid form, either in a diseased or a healthy subject. From the experiments of the French academicians, Du Hamel and Hereffant, by feeding hogs with madder, it is proved that the earth of the bones is the substance which is constantly removing and renewing in their texture, in a natural state, and that the cartilaginous part of their structure is not subject either to the waste or renovation. This is confirmed by Haller and Stoerck. And it was proved by the experiments of these gentlemen, that it was this earth only which was tinged with the madder in the coloured bones, by the colour being removed with the earth, which was totally dissolved by macerating the bones in acids, whilst

whilst the cartilaginous part of the bone was left colourless, entire, and undiminished by the acid. Du Hamel found that the whole of the earth of the bones of a young hog was entirely changed in six weeks.

When urine is fresh made by a healthy person it is perfectly limpid, diaphanous, and homogeneous, and not a single particle of earthy matter is to be discovered in it even by the help of glasses. If it stands in a quiescent state in a glass vessel, a decomposition takes place; probably by the escape of that universal principle in nature, fixed air (the aerial acid by some) which held the solid matters in a state of solution in the aqueous part of it, the several materials of this compound fluid are separated, new attractions, and new compositions take place; the solid matters leaving the fluid menstruum, incrustations of an earthy and saline nature form upon the sides and bottom of the vessel. Here then we have proof of solid matter held

in a state of perfect solution, in a fluid secreted from the blood, and the earth is certainly the earth of the bones.—Mr. Sheldon says, that by experiment the calculus in the bladder of an animal, whose bones are coloured by feeding on madder, will be found coloured with it also; and tells us that Mr. Hunter fed himself with madder, and that he found the earth attracted by the sides of the vessel in which his urine was made was of a red color*.

When a quantity of extravasated blood happens to be confined long contiguous to a bone, that bone will become carious, and suffer an erosion and loss of substance in that part which is exposed to this blood, and appears as if the part removed was actually melted down and dissolved in it, which we believe to be literally the case.

Bones which are exposed to compression by tumors, as the different kinds of scrophulous and encysted tumors, which are

* Sheldon's Absorbent System, p. 30, 31.

sometimes buried in excavations of the bones; and also aneurismal tumors, as those of aorta, become carious, and suffer a loss of substance in the parts compressed by the tumors. This *prima facie* is in favour of the absorption of the bone in a solid form. But if it be considered, that wherever there is so considerable a pressure as to destroy bone, there must be an obstruction in the different vessels which carry on the circulation in this place, and that no obstruction can happen without an accumulation of fluids in the vicinity of the obstructed parts; and these fluids, which are often to be found in a state of purulency upon the very surface of the injured bones in those cases, may furnish a menstruum to dissolve this osseous matter, and render it fluid enough to be taken up by the neighbouring absorbents.

In no instance is the power of absorbing effete and morbid matter more evident than in the operative aid given by caustics, in cases of scrophulous caries of the vertebræ,

first instituted by the ingenious Mr. Pott. In those cases the carious bones are dissolved in the matter surrounding them, absorbed with this matter, and discharged partly by the secretions, and partly by the large issues made by the caustic; new actions take place in the diseased parts, and an anchylosis is formed. But to return to the more immediate consideration of our subject.

When the scrophula attacks the bones or their articulations, there is this peculiarity sometimes takes place:—one limb or one joint is affected severely, whilst its existence is scarcely to be perceived in the rest of the body and other extremities.—I have seen instances where one foot was only attacked, and all the bones of the metatarsus and toes have cast off, and the patient has recovered and trod upon the tarsus ever afterwards. I have seen instances when all the bones of the foot but the heel and toes were destroyed, with the greatest part of those of the leg; and

and from the loss of substance of those bones the leg was shrivelled up, or reduced to one third of its natural dimensions, and the patients walked afterwards with the knee resting on a common wooden leg. And whilst all this destruction was going on in the devoted limb, the increment, and perfection of all the rest of the frame, have continued, with little apparent interruption, with great symmetry of proportion and beauty (instances which I could now produce) until the body attained its full growth.

It is by no means uncommon for one knee only to be injured, where, suppurations ensuing in the cavity of the joint, the extremities of the tibia and femur, and the patella, are exposed to the influence of the acrid matter, and rendered carious, whilst the body and other extremities appear to be unaffected with the disease. This is a distressing case, and is commonly called a white swelling; and amputation is but too often the only expedient left to
cut

cut off the source of acrid pus, prevent its absorption and hectic fever, and the patient's dying tabid. Yet now and then an anchylosis takes place, and the patient has the good fortune to escape with a stiff knee.

The scrophula sometimes seizes the articulation of the head of the femur with the acetabulum coxendicis, and the bones of this joint are the only parts of the frame involved in this calamity. The acetabulum and head of the femur become carious, and the latter being sometimes dissolved and destroyed, a dislocation appears to follow from this internal cause; the femur is loose at the joint and easily moveable upwards or downwards, above or below the cavity, and at length actually becomes shortened. One instance among many which I have seen is daily before me. From the acrid matter collected in those parts, in cases of this kind, the miserable patient undergoes all the vicissitudes of the mining hectic fever of absorption,

absorption, which but too frequently destroys him.

I have seen some cases of patient's labouring under a scrophulous affection in the articulation of the head of the femur, where an anchylosis has fortunately taken place, and the patients have of course remained lame for the rest of their lives; and it was curious to observe, after their recovery, the expedient necessity pointed out to alleviate this distressing misfortune. — As the femur and ossa innominata were now become one bone, the lame limb was moved on the aggregate articulations of the lumbar vertebræ, and that of the last vertebra, with the os sacrum, but more conspicuously on the articulation of the other thigh bone, with the acetabulum, the head of this femur becoming a central point of motion, upon which the outside of the opposite part of the pelvis, and the other femur with the anchylosed joint, described a portion of an arch of a circle every

every time the lame limb was advanced forward in walking.

I was consulted many years ago in a very extraordinary scrophulous affection of the thigh, which commenced at the articulation of the head of the femur, with the acetabulum coxendicis, and was followed by an actual solution of that solid bone downwards, in a fluid contained in a cyst of immense dimensions, which possessed the site of this bone. This case, with some others on medical subjects, were sent to the Philosophical Society of Edinburgh, where, I was informed by the member of that body who presented them, they were read and approved of in 1773; but upon inquiring particularly after their fate, when this society obtained the royal charter in March 1783, I was informed that they all had been mislaid and long lost. Wherefore as this case is connected with the subject under consideration in this paper, I have taken the liberty to give an abstract of it in this place.

XIX.

About the end of the year 1758 a lady of a strumous habit*, aged about fifty-six years, complained of pain and lameness in her right thigh, which continued increasing for some months, particularly in the articulation of the os femoris with the coxendix, where the pain first began. On getting into her coach one day, which she could not accomplish without assistance, she felt, as she expressed it, something give way in the above named joint, with very acute pain. She was with difficulty got home, and put to bed. Various means were tried by her † physician and surgeon for her relief, but it was more than two months

* Her spine was considerably curved, the scars on her neck bore testimony of scrophula in early life; she was subject frequently to ophthalmiæ and pulmonary defluxions.—Her husband is the subject of the first case of hepatic abscess in this paper. All their descendants were scrophulous, and the females afflicted with distortions of the spine.

† My late worthy friends, Dr. Tayler and Mr. Young, a surgeon of great knowledge in his profession.

before she could sit in her chair out of bed, and above three before she could move about the room with the help of assistants and crutches, and then she could not bear upon the lame limb, but dragged it useleſs after her. Some months after this period ſhe became ſo very lame as to be confined entirely to her bed, and never afterwards was able to ſit up any longer than to have it made. I was deſired to viſit her the firſt time about eight months after this injury happened: the thigh was then very much ſwelled, and appeared to be evidently ſome inches ſhorter than the other. On examining the articulation as attentively as the ſwelling would permit, I perceived that the head of bone was removed from the acetabulum a conſiderable ſpace above that ſocket, and lay on the outside of the ilium; that it was moveable, and gave much pain when the thigh was preſſed upwards, which immediately ceaſed on pulling the limb downwards; and this was ever afterwards obliged to be done,

done, when necessity occasioned a change of posture, as laying down after sitting upright in bed; but particularly after getting into bed after its being made, for till that was done she remained in great pain. These circumstances led to a suspicion, that all this arose from a spontaneous fracture of the neck of the femur, by the mere exertion of the muscles in getting into the coach, in consequence of the texture of the bone having been destroyed by the scrophula.

From this time I did not see her again till summer 1761, when the whole limb was cedematous, and very large from the spine of the ileum to the toes. She was in extreme pain, which was only relieved by the opiates she had long been used to; and had at the same time a fever apparently symptomatic to her complaints. The limb was fomented and poulticed, with anodyne and aromatic fomentations and cataplasms, for a considerable time; and a variety of medicines adapted to her

circumstances were taken internally: the swelling and pain abated, and the fever went off. After the general tumefaction of the limb subsided, a circumscribed tumor was discovered about the injured parts, at the head of the bone, which gradually increased and descended downwards within the muscles of the thigh, until it became of a vast size. Not long after this a small tumor appeared above the right clavicle, attended with pain, but without inflammation or discoloration of the skin. It increased gradually, and was perceived to have a strong pulsation, which led to the suspicion of its being aneurismal, and that the subclavian artery was the seat of it; but as this tumor increased in size, the pulsation was less to be distinguished. In about a year afterwards, another tumor appeared on the clavicle, by the side of this next the sternum, and contiguous to it, and as it increased in size it became blended with it, and the pulsation was again stronger,

She

She was frequently afflicted with fevers, from the first attack of this disease in the thigh; and for the last three or four years of her life frequent vomitings and diarrhoeas accompanied those fevers, with a distressing cough, and large expectoration. Bleeding always gave her great and speedy relief. During the last two years of her life, the cough was frequent and distressing; and when the vessels were full, or the expectoration stopped, a very painful difficulty of breathing ensued; she was now in a real phthisis, and the last-named symptom became so frequent and alarming, that if recourse was not immediately had to the lancet, she was in danger of suffocation. The cough became at length almost continual, the purulent expectoration astonishing; she was besides exhausted, by the wasting hectic fever of absorption, to a mere skeleton, and died tabid 28th September 1767.

She was a woman of an excellent understanding, and happy even temper,

which she maintained with her usual cheerfulness through this long scene of distress, which she bore with fortitude and resignation; and by her express commands, repeatedly given, and even named to me a few hours before her death, which she told me she knew was approaching, I examined the body the day after her decease, assisted by Mr. Crawforth, a surgeon of reputation here. The result of which was as follows:—

The tumor of the right thigh was extremely large, of a pyriform shape, and extended from the spine of the ileum, and the articulation of that bone with the os sacrum, possessing almost all the thigh to near the joint of the knee. Upon plunging a scalpel into the outside near the middle of the tumor, a watery yellow-colored fluid without smell gushed out, which became tinged with blood when about a quart (two pounds) of it was discharged, and of this sanies about five quarts more were evacuated. The extent of the tumor

mor was then opened by a crucial incision, in doing which several ossifications in the soft parts were broken asunder before the knife would pass. Then it was discovered that the fluid was contained in a circumscribed sac or cyst, of a thick ligamentous texture, between whose coats several lamina of preternatural ossifications, of irregular shapes and dimensions, were every where dispersed, some of which were of three, four, or five inches in length and breadth, and of different thicknesses, from that of a crown to that of a shilling. The most considerable were, one under the glutæi muscles, one on the outside, and another on the inside of the thigh; and all those plates had a communication with each other, by the interposition of bony bridges; and the whole formed an irregular case of bone, retiform in some places, between the coats of the cyst*.

* This was a curious matter: a solid bone was annihilated by disease, a new laminated case of bone formed; as if nature, by this preternatural ossification, had attempted to give a substitute for that which had disappeared.

The fleshy bellies of the glutæi, vasti, rectus, and in short of all the strong muscles on the thigh, were wonderfully wasted and pale, and so blended together that distinction was lost, from the distension of this vast tumor, in this extremely emaciated patient, where no fat in the tela cellulosa was to be found, and formed, if I may so term it, a carneous membrane thinly covering the cyst. Within the cavity of the cyst a considerable quantity of a soft white substance, much resembling the medullary texture of the brain, was deposited, and about seven or eight ounces of grumous blood. The internal surface of the cyst was studded in many places with hemispherical fungus excrescences of various dimensions, from an inch and a half to a quarter of an inch in diameter. But the most wonderful circumstance of all was, that no remains of the os femoris were to be found, from the acetabulum coxendicis to the lower extremity of the tumor; no vestige of

the head of the bone remained in its socket! which was open within the cyst! and no part of it was found to exist, but the small extremity of the fragment of it at the lower end, which projected a little upwards within the cyst! the substance of more than three-fourths of this solid bone having been dissolved and annihilated! The acetabulum had no other alteration in shape than a roughness at the bottom, and a small bony ridge, that extended from above downwards, over or rather through the bottom; the lower and anterior edge of its ligamento-cartilaginous brim remained unaltered, but the upper and posterior parts of it were destroyed. From around this socket, at a small distance from its verge, the upper end of the cyst took its rise, in the same manner as the capsular ligament nearly does; stretching itself on all sides, it extended forward to the os pubis, backwards over the hole of the ischium, upward and backwards under the glutæi muscles, adhering

to the ileum in its whole extent, which did not seem to be altered by the compression; then reverting outwardly in every direction, it turned downwards, and contracted gradually in its descent, till it came to its apex or lower extremity, where the coats of it becoming thicker, the end of the cyst reflected upwards inwardly, and closely embraced, and was strongly inserted into, the remaining portion of the os femoris; from the edges of whose extremity some plates of bone of a late production, fashioned to the shape of the cyst, extended themselves upwards within its cavity; one was particularly remarkable, on the inside of the thigh, about four inches long, and near two broad, somewhat resembling in shape one of the wing-like processes of the sphænoid bone. Neither had these, nor the extremity from whence they sprung, any periosteum or other covering, but were exposed naked to the fluid contents of the tumor; and the cavity where the marrow
should

should have been was entirely filled up and obliterated. This remaining portion of the femur was laid bare as far as the condyles; it was not three inches in length, of a dark blue color inclining to black, and spongy texture, yielding readily to the knife.

The tumor on the upper part of the thorax, which first appeared on the right clavicle, reached now from within two inches of the articulation of that bone with the acromion scapulæ, to the extremity of the left collar-bone next the sternum. It was elevated about two inches above the neighbouring parts; was about seven inches long, and from three in some parts to four in others broad; and seemed to be composed of three distinct glandular swellings united together, the largest of which was on the sternum. This tumor was divided by the knife longitudinally, and no fluid, or indeed cavity, was within it; the only difference in its texture (which was a soft medullary-like substance of a
light

light ash color) was in the centre of the largest extremity, where the knife divided a small crude white nucleus, somewhat resembling cream cheese. The tumor was dissected out, and seemed to weigh by computation twelve ounces: it was found to reach as deep within the thorax as it arose above its external surface. One part of it lay contiguous to and pressed upon the pulmonary artery, which may account for the apparent pulsation felt in this tumor. When it was removed, it was discovered that, in the space it had occupied, about two thirds of the clavicle, one third of the first rib, with its cartilaginous extremity, and two inches of the sternum, were wanting, being as it were devoured (if I may use the expression) and annihilated by this tumor, no vestige of them being to be found in its substance! and the earthy matter of the remaining part of the first rib was so much destroyed, that the bone bent and yielded to the knife like a soft cartilage!

About

About eight ounces of water were found in the right side of the thorax; and this lobe of the lungs, excepting some slight adhesions to the mediastinum, appeared to be in a natural state; but the left lobe was full of matter, and upon being punctured emitted a most fetid smell, which was not observed in any of our investigations before. The pericardium had not a due proportion of fluid in it. The heart was in a natural state, excepting an induration of the muscular fibres at the apex of the left ventricle. The pulmonary artery was dilated to about two thirds more than its natural dimensions, a little after its exit from the heart, which gradually increased to where it divides into branches. Where it had been compressed by the tumor its external coat had an inflammatory discoloration, and the ramifications of the vessels distributed upon its surface were distended as if they had been injected.—Here ended our inquiries, not being permitted to examine the contents
of

of the abdomen, which we regretted, as no doubt some curious diseased appearances would have been found in that cavity.

XX.

In February 1790 I saw, at Snettisham, a very extraordinary instance of the destruction of the texture and annihilation of the internal substance of the thigh-bone in a young man, of twenty-five years of age, named Walker; the following summary history of whose case I had from Mr. Rand, a respectable surgeon of that place.

In May 1778, whilst Walker lived in Mr. Rand's service, he had the misfortune to fracture his right thigh about four inches above the knee, from which he soon recovered, under his master's care, and lived two years with him afterwards. Near six years after this accident, when apprentice to a miller at Docking, he was overturned in a cart, and the same femur was broken again, a little above the callus of
the

the former fracture. About three weeks after this misfortune the limb was hastily lifted, and its whole weight imprudently trusted to rest upon the heel only, in nearly a horizontal position, by which incautious proceeding a separation immediately happened, attended with great pain, and he screamed out that his thigh was broken again. About something less than three weeks after this he was removed to the parish of Heacham, and put under the care of his former master. A union, however, did not take place for many months, notwithstanding the greatest attention being paid to it by Mr. Rand, in the use of a proper bandage and long splints; who, therefore, had a jointed machine of iron constructed, and properly adapted, when affixed from his hip to his heel, to support the weight of that side, and give some kind of stability to the injured limb. But every means proved abortive; and no union taking place, he was in March 1784 sent to Norwich hospital

pital with a view to have the limb, now totally uselefs, removed by amputation. This operation, however, was not performed, and he was sent back to Heacham, on the supposition that time would produce a cure: to promote which he was ordered to continue the application of the same apparatus, of long splents, iron machine, &c. which he had used before. At length a slight attachment was formed; and about Midsummer following the bone had apparently acquired a sufficient union and firmness to enable him to walk with crutches, when he was bound apprentice to a breeches-maker at Wells to learn that business. The firmness of union of the bones seemed rather to increase during his servitude with this master; and since he left him he had been able to walk several miles with his crutch, and across his room without either crutch or stick, but never ventured without the long splents, and the support of the jointed iron.

On the 21st of February 1789 his heel slipped off a stone in walking the street at Lynn. He felt immediately pain in the part affected, was unable to support himself, but fell, and either displaced the bone at the old diseased part, or fractured it again near it. He had the immediate assistance of Mr. Middleton, a surgeon of character, and was attended by him two months at a private house; but being in real want of subsistence he was removed to St. James's workhouse (the hospital for the poor) where he remained five months before he was removed to Snettisham. The bone never united after this last accident, but the limb was supported as before: yet, on the 1st of November 1789, riding slowly on an ass at Snettisham, it fell with him, and fractured the same bone, at its upper extremity, near the trochanter major, which united afterwards by callus, whilst the old seat of the misfortune, which had suffered so many derangements, still remained disunited, and moveable like a joint:

a joint: and it is highly probable, from what was discovered afterwards by dissection, that the fractured extremities of the bone never perfectly did unite by a firm callus after their being displaced after the second fracture, and the bone was diseased from that period; and that the apparent stability which the limb had gained was fallacious, and dependant upon the callosity which the thickened periofteum, and other soft surrounding parts, had acquired, and the support it received from the apparatus of long splints and iron machine, which were judiciously applied.

This poor fellow's limb was now become a burden to him; for it was not only painful and useless, but by exciting frequent febrile attacks of the hectic kind daily impaired his health. He was totally unable to use any kind of motion with it, and was rendered wholly incapable of getting his bread, by even his sitting business, a breeches-maker. In this miserable state he earnestly begged of Mr. Rand to re-
move

move this load of disease by amputation, and give him this only chance of recovering his health.

The operation was accordingly performed on the 22^d of February 1790, by this gentleman, assisted by his nephew, Mr. Ch. Snell*; and as I was at Snettisham, visiting another patient of Mr. Rand's, I was present, and gave what aid I was able on this occasion.

The amputation was performed above (as was supposed from the external appearances) the diseased and disunited parts of the bone. When the operator had divided the integuments and muscles he was astonished to find that the os femoris did not make the usual resistance; for when the knife reached the bone, where the most solid part of it might naturally be expected to be found, it yielded as readily to the edge of the instrument as the soft

* A young man, who, to an excellent education, adds, with a modest diffidence, great assiduity, and the most promising abilities.

parts had done ; and the operation was instantly finished (by continuing the incision) with the knife only, without a saw being required.

On inspecting the end of the stump, the bone was found to be reduced to a mere cylindrical shell, consisting only of the external lamina, all its internal structure being destroyed, and its cavity filled with hydatids of different sizes floating in a fluid, many of which, of a perfectly spherical figure, totally unconnected with each other, fell to the floor with the fluid upon the division of the bone by the knife.

Notwithstanding the most humane attention and unremitting care of Mr. Rand and Mr. Snell, this poor fellow, after digestion was fully established, granulations formed, and the integuments contracting and beginning to draw over the stump, appearances which gave the most flattering hopes of his recovery, sunk gradually, and died in a fortnight after the operation.

After

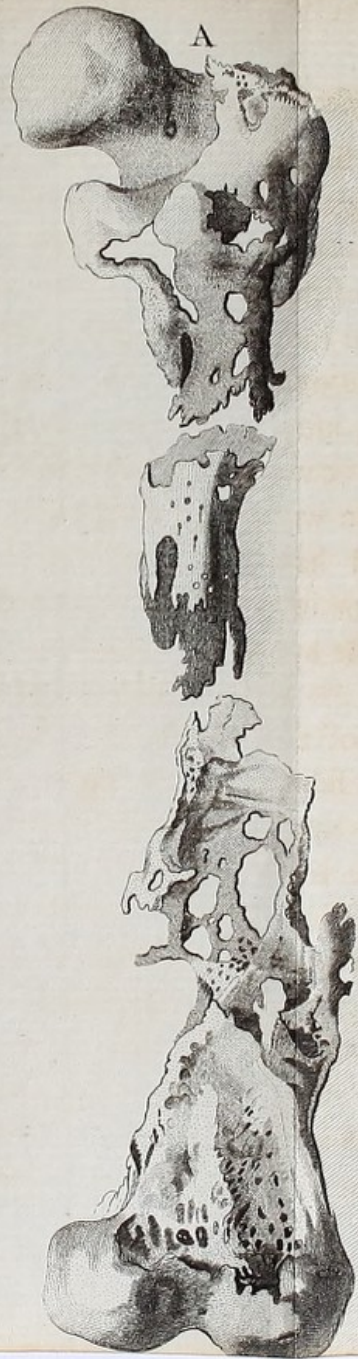
After digestion was established, a large collection of matter filled this hollow lamina of the bone, far beyond the reach of Mr. Rand's finger, which he passed up without the smallest interruption, and in this way much of it was pressed out. This must have been very acrid, as the irritation excited by the absorption seemed to have produced a most uncommon action in the arterial system; inasmuch that the pulsation of the artery, immediately after its passing under Poupart's ligament at the groin, felt apparently equal to the force of the heart itself. From this extraordinary action a hæmorrhage was twice occasioned; once from the trunk of the femoral artery itself, and the second from a large branch of it; but the screw tourniquet having been kept loosely on the thigh, in case any accident of this kind should ensue from this very extraordinary force of the arterial system, the hæmorrhage was restrained directly by turning the screw, the quantity of blood lost was

inconsiderable, and the vessels were again immediately secured by ligature.

Mr. Snell examined by a careful dissection not only the state of that extremity of the femur attached to the leg, separated from the other by the operation, but also the superior end of it, after the death of the patient, which he cautiously removed from its articulation with the acetabulum coxendicis; and has now the carious remains of this bone in his possession*, and also many of the hydatids preserved whole in spirits.

The internal structure of the femur is entirely destroyed, and its substance gone from the second fracture upwards; the callus of the first fracture is still visible about an inch below the second, which second had been, as related, deranged, and never did afterwards perfectly unite: and the back part of the bone, from this second loose fracture down to the articulation of the knee, is entirely gone; and the

* A drawing of which is here annexed.



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cavity here has a very strange appearance, having on the inside of the fore part of it a longitudinal ridge perforated in many places, with thin plates of bone extending sideways, resembling somewhat the back and side bones (*ossa innominata*) of a common pullet. An excavation appears between the upper parts of the condyles, occasioned by a large strumous glandular body, like a steatom, which was seated under the pereostrum, and sunk into the substance of the bone.

It has been already said that the internal structure of the bone was destroyed; it now appears, on closer investigation, that from the second fracture (which never did unite) upwards to the head of the femur, the bone is completely reduced to its external lamina only, a mere shell not thicker than a wafer, and liable to break on the slightest touch; about three inches of the middle cylindrical part of it is separated from the rest, and its external form preserved, excepting being pierced

in different places with small holes. The other portion upwards to the neck of the bone was perforated with several large holes, particularly one on the back part near the trocanter major, through which some matter gushed from the cavity of the bone whilst Mr. Snell was dissecting it out. The remains of the callus of the last fracture, near the trocanter, is still visible; but, like the body of the bone, is reduced to a mere shell, as thin as a wafer. The neck and head of the bone are spongy, and their texture destroyed, but the acetabulum coxendicis did not appear to be affected.

Mr. Snell found the pereoosteum preternaturally thickened to a very extraordinary degree, as was also the cellular membrane surrounding it; which had united the muscles into a firm compact mass, which not only had confined the fluid and hydatids within this perforated cortical lamella of the bone, but probably gave that partial and temporary firmness now and then to
the

the thigh which enabled this poor fellow to walk, when supported by his splints and spring, and the help of his crutches.— Upon examining the tibia, Mr. Snell found the structure of that bone much injured also by disease.

Upon considering this case there cannot be a doubt but all this mischief arose from scrophula, although its existence was not conspicuous before the second fracture was deranged. For it is by no means more uncommon for the distemper to be dormant in the constitution for several years, until it becomes visible by some fortuitous derangement of the animal economy taking place, and appears then in full force, than it is for one joint or one limb to be attacked, whilst the rest of the body remains apparently free from the disease, as has been already observed.

Besides those partial affections already noticed, one hand is sometimes the only seat of scrophula, and the bones of the

metacarpus and fingers are destroyed, and the hand becomes mutilated, as it was observed has been the case with the foot. Sometimes the bones of the carpus are the only sufferers, and the patient has the good fortune to come off with the loss of some of those bones, and a lame wrist. I have seen the end of the radius involved in this calamity, by the destruction and separation of which the fore arm was considerably shortened, and the hand of course deformed; but happening early in life the person could afterwards make tolerable use of it.

One elbow is often the only part devoted to this disease, and after repeated ulceration of the joint and around it, an ankylosis has taken place; but this fortunate event is not very common, and amputation is more frequently the only resource.

One shoulder in some instances is the only sufferer, and fistulous ulcers have remained many years communicating with the
cavity

cavity of the articulation, by means of the passage of the long tendon of the biceps muscle through it, which ulcers have at length dried up.

It is a dreadful case when one or more of the bodies of the vertebræ are attacked, either from the contiguity of a scrophulous abscess, or this disease beginning in the texture of the bones themselves, a caries, with loss of substance in these bones, takes place, the spinal marrow becomes exposed to the acrid matter, and a paralysis of the lower extremities follows.— The ingenious Mr. Pott has ably treated this subject; and by the application of caustics on each side of the spinal processes of the vertebræ saved some lives; and in those cases an anchylosis followed: but if this circumstance did not take place, those patients were destroyed by the hectic fever of absorption; and a mortification on the parts covering the os sacrum has very often happened before death.

As the bones are the basis of the human
frame,

frame, the stability, elegance, and beauty of the fabric, depend upon the just proportions, make, and solidity of them.—In the growing subject in a healthy state their fibres are more or less pliant and expansive; and the process of increment goes on, if not interrupted by disease or accident, until the body arrives at its acmé of full perfection in the adult state.

The scrophula superinduces a general laxity of the system; and the texture of the bones seems often to be more particularly attacked than that of the soft parts.

About the age of puberty young subjects shoot upward in height more rapidly than at any other period; the growth of the bones is wholly concerned in the speedy progress of the increment now made; and the circumstance of solidity by no means keeps pace with their quick increase, particularly in the long bones of the extremities. At this period the scrophula generally makes the greatest havock, and the already lax texture, from the unequal supply

ply of nutritive materials (particularly the earthy matter, which gives solidity to the bones) to the demand of such a rapid increase, a mollities ossium will more or less ensue; the limbs of the tall stripling of either sex, devoid of firmness and stability, totter under the incumbent weight of the body which they are unable to support; the young persons, therefore, are obliged to throw their feet at a greater distance asunder, in order to increase the base, and preserve the centre of gravity in a proper place; the pressure falls on the outer condyle of each thigh-bone, and the portion of each tibia immediately below it; the inner condyles, and correspondent portions of the tibiæ, swell in proportion to the weight removed from them; and in process of time these expansions acquire some firmness and solidity, the joint is altered in shape, the long bones themselves become in some degree curved, and the subjects become, what is called by the common people, knock, or knap-knee'd, for the rest of their lives.

But

But one of the most grievous circumstances attending this diseased state of the bones, is the shocking distortions of the spine and ossa innominata, which are so various and distressing as to render the poor patient miserable through life. This misfortune happens most generally to the most delicate and beautiful part of the creation, the fair sex. And although it arises sometimes from scrophula, yet certain absurdities in the ladies' dress have greatly contributed to render it more frequent than it would have been from the disease alone. What I mean are stiff stays and strait lacing; on which I conceive it is not foreign to this subject to make a few observations.

It is notorious, that distortions of the spine have chiefly taken place among females of the superior and middle ranks of life.—The health of ladies, naturally delicate, and perhaps under the influence of a constitutional disease, has suffered, by fashionable modes of living, as well in the articles of food as in irregularities and late hours,

hours, and particularly by that part of their dress already named. The lower order of females, from their mode of life, air, exercise, and loose attire, become more robust and active, and the scrophula has by no means so much power on their constitutions. Therefore they are but little obnoxious to this particular misfortune, a crooked spine; and no instance occurs of it in this rank of life but from a superabundant quantity of the disease, or from accidental injuries.

About forty years ago the number of straight well-proportioned young ladies was not so great as at present. There was scarcely a genteel family, where there were several young ladies, but one or more had a curved spine. This misfortune chiefly arose from the false notion of attempting to improve a naturally good shape, by the employment of strait lacing and stiff stays. A fashionable waist must be spanned—and what young lady could be found that disregarded the fashion? But the mothers

were

were to blame. I have known deep ulcers in the sides of the waists of girls at the age of puberty, made by the constant galling of the stiff ends of the whale-bones at the bottom of the stays; yet the fashionable mothers persisted in tormenting their daughters, until the very misfortune happened which they wished to prevent, and the young ladies became miserably crooked. How could it be otherwise? The stricture brought on the lower part of the trunk of the body, by the pressure of the small end of this conical case of whale-bone, effectually prevented the expansion of the parts so necessary to the growth, symmetry, and perfection of the frame. The ribs were prevented from performing the natural motions of expanding the chest in breathing; the false ribs were pressed inwards, and their cartilaginous extremities turned in upon the viscera underneath them; the points of the lower ribs of the thorax were squeezed nearer the sternum, the sternum pressed in upon the
contents

contents of the thorax, and the end of the cartilago xiphoides turned inwards upon the liver; whilst at the same time, by this stricture of the lower end or apex of this conic case, the abdominal viscera were divided into two portions; the upper containing the stomach, liver, &c. above, and the under portion the intestines, &c. below. The upper, pressed upon the diaphragm, injured respiration, by also diminishing the capacity of the thorax. But one of the greatest mischiefs was the deranging of the whole of the abdominal viscera, and injuring the processes of digestion, chylification, and nutrition; and in part destroying the whole important purposes of the animal economy, in bringing forward the subject to perfection, and inducing consequently many diseases, and bad health for ever.

But one of the most distressing evils was a miserable decrepitude: for if the poor tortured girl had not courage, from a dread of punishment, to cut the lace, she naturally

rally used every expedient in her power to relieve herself, and, in the first place, of the oppression in her breathing: accordingly she tried to increase the capacity of the compressed thorax; and after many attempts found that by drawing the ribs of one side upwards, into the widest part of the stays, the chest was somewhat enlarged, and she could breathe with more ease. Being thus far successful, she repeats the experiment, and conceals it. A very moderate share of anatomical knowledge will show that this could not be done without bending the spine in the opposite direction; and that the consequence of the continuance of this operation must be, that a greater influx of offic matter must pass into that side of the bodies of the vertebræ from whence part of the compression of the incumbent parts was removed, and less into that side which had a proportional weight added to them by this inclination of the spine, in this lax state of the bones of the growing subject; and

and that by acquiring solidity in time, they must remain in that state always afterwards. But the grievance did not end here; for the head, and other parts above the curve, being thrown out of the line of perpendicular gravitation, the equilibrium of the body in an erect posture was lost; to restore which a new expedient, from necessity, was practised; and that was the bending of some other part of the spine in a contrary direction. This commonly happened to the vertebræ of the loins; and the articulation of the last, with the sacrum, and the bones of the pelvis, were frequently involved in the calamity; and from their distortion in the fair sex much distress arose in parturition.—Whilst all this was going on there was generally a little twist in the spine, by which one shoulder was advanced forward, and the most convex part of the elevated ribs, next the vertebræ, forming a kind of ridge, pushed the scapula outwards, making an unseemly projection behind, which remained during life.

But this was not all; for whilst the bones were soft the incumbent weight above these curvatures compressed them, increased the curves, and contracted the height of the trunk of the body to a very diminutive size, whilst the limbs continued to increase in length; and thus the elegance and beauty of female shape was converted into a monster of deformity. But this misfortune was fraught with still more serious mischief than what arose from mere deformity; for from this alteration of the shape of the spine, a considerable change must take place in the medullary canal of the connected vertebræ, and the medulla spinalis become deranged and compressed in the different curvatures; its functions, and those of the nerves issuing from it, suffered exceedingly, by which many grievous complaints were superinduced, and sometimes, with the rest, paralytic affections in the parts below.—In examining the skeleton of any distorted subject, the bodies of the vertebræ will be

be found of a wedge-like shape, resembling in each curvature of the spine the stones on the top of an arch, with the thinnest end on the concave side, and the thickest on the convex.

It is needless to add, that scrophulous subjects always became the greatest sufferers from the pernicious practice here exposed.—This havock on the symmetry of female shape happened chiefly, in every possible form of distress, from about the year 1730 to 1750, and within my remembrance. About the year 1750 the good sense of a great majority of mothers, many of whom were sufferers by the absurd practice themselves, was roused by the admonition of medical men; and the whale-bone case and strait lacing were laid aside, and the young ladies were dressed in soft jackets, loosely laced, with light petticoats sewn to them, which was put on all at once; and this light dress hung by the shoulders only, no strictures being permitted at the waist or any where else;

and thus the expansion of the growing frame was freely admitted, adventitious disorders prevented, the natural functions were performed with freedom and ease, and the symmetry of growing perfection was preserved where this dress was used. This very judicious practice continued pretty general till within a very few years ago; and crooked females born within this period are very rarely to be met with, and those few proceeded from the effects of scrophula. But, it is to be apprehended, that our former absurdities are about to be revived with all their train of evils! A few straggling whale-bones have gradually stolen into the jackets of the young ladies before puberty, on the pretence of keeping the misses upright. And about puberty they have again been encompassed with stays; but in excuse for this, it has been said, that those stays are made large and pliable, as the whale-bones in them are thin, and few in number. But, alas! with all this plausibility by which ladies

ladies deceive themselves, the passion for a small waist is returned with the stays! And with regret we have of late observed, that the waists of fashionable ladies have diminished, and, it is ironically said, have been reduced to the diameter of an orange and a half, and compared to some insects, as the wasp, the ant, and some spiders, and they appear as if they were ready to break asunder in the middle. Thus are we in danger of seeing not only adventitious disease entailed for life, but the just proportions and symmetry of Venus de Medicis, in the female form, loose all their beauty and elegance, and of dwindling again into the diminutive decrepitude of a frightful dwarf*.

To

* The late emperor of Germany, Joseph II. ever attentive to the welfare of his subjects, issued an edict against wearing stays, of which the following is a translation:

“Whereas the dangerous consequences arising from the use of stays are universally acknowledged to impair the health, and impede the growth of the fair sex; when on the contrary the suppression of that part of their dress cannot but be effectual in strengthening their constitution, and, above all, rendering them more fruitful in the marriage state; we hereby strictly enjoin, that in all orphan-houses, nunneries, and other places set apart for the public

To the preposterous practice of strait lacing now introducing may be added another extremely pernicious, that is the steel backs now in use in genteel boarding schools for ladies, and creeping in to private families. By this machine miss is in a manner put into a moving pillory; her back is prevented bending forwards, her shoulders are pinioned tight backwards, and her head is kept erect, and is prevented from making any inclination forwards, by means of an iron collar fastened to the

education of young girls, no stays of any kind whatever be made use of or encouraged henceforth and from this instant; and it is further hinted to all masters and mistresses of academies and boarding-schools, that any girls wearing stays should not hereafter be received or countenanced in any such schools.

“ We hereby also will and command, that it be enjoined to the College of Physicians, that a dissertation adapted to every one’s capacity be forthwith composed, shewing how materially the growth of children of the female sex is injured by the use of stays, for the better information of parents and schoolmasters who wish to procure a handsome shape to their children or pupils; as also those who are not rich enough to alter their stays in proportion to the growth of such children, or, having the means, neglect to do it.— The above dissertation shall be distributed gratis, and dispersed among the public; the more so, as whole nations, unacquainted with the use of stays, bring up a race of children remarkable for the healthiest constitutions.”

plate behind. The consequence of this restraint is, that the young lady will try to relieve herself from the pressure of the upright piece, applied directly over the spinal processes of the vertebræ, from that of the cross piece over the scapulæ, from the galling of the shoulder straps on the arm-pits, by wringing herself into such an attitude whilst she wears it as to procure some ease. But this cannot be readily done, unless by twisting herself a little sideways, to slip the springs clear of the parts they press on, particularly the spinal processes of the vertebræ, and bending the spine somewhere. And it may be easily collected from what has been said on strait-lacing, that if the confinement is continued, the foundation is laid for a crooked spine for ever.

The moment miss is released from this machine, she stoops, and brings her shoulders forwards more than ever, in order to give herself ease, by relaxing those mus-

cles which have been stretched by an unnatural exertion. And besides the danger of a crooked spine, her attitudes from this restraint will become stiff, and more ungraceful than ever.

The dancing-masters stocks are full as reprehensible: there is a peculiar make in the articulations of some subjects, which cannot be altered; to place the limbs out of their natural state and attitudes will give pain; therefore the moment the feet are removed out of confinement the toes are turned inward more than ever to procure ease.—Young ladies who are well formed, and have a good ear, will readily acquire an easy deportment, and grace in dancing, which those of a different description can never attain. Therefore, if emulation, and a just method of teaching will not do, stocks will avail nothing, but may on the contrary do a great deal of mischief.

Although these remarks are not perfectly

fectly connected with our subject, yet as scrophulous constitutions will certainly suffer more from tight lacing than others, and as I conceive that what has been said is of some importance to the future happiness of the rising generation of my fair countrywomen, I hope I shall be pardoned this long digression.

III The Rachitis, Rickets, is peculiarly incident to children; it is a real tumefaction of the substance of the bones, which particularly affects the most spongy of them, and especially the extremities of the long bones, vertebræ, and cranium. From this affection a most singular enlargement takes place, and is particularly conspicuous in the extremities contiguous to the articulations, and in the bones of the cranium. There is an extraordinary derangement of the bony compagies in all those cases; the lamina, or plates of the bones, are separated from each other,
and

and become thinner; the number of cancelli seem to be increased, and the medullary cells to be enlarged: hence the extremities of the large bones at the articulations increase in magnitude, whilst at the same time the softness of the texture of these bones, particularly the legs, yields to the incumbent weight of the body, and they bend in the middle. The diploe likewise now expands, and shoves the tables of the skull asunder, the lamina of which are also separated and diminished in thickness, whilst the spongy texture enlarges, and increases the thickness of the several bones. And it is well known, that the bones of the cranium of children, who have died of the rickets, are sometimes of an enormous magnitude and thickness, whilst the capacity of the cranium within seems to be proportionally diminished.

This has commonly been deemed a distinct disease, * *fui generis*, peculiarly in-

* Vide Glisson de Rachitide.

cident to children. But as I never saw the rickets but in scrophulous children descended from scrophulous parents, I am led to suppose it to be only a peculiar morbid modification of the scrophula, which affects the bones solely in infancy. I am the more disposed to think so, because I have seen instances of the predominancy of the rickets in every degree, whilst the presence of scrophula was evident in the enlarged lymphatic glands of the neck with many of them at different times imposthumated and some ulcerated, with at the same time a tumefaction of the abdomen and want of digestion and nutrition, evincing the existence of obstruction, and tumefaction of the mesenteric glands. The peculiar molities ossium incident to rickets, and tumefaction of the bones, accompanied these symptoms; the spine consequently either became crooked or diminished in length, by the pressure of the weight of the head,

&c.

&c. and the bones of the legs and thighs bent under this weight of the superior parts, and were with the greatest difficulty prevented, by the contrivance of stable and elastic machinery, from suffering the most grievous distortions.

SECTION III.

Treatment of the Scrophula.

WAVING all consideration of those absurd means, which have occasionally been obtruded on the public for the
cure

cure of scrophulous affections, invented by superstition or knavery, and nurtured by credulity and fraud, from the royal touch to the most trifling and insignificant amulet, I shall proceed to mention medicines, that have been found from my experience, to possess active powers, and have had a sensible effect in abating the violence, and preventing some of the evil consequences, of this distressing disease; and take notice of some others, whose efficacy, although much recommended, has rather appeared doubtful.

As the scrophula is a disease of the lymphatic system, attended not only with obstruction in that system, but a peculiar laxity of all the solid parts of the body, the principal intentions of cure should be to remove the obstructions, and strengthen the tone of the habit; and by a happy mixture of those means, great benefit is often derived. And by whatever methods these are attempted, it is of the utmost importance to the patient to begin early
to

to attempt the resolution of the obstructed glands, before inflammation and suppuration have begun to take place; and speedily, as soon as an appearance of resolution is evident, to apply the corroborant plan.

The most active deobstruent medicines that I have experienced are mercury, with the addition of opium, with repeated purging with *sal catharticus amarus*, *sal glauberi*, or sea water, with a constant and steady use of *sal sodæ* and *extract. cicutaë*. And the best corroborants were the Peruvian bark and cold bathing in the sea or any other large body of water. The burnt sponge, the calcined *quercus marinus* (sea wreck), so much recommended by Dr. Ruffel, and called by him *æthiops vegetabilis*, *guajacum*, *sarsaparilla*, and antimony, and others which shall be noticed afterwards, have by no means been attended with the advantage we have been taught to expect from them. I have had no experience in the coltsfoot,

revived

revived and recommended by Dr. Cullen; nor in the terra ponderosa salita, which has been lately introduced into one of the hospitals in London, as a medicine of great efficacy, particularly in the scrophula. It has now, however, been under trial for some months in this town, in the case of a youth of seventeen years of age, covered with ulcers when he began to take it, and who had been wasting by the almost daily appearance of fresh suppurations, and a constant large discharge, to a skeleton; but so far from succeeding here, the suppurations have been larger and more frequent, and he is reduced to nothing but the skin over the bones. His appetite is great, and he drinks, I am told, to the amount of three pints of port wine a day, by which means he has probably been supported under this immense daily discharge*.

XXI. Many

* He sank under this discharge, and died soon after this paper went to the press. The terra ponderosa salita

was

XXI.

Many years ago, a shoemaker about twenty-four years of age, whose neck on the left side was wholly occupied by indurated strumous glands, reaching from the ear to the clavicle, was put under a course of extr. cicutæ and the mercurial pill of the last Pharm. Londin. with intervening purgatives and sea bathing, which he prosecuted for more than two months, in April, May, and June. The tumors softened, and were evidently dispersing; but growing impatient under the long course of medicines, which he was told he must submit to, he went to London, and got admitted into St. Thomas's hospital. What

was tried in other cases about the same time, both in ulcerations and tumors, but not with that benefit expected from its use. Indeed, matters appearing to become worse, it was totally laid aside, and recourse had to the remedies mentioned above, administered according to the different circumstances of the cases, and were attended with considerable advantage.

was done there I do not perfectly know; he certainly however took the *æthiops vegetabilis*, and some occasional purgatives; but not being relieved, he was discharged, and came again into the country, with directions to return to sea-bathing.— He consulted me again on his return; bathed in the haven a little below the town; took either sea-water or *sal catharticus amarus* as purgatives, and the tumors vanished entirely in a few months. The mercury and *cicuta* began the cure by softening the tumors, and the bathing in this large body of water, in autumn, completed the business. He married some years afterwards; has had several children, who are all scrophulous.

XXII.

I was consulted the 21st of March 1769 by a young woman from the country, aged twenty-two years, who never had menstruated, respecting a groupe of large strumous glands, which occupied each side

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of the neck, but more on the right than the left side, and reached from ear to ear under the lower jaw, and extended as low as the sternum. They were from the size of a billiard ball to that of a chestnut, and adhered firmly together, preventing the motion of the lower jaw and impeding deglutition, by pressing on the roots of the tongue, the larynx, and pharynx; and gave her great pain. She had also a hard tumor within the parietes of the abdomen, on her stomach, reaching from the ensiform cartilage to the navel, and extending at least twelve inches from side to side, possessing the epigastric region, and most of the hypochondria. It was extremely hard and tense, seemed fixed, yielded not in the least to the touch, was attended with great and constant pain, with feverish symptoms, and occasional vomiting. From every appearance, I concluded that this tumor was seated in the liver, but I was mistaken.

Our hopes of relieving this poor creature

ture were but slender; she was, however, put under a course of the extractum cicutaë, with the addition of Dr. Saunders's grey precipitate of calomel, directed to increase the dose gradually, to rub the tumors with oil strongly impregnated with hemlock by boiling, and to foment the epigastric tumor with a strong decoction of the recent herb, which she could easily procure near her abode in the country.

April 1. The glands on the neck and throat were softer, moveable, and she could swallow without pain; but the tumor on the gastric region was larger, and the vomiting frequent.

April 8. Tumors under the maxilla were much lessened, more distinct, and moveable; but that on the stomach was more turgid and painful; had a poultice of recent hemlock and oatmeal applied to it.

April 14. The glandular swellings were much decreased; her mouth being affected by the mercury, the dose of that was diminished, and the quantity of ex-

tract. cicutæ increased: her stomach was still more turgid and painful, but there was no perceptible fluctuation.

April 21. As she was gathering hemlock in the fields she felt something burst within, and fainted away. Being missed for some length of time, her brother came in search of her, found her in this condition, and had her conveyed to the house. On examination the tumor on the stomach was found to be subsided, and before night had totally disappeared. From these circumstances it was plain, that although no fluctuation could be distinguished, this tumor certainly contained a fluid, which when it burst, escaped into the cavity of the abdomen, and, therefore, the dreadful consequences of peritoneal inflammation were to be apprehended. However, as the quality of the fluid was unknown, absorption might do something in her favour, and, therefore, the secretions, particularly by the kidneys, were attempted to be increased; a composition
of

of oxymel scillit. & syr. diacod. was given for that purpose, and a gentle laxative, with fal. cathart. amar. to procure stools.

April 22. She had passed a very bad night, being harassed with pains darting from her back through the abdomen, so very acute as to throw her into convulsions, in which she remained most of this day, which symptoms were relieved by increasing the opiate.

April 23. After a tolerable night, she complained only of pain in her back, and of a weight and fulness in the abdomen, which was easily distinguished in the left side on which she lay. The site of the gastric tumor was as soft and easy as if no such swelling had ever existed. She was directed to continue the squill mixture, and to return to the hemlock and mercurial pills, which had been omitted ever since the rupture of this tumor. The secretion of urine had much increased.

April 24. She passed the night without pain, had discharged above three

quarts of urine, and said she felt herself perfectly well; however she was directed to continue her medicines. I did not see her for several days after this; when, to my surprize, she came to town, seemingly in as good health as ever, with the additional satisfaction of being then under an eruption of the catamenia, which was the first time in her life. She had adhered strictly to her medicines; but all symptoms of pain, weight, and uneasiness, in the abdomen, as well as the epigastric tumor, being gone, she was directed to take the squill mixture seldomer, and to leave it off by degrees; but to continue the hemlock mercurial pills, and to gradually increase the dose of them. The tumors of the submaxillary glands being much diminished in size, there was a prospect that a perseverance in those remedies would totally reduce them.

I saw her a week after this greatly mended in every respect; and ten days after that fat and well, but desirous of leaving

leaving off her medicines. But as the tumors were greatly lessened since last visit, and were manifestly resolving every day, she was encouraged to persevere in the pills, and to take some sal catharticus amarus; and as she had received so much benefit in so short a time, there was great reason to believe that the glandular swellings would entirely subside. She promised me that she would; and as I never saw her afterwards, I suppose that she perfectly recovered.

Was not this tumor on the epigastrium an encysted lymphatic collection, and the fluid being inoffensive, did therefore no injury after its escape into the cavity of the abdomen, but was readily absorbed and discharged by the urinary passages?

XXIII.

Some years ago a young gentleman, about fourteen years of age, who had been subject to pulmonary complaints, with pains in his side, and cough, which became

more alarming, because his mother died of a scrophulous consumption not long after his birth, was attacked by an affection in his chest of a formidable and ferious nature; it was first attended with peripneumonic symptoms, which were relieved by bleeding, small doses of calomel and opium, and blistering. After the urgent inflammatory symptoms were gone a dry cough remained, with a very quick pulse towards night, and morning sweats, threatening hectic fever and phthisis. The vitriolic acid, light preparations of the Peruvian bark, and gentle occasional purgatives, relieved these symptoms; and after a confinement of more than two months his health seemed to be re-establishing, with the additional assistance of asses milk. But as he recovered, it was observed that the lymphatic glands on the left side of his neck enlarged; and in the space of between two and three months those tumors gradually increased in size and number, some of them to a very considerable magnitude, when the right side became
also

also affected. Some of the largest of those tumors, which had appeared first, became painful to the touch, and threatened inflammation and suppuration.—He was approaching his fifteenth year, when he was put under the following course, with a view to dissolve the indurations, disperse the tumors, and prevent suppuration:—One scruple of sal sodæ, one grain of calomel, and a portion of opium, were directed to be taken every night, and one drachm of sal catharticus amarus every morning. After taking those medicines some weeks he was ordered, in addition to them, to take one drachm of Peruvian bark in powder, some time every day. He persevered assiduously in this course, and the glands softened and wasted daily; but it was twelve months before they were quite resolved. His perseverance for this very long time was rewarded by the perfect re-establishment of his health, and he is now a fine young man, in his nineteenth year.—We had not an opportunity of using the cold bath in this case.

XXIV.

I was lately consulted in the case of a young gentleman of family, with incipient strumous indurations of the glands of the neck, and put him under a course nearly similar to that above-mentioned; but he took the mercurial dose only every other night, and the sal catharticus amarus on the succeeding morning; and on the mornings on which the cathartic salt was omitted he used the cold bath, and every day the cortex Peruvianus and sal sodæ: by which means the tumors were resolved in less than two months. The bath here used was sea water; but its effect could be no other than a mere application of sudden cold to the surface of the body: as it was in a bathing-tub, and the immersion quick, he plunged in at once, and came out immediately*.

* I lately saw a suppurated scrophulous tumor (ready to burst) on the neck of a young subject, who had been some time under a course of similar medicines, whose contents were totally absorbed, and the tumor disappeared without any inconvenience.

I have seen several instances of indurated lymphatic glands in the breasts of young females reduced by the same means; and, where they have not been entirely resolved, have seen them, from being large, hard, and painful, become soft and indolent, and so they have remained. The patient, however, has always been enjoined to avoid every kind of pressure or other injury upon the part affected, as it appeared evidently, from a complete resolution not taking place, that those glands had from a strumous taken on a schirrous modification, which from irritation will in time acquire a cancerous disposition.

I have known incipient tumefactions in the thyroid glands, which disease is termed by medical writers the bronchocele, and as being common in the mountainous parts in Derbyshire is known by the name of the Derby-neck, but more particularly on the Alps, where it is named the goiters,
yield

yield to mercury, sal cathartic, and the Peruvian bark; when the burnt sponge, supposed to be a specific in this, I do suppose scrophulous affection of those glands, has failed. An instance of this kind came (XXV.) lately under my inspection in a young woman, where the tumors increased so fast as to press upon the larynx, and impede both breathing and swallowing. The calcined sponge having no effect, and the disease daily gaining ground, she was directed to lay that medicine aside, and to anoint the tumors and the neighbouring parts every night with strong mercurial ointment, to wrap the parts in flannel, and to take a drachm of the sal catharticus amarus every morning, and the same quantity of powdered Peruvian bark every day; by which means those tumors disappeared in the space of a month. This was an incipient disease; but we are not to infer from the success in this case that this method will prove equally

equally

equally so in those of a long standing*. It is however worth trying in all, and probably will succeed wherever the resolution of those tumors is practicable. — I have often thought that a seton passed through the bronchocele might be attended with advantage, but I never tried it.

Scrophulous tumefactions in the upper lip and nose, with sometimes slight ulcerations, discharging an acrid ichor, both on the inside of the nose and on the out and inside of the lip, occur both in youth and in persons of the middle-age, and are sometimes extremely troublesome and painful. A liniment composed of calomel and honey, or calomel and the honey of roses, generally heals the ulcerations; and small doses of calomel, and purgatives of the cathartic salt, with the Peruvian bark, commonly removes the tumefactions.

* Since the above was written, I have seen a distressing case of this kind of long standing; and by a similar method two large tumors upon the larynx and upper part of the trachea arteria, have been almost intirely dispersed.

Sea-water taken internally, and sea-bathing, have long been in use for the scrophula, as well as other diseases; and on account of its supposed efficacy, several towns situated on the sea-shore have many years been the fashionable places of resort in the summer months. Together with the drinking of the water and bathing, the mucilage contained in the pods of the sea-wreck (*quercus marinus*) for external friction on the glands, and the black ashes of this plant, have been strongly recommended by Dr. Ruffel, under the name of *æthiops vegetabilis*, in this disease, and other marine substances, as cuttle-fish bone, coralline, marine-shells burnt to lime, and other things of doubtful properties; whilst the breathing of sea-air has been supposed to promote the efficacy of those remedies.

I must confess that I have my doubts as to the sea-water's possessing powers in a superior degree to any other medicines in the scrophula; nor do I think that it

merits the virtues given it by Ruffel and Speed. My reasons are the following, however heterodox they may appear; 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 German 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 suppose 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 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

tims to the scrophula to be met with than at Lynn! and they are as frequently to be met with amongst the lower orders of the inhabitants, who are used to the water daily, as in the other ranks of life, whose business has no connection 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 scrophula 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 inclined to think that it is really more severe and distressing.

It may be alleged that as moisture will increase the laxity of the fibres it will augment the symptoms of the disease in some scrophulous habits, consequently this
may

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 south-west to north-west 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 corruption from putrid animal and vegetable matters in this stagnant state, may be supposed to be more liable to increase the severity of this disease on that account. 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 tide: and it is well known, that when the remittent fever becomes epidemic in this country that it always rages some weeks, in the fenny situations of the above description, before it appears at Lynn; which we may presume is owing 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 sea some of those putrid matters which are partly the source of those infectious effluvia.

If I mistake not, there are some places of public resort, for the purpose of bathing and drinking sea-water, full as low in situation as Lynn, if we may judge from the flux and reflux of the tide, which is by no means a bad criterion to judge by; and I think that Southampton is one of the number.

The

The use of sea-water internally and externally has been supposed to be superior to every other remedy in this disease. Its efficacy internally, I apprehend, depends merely on its purgative quality; and it is doubtful whether its application externally is superior to bathing in a large body of fresh water. The continuation of the purgative certainly may receive considerable assistance from the co-operation of the bath, as a tonic, in a disease where there exists a laxity in the solids in an extreme degree. This suggestion has a foundation in experience; equal advantages, at least, having been obtained from different remedies, and the cold bath in a large body of water, at such a distance from the sea where it was impracticable to procure sea-water either for drinking or bathing. Moreover the advantage arising from sea-bathing in some places is merely nominal, and in no respect better than cold water in a large bathing tub, and by no means equal to a large cold bath, because the patients

do not bathe in the open sea, but in baths of eight or ten feet square, which are supplied by a pump from a reservoir, which can only be filled with sea-water at spring tides; and those reservoirs are exposed to the heat of the sun, liable to become putrid, and consequently are neither so cold nor so wholesome as water directly from the spring.

If we consider sea-water chemically, we may presume that its virtues as a purgative must depend upon the aggregate of its component parts; and as we are in possession of the principal of those in a separate state, as in the fossil alkali and magnesian earth, and the compound salts formed from these substances, by their combination with different acids (as the better purging salt, Glauber's, and Rochelle salts) as well as the marine salt itself, which contains calcareous earth, with its other ingredients; every thing to be expected from the internal use of sea-water may be accomplished by a proper exhibition

exhibition of those salts, and continuing the use of them for a necessary length of time. But it is very difficult to get patients to persevere in a long course of medicines, however beneficial it may be represented to them; whilst from the force of example, and not regarding sea-water as a medicine, they will continue the use of it many months, and repeat a long course of it every year. Therefore I am led to think that all the advantages derived by scrophulous patients from attending public places of resort for sea-bathing and drinking sea-water, seem to depend on their bathing in a larger body of water than is to be met with in inland parts of the country; and in persevering in this practice, and in a state of constant purging, by taking sea-water every day, more than in any specific quality which the water itself possesses in subduing this disease. The constant exercise, when the patient is able to bear it, will add to the plan of strengthening the system. And that hilarity which always

attends large meetings and public places of diversion will have a great share in soothing the mind of those severely afflicted with this disease, and divert their attention from their sufferings. To which may be added, the confidence which the patient has in the efficacy of these remedies. All which advantages may be obtained under the guidance of common sense at a distance from the sea.

Burnt sponge and *æthiops vegetabilis* must be taken in large quantities, and persevered in long, to produce any remarkable effect; and what effects are produced I am strongly of opinion must depend upon the quantity of the fossil alkali, which those ashes contain; and the extrication of this salt must depend upon the degree of incineration which the sponge and sea oak have undergone*, and the quantity of fluid in
the

* Dr. Lewis, in his *New Dispensatory*, page 259, in the article *Spongiæ ustio*, says, “ Its virtues seem to depend upon a volatile alkali just formed, and combined with its own oil: if the sponge be distilled with a strong
“ heat,

the stomach. Surely the *sal sodæ* given in doses, the quantities of which can be ascertained, would be a more elegant and efficacious medicine than either of these powders; the dose of which, for the above reasons, cannot be adjusted with equal precision; and I am confident that I have seen the exhibition of this salt attended with much more advantage.

“ heat, it yields a large proportion of that salt in its proper form. The salt is in this preparation so far extricated, that if the burnt sponge be ground in a brass mortar it corrodes the metal so as to contract a disagreeable taint, and sometimes an emetic quality.”

With deference to this ingenious writer's opinion, I conceive that the corrosion of the brass, in this instance, is no more a proof of the presence of the volatile alkali than of the fossile alkali, or indeed any other salt, because any salt will corrode brass and produce rust of copper, which certainly in a sufficient quantity will prove emetic. Therefore I am strongly of opinion, that as we know from experience that the *sal sodæ* possesses great solvent powers, when given in scrophula, that all the deobstruent properties which the burnt sponge has is more likely to depend upon the quantity of the fossile alkali remaining in those ashes, after the marine acid which held it in a state of neutralization is volatilised and expelled by the heat, during the calcination of the sponge, than on the newly-generated volatile alkali stated by this author; and as the quantity must be but small, and unascertained, in the dose of the burnt sponge commonly given, it must be much better to depend upon the *sal sodæ*, the dose of which can be determined with accuracy.

The madrepora, corallines, corals, cuttle-fish bone, and sea-shells, are mere absorbent earths, and possess no other virtues than chalk or any other calcareous fossil production; and when they are calcined, which has been recommended, become a caustic quick-lime, and possess no other virtues than lime made by calcining any calcarious earth.—I never had any opinion of them in this disease, and, therefore, never used them; yet I have known them given in different shapes by others, without affording the smallest advantage. The squill is certainly possessed of great deobstruent powers; it assists the secretions, especially that of urine; it promotes expectoration, and is useful in infarctions of the lungs, besides its mild emetic effects. As to millepedes, I have seen vast quantities of them taken, both alive, and prepared, for a succession of very many years; but I cannot say I ever saw any benefit from their use, either in this disease, in the schirrus, or in the cancer, nor indeed in
SECTION
any

any other for which those insects have been extolled.

Perhaps the use of mercury in this disease may by some be deemed heterodox, because it has been condemned by Doctors Ruffel, Speed, and some others I could name, as occasioning too much irritation from its supposed stimulating properties. This opinion has apparently been taken up upon theory only, I might have said conjecture, and not from proper and attentive observation. Men argue and draw conclusions often from the abuse and not the use of mercury. For the efficacy of mercury, properly exhibited, in removing inflammation, sufficiently proves its properties to be directly contrary to what had been supposed; and that besides the deobstruent powers it so eminently possesses, it is also sedative and antispasmodic. By abuse the best food may be converted to a poison.

SECTION IV.

THE chirurgical treatment of scrophulous tumors and ulcers is, I believe, confined within a very narrow compass. Simplicity, wherever it can be adhered to, in every disease which is the object of surgery, is always the best practice, and in none more than in this. I never found fomentations or cataplasms, used with a view to disperse strumous glandular tumors, of any advantage: I have, on the contrary, thought them often detrimental, by bringing on an inflammatory disposition in the tumor. An emollient poultice was indeed useful when the tumor was already inflamed, and certainly disposed to suppuration; and when the inflammation was of a dusky hue, and the powers of life languid, with evident marks of a slow suppuration having taken place,

place, such stimulating substances added to the cataplasms, as are well known to forward maturation, have been of great service.

I have always found it the best practice to suffer the external suppurations in strumous tumors to burst spontaneously, unless when they were in the vicinity of bones or large blood vessels. When either of these circumstances happened, the matter, for obvious reasons, was discharged early by incision. The simplest applications, as white liniment, or a cerate of wax and oil, were the best to ulcerated scrophulous glands; but if the ulcer remained crude, and did not digest kindly, red precipitate, or, if that gave pain, calomel, sprinkled on its surface, assisted to promote the formation of good pus, and the growth of granulations.—I have seen the strong mercurial ointment alter the complexion of the ulcer very much for the better in a short time.

If the matter is deep seated amongst the
4 muscles,

muscles, and near bones, or large blood vessels, it should (as already said) be discharged by incision: and this should be done as soon as there is any evidence of its existence, to prevent the mischief which must arise from its long abode in such situations. And the passing of a seton under the bellies of large muscles, as those on either extremities, where such collections have been, has, under my inspection, been attended with great advantage; which having remained till the parts were well digested, and incarned, were withdrawn, and the part united firmly, without the smallest inconvenience to their motions afterwards. Whether the seton is employed or not, a counter-opening in such deep-seated collections is, when practicable, of great utility.

XXVI.

I remember an instance in a man of upwards of fifty years of age, who had a scrophulous abscess form on the temporal muscle,

muscle, with the lower end of its cavity extending downwards under the zygomatic process. When fully matured the matter pointed outwardly, and was discharged from an opening made above this process; but could not be perfectly evacuated from that part of the cavity behind the zygoma, especially in an erect posture; and, therefore, endangered by continuance and contiguity the rendering of the bone carious. To obviate which a seton was passed through the opening downwards behind this process, and brought out under its lower edge; by which means the matter found an easy vent at this depending orifice, and the bone was prevented from receiving any injury by its abode behind it; which probably would have been the case, if this outlet had not been made. The seton was retained until a proper digestion and incarnation took place, when it was withdrawn, and the ulcer healed kindly.

The

The treatment of scrophulous affections of the articulations depends upon the parts involved in the calamity, the condition of them, and the quantity of the disease in the habit. In cases where one joint is only affected it must be very different from those wherein morbid appearances are prevalent through the whole system. If, for instance, one articulation is so injured as to require amputation, if in a part where that is practicable, and this appears to be the only diseased part of the constitution, the removal of the morbid limb might preserve the life of the patient. But if many other parts besides this are deeply affected with the distemper, in the form of indurations, abscesses, or ulcers, the operation must not only be fruitless, but contribute to the more speedy destruction of the patient. Therefore great circumspection and patience are required in the chirurgical treatment of scrophulous

ulous affections of the articulations, particularly in the large ones of the extremities.

When a caries is deep seated there is very little probability of relieving the patient but by amputation; yet, for the reasons above noticed, it is not always easy to decide on the expediency of the operation, even when a solitary joint is apparently the seat of the disease only; appearances are sometimes fallacious, and a hasty determination must be exceedingly wrong.—I am exceedingly sorry to say it, but many years ago I knew (XXVII.) an instance of an amputation of an arm for a scrophulous affection of the elbow joint, in consequence of the result of a consultation in London, where the patient, not satisfied with the opinions he had had in the country, went: when it appeared that the bones were enlarged and softened in their texture at their extremities; that no real caries had taken place in them; that no acrid, purulent matter was

was in the cavity of the joint; and that the chief seat of the disease was in the burfæ mucosæ, and the cells of the tela cellulosa, which were filled with gelatinous matter; and in consequence of this the ligaments and cellular membrane were thickened. This case naturally led to future caution, and since that time I have seen several instances similar to this in the elbow joint treated successfully, with the inconvenience of a stiff joint only in some; but in others, who were less affected with the disease, the use of this articulation was preserved.

Amputation ought never to take place in this disease, but when the patient is in evident danger of dying tabid, from the immensity of the discharge, and hectic fever of absorption; in a case where a solitary joint, with a deep seated caries of the bones, is the seat of the disease only, whilst the rest of the body remains apparently free from it.

The

The internal treatment, where the articulations are the seat of the scrophula, is not different from that which takes place when the disease affects other parts of the system. The external treatment admits of some variation, according to the state of the affection.

I have known instances where mercurial friction, with the strong ointment, cooperating with the internal regimen, was attended with success when the disease was confined to the burfæ mucosæ and tela cellulosa furrounding the joint, and infarcted with inspissated lymph, when the parts were not inflamed, and the articulation moveable; we may suppose this might be brought about by the inspissated fluids being attenuated, and the absorption restored by these means: be that as it may, the fact is certain, that by perseverance in the internal medicines mentioned, and this mode of treatment externally for a considerable length of time, the joint has been restored to its natural functions.

Blisters have been used with great advantage in diseases of the joints, particularly in scrophulous affections of the knees and elbows; and their greatest efficacy seems to take place where the bur-
sæ mucosæ and tela cellulosa are infarcted with gelatinous matter: they seem to possess a power from the cantharides of attenuating the inspissated lymph, and rendering it more fit for absorption; and by their stimulus to rouse and give energy to the lymphatics, and enable them to perform their office. This, and the large discharge, as we may suppose, of morbid matter, induced by their repeated application, have greatly contributed to restore the freedom of the joint. I have seen instances of their use both in the knees and elbows, but think, when this was the case, that the bones were sound; although we learn from some late observations that they have succeeded where there was a caries; and, as might be expected, an anchylosis ensued.

Caustics,

Caustics, applied above and below the diseased joints (especially the knee and elbow) are often attended with advantage. And sometimes, when the tumid cells have been opened by the knife, the gelatinous inspissated contents evacuated, and the morbid parts exposed by the incision, stimulated and cleansed by the occasional application of escharotics, until digestion was fully established; this treatment has been attended with success, and the patient, with the assistance of the regimen before-mentioned, has recovered the free use of his joint.

XXVIII.

I was consulted in August and September 1777 in the case of Mr. W—h—, from the Isle of Ely, thirty miles distant from Lynn, who had been long afflicted with an enlarged knee, from a scrophulous cause. The tumefaction was of a very considerable magnitude, was attended with great lameness, and wore a very threaten-

ing aspect. A small tumor had been opened, and a very foul ulcer remained on the inside of the tibia, with sinuses running from it in different directions, discharging a crude ichor, mixed with a gelatinous inspissated lymph. All the *tela cellulosa* involved in the tumefaction was thickened and infarcted; and when the sinuses were laid open afterwards, they were found to communicate with others running in the cellular texture; and upon exploring these, it was discovered that the cells were distended with this morbid inspissated coagulable lymph.

The common means to promote digestion, and a discharge of this morbid jelly, proving ineffectual, it was agreed to open every sinus that presented, in order to evacuate all the morbid gelatinous matter that possibly could be done in this way, and to destroy the diseased cellular membrane with escharotics, and then to endeavour to promote digestion. The late

Mr.

Mr. Thorbourne*, of March, in the Isle of Ely, his surgeon, performed the task with success: when fresh sinuses appeared they were opened, and pretty numerous they were; the gelatinous matter was discharged by degrees from the cells, the morbid parts were gradually destroyed by escharotics of red precipitate, &c. a digestion was at length established; but it was a work of time and great attention before a cure was completed, which at length was happily effected, and he recovered the perfect use of his knee. Strong mercurial ointment was the chief dressing. Whilst the surgeon was performing his part externally, the patient

* The fate of this gentleman affords a melancholy instance, among many, of the dangers to which medical men are exposed. He studied more than five years in the medical schools in the university of Edinburgh; and was possessed of great knowledge in his profession; in the diligent prosecution of which he lost his life by contagion, during the raging of the marsh remittent fever (in the spring of 1780) which was universally epidemic and malignant in this country, from the time of the inundation from the sea, January 1, 1779, to 1785. And his wife survived him but three weeks, being cut off by the same disease, leaving several small children to deplore their loss.

was put under an internal course of small doses of calomel, opium, and extract. cicutaë every night, and small doses of cathartic salt every morning, a decoct. farfaparill. cum cort. Peruvian, through the day: which being continued some weeks, the farfaparilla was laid aside; and the Peruvian bark, with the addition of sal sodæ, was continued through the day, until the cure was effected, which was not till many months afterwards.—It was remarkable, that until his constitution was in a manner saturated by slow degrees with the mercury, of which we had evidence, by the salivary glands being slightly affected, which was some time after his persevering in this medicine, he did not begin to mend; but as soon as this took place he began to recover. I saw him in 1787 perfectly well in every respect.

XXIX.

I was many years ago consulted in the case of a young man, about the age of puberty, which was in many respects similar to the above. The difference of treatment was, that the caustic was freely employed instead of the knife, and a large ulceration was the consequence. As the morbid cells and sinuses were not completely destroyed by these means, and as the scrophula continued to manifest its presence for several years, it was not attended with the same success in the same proportionate time. After chirurgical treatment for many months, the ulcer became fistulous, and remained so for several years; at length, after he had attained manhood, the discharge gradually decreased, and dried up, without leaving the least lameness behind.

XXX.

Another case of a scrophulous affection of the right knee in a young woman came under my inspection about fifteen years ago, which did not end so well. The bursæ mucosæ above and below the patella were greatly distended, and the tumefaction extended in the cellular texture all around the joint. A distinct tumor formed, and suppurated on the inside of the head of the tibia; it was opened and treated by her surgeon: a fistulous ulcer however remained in this place for several years afterwards, as also did the lameness, which has remained ever since. The fistula at length drying up, an issue was made on the inside above the knee. Fresh inflammations and suppurations have occasionally returned every year or two, about the site of the old sore, which last a few weeks, with lameness, reducing her to the use of her crutches; when they dry up in time with simple dressings, and

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she again can walk without any assistance. About a year ago she had one of those suppurations, and it was several months before it healed; and she is now well, and less lame than she has been for many years.

It has been already mentioned that I had seen many cases of scrophulous affections of the elbow-joint, of threatening appearances, do well without amputation. Several of this kind have come under my inspection within a few years: five within twelve months; and some of those are now under courses of medicinal treatment by my direction, attended by different surgeons in the town and country; two of whom have caustics applied, and are manifestly better; two under mercurial friction occasionally, as the parts are not inflamed, and the disease clearly confined to the burfæ mucosæ and cellular membrane, are recovering; and all use the calomel and sal cathart. according to circumstances,

also

also the sal sodæ and cort. Peruvian. and are directed to use the cold bath. Besides these there is one under the care of Mr. (XXXI.) Cruso, a surgeon of eminence here, who I have occasionally seen in the course of two years. It is in a lad about the age of puberty, and has been in a state of ulceration with a large discharge near three years; it mends slowly, and the elbow is become stiff, but he can use his hand. This youth had a large scrophulous abscess in his leg some time before, which was long attended with a large discharge, and hectic fever, which healed before the elbow was affected.

XXXII.

In September 1789 I was consulted in the case of a young man, about twenty-three years of age, at Thornham, who had been afflicted with a scrophulous tumor on the wrist, involving the bursæ mucosæ, cellular texture, and all the parts surrounding the ends of the radius and ulna,
 * the

the carpus, and metacarpus, in an extensive number of distinct suppurations, which had separately been opened by his surgeon, Mr. Shaul, of Burnham*, with also those several sinuses leading from the several collections of matter, which could be with safety opened. It was now in a state of extensive ulceration, several sinuses were still unopened, and one sunk down among the bones of the carpus. The tumor was still great, with considerable inflammation of a dusky purplish color, and induration, particularly about the carpus. The whole had a very threatening appearance; and from the danger of this compound articulation becoming carious, there was some doubt whether the hand could be saved. All this was attended with the hectic fever of absorption to a considerable degree. One superficial sinus was opened contiguous to the radius whilst I was there. The ulcers were directed to be dressed with ung. cerul. fort. precipitate occa-

* A young man of promising abilities.

fionally, with dry lint to repress the fungi, which were luxuriant: with small doses of calomel and opium, the magnes. vitriolat. sal. sodæ and cort. Peruvian. in their turns internally, with a milk diet; and as he lived so near the sea, the small harbour opening into the German ocean, sea-bathing was recommended. All these things were strictly complied with, except the bathing, which timidity prevented him from putting in practice. This however was found the less material, as he speedily mended without it. His surgeon told me, in June 1790, that he was nearly well, but a stiffness remains in the carpus, perhaps from a partial anchylosis among some of the bones of this compound articulation.

XXXIII.

Not so fortunate was the case of a beautiful young lady, who consulted me in June 1786, respecting a scrophulous affection of her wrist. The tumor was
small.

Small and indolent, and seemed to be seated in one of the bursa mucosæ of the flexor tendons of the fingers on the inside of the wrist. She was directed to employ the same kind of regimen so often mentioned, and it burst spontaneously some months afterwards. She married some time after this, and consulted some men of eminence in London. I do not know what plan was directed, but think that sea-bathing was part of it. She became the mother of one child, but the whole system was so deeply contaminated, that the wrist became daily worse. She fell into a phthisis pulmonalis, and died in the beginning of 1789.

XXXIV.

The following being an extraordinary case, I beg leave to insert it: Mr. Bayly, an eminent surgeon, at Swaffham, was sent for early in the morning of the 20th of July 1778, to a man of thirty years of age, at three miles distance, labouring
under

under a total suppression of urine. The attempts to relieve him, by passing the catheter, elastic bougies, and every other means, proving unsuccessful, I was desired to attend the next day, and accordingly met Mr. Bayly at noon. Upon an accurate examination, a round tumor containing a fluid, was discovered, by introducing a finger a little way into the anus, and was supposed to be the bladder distended with urine. The catheter, &c. were again tried without success; therefore, after due deliberation on the pressing danger the patient was in, it was agreed that the safest and readiest way to relieve the patient, was to pierce the bladder through the rectum, which, by the tumor's being low, and within reach of the finger, could be effected with the greatest ease. Accordingly Mr. Bayly performed the operation, in the manner described in the 66th vol. of the Philosophical Transactions, p. 582, with a large trocar; and on withdrawing the perforator, introduced a straightened male

male catheter through the canula, and about a quart of a clear limpid fluid, not at all urinous, was discharged through it. When this fluid had done running, he had an inclination to make water, and the catheter and canula being withdrawn, he passed a large quantity of dark-coloured strong smelling urine by the urethra into two chamber-pots. This circumstance surprized us at first; but on a short reflection, we concluded that the fluid discharged by the canula could be no other than the contents of a large hydatid or cyst, placed between the bladder and rectum; and that this was the tumor felt by the finger in ano, and not the distended bladder, as we at first supposed it to be; and that this, by pressing the neck of the bladder against the pubis, had caused the suppression of urine. The tumor and bladder being emptied, we examined the abdomen, and discovered a large tumor above the pubis, which appeared to be situated about the flexor of the colon.

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He had an opiate given him; we left him, and his bowels were emptied in the evening.—Mr. Bayly informed me afterwards by letter, “ That he passed a favourable night, was better in the morning, “ and continued mending three days, and “ passed his urine naturally; but on the “ fourth he complained of great pain in “ the tumor, the abdomen was much “ swelled, attended with strong inflammatory symptoms; that he was bled, “ had his intestines emptied by clyster, “ and was treated in the antiphlogistic “ way. The inflammatory symptoms “ however increased daily, and he passed “ his urine and stools involuntarily, and “ lived in this sad state till the 2d of “ August.”—I never saw him during the time he lived after the operation. Mr. Bayly obtained leave to inspect the body, and wrote immediately to request my presence. I accordingly went, and was present at the opening of the abdomen and examination of the viscera; but the whole

contents of the lower belly were so putrid, that I could not remain but a minute or two at a time in the room. Mr. Bayly stood it better; and as he was more attentive, as dissector, in his investigation than I could be, I requested that he would commit his remarks to paper, which he accordingly did. The summary of which are as follows :

“ The abdomen being laid open, and
“ its contents in view, the tumor which
“ had been felt above the pubes was
“ found to adhere to the fundus of the
“ urinary bladder, and was a globe about
“ the size of a cricket-ball. There was
“ about an ounce of a purulent lymphatic
“ fluid in the pelvis: the bladder and
“ rectum were taken out together; and
“ upon strict examination it was found
“ that a lymphatic tumor had existed between
“ the rectum and the bladder, and
“ adhered so firmly to the latter, as not
“ to be separated from it; and this was
“ the tumor which had been emptied by
O “ being

“ being pierced with the trocar through
“ the rectum. The rectum was detach-
“ ed from it, and appeared to be in a na-
“ tural state, and upon examination was
“ neither inflamed nor discoloured; and
“ the perforation which had been made
“ by the trocar was found to be so per-
“ fectly closed as to be imperceptible.
“ Another tumor, similar to that on the
“ fundus of the bladder, but not so large,
“ was upon the flexure of the colon. The
“ intestines were all discoloured, and ap-
“ peared to be highly inflamed; the sto-
“ mach and small guts were particular-
“ ly so. The liver, gall-bladder, pan-
“ creas and spleen, were in a natural
“ state: and the glands of the mesentery
“ did not seem to be diseased. The
“ kidneys were larger than usual, and
“ appeared to be inflamed. The sto-
“ mach had two tumors upon it, some-
“ thing more than an inch above the
“ pylorus, but something less than that
“ upon the flexure of the colon. I
“ dissected

“ dissected these tumors from the diffe-
“ rent parts, and carried them home, to
“ be examined at leisure. That from the
“ fundus of the bladder (you may re-
“ member) had the thickened portion of
“ that viscus to which it adhered cut off
“ with it.

“ I divided these tumors in the pre-
“ sence of Mr. Hellsam, of Stoke*, Mr.
“ Edgar, of Swaffham, and yourself, and
“ you must remember that they were all
“ laminated; and within these concen-
“ trated laminæ there was a small hydatid
“ full of a limpid fluid, in each tumor,
“ about the size of a marble; these
“ coats had a gristly elastic feel, and
“ each lamina was thicker than a shil-
“ ling. You may recollect my separating
“ them from each other. This person,
“ when about ten years of age, fell from
“ the top of a barn whilst he worked
“ with a thatcher, with his belly upon a
“ heap of stones, and was confined in

* Surgeons of character.

“ consequence of this accident many week’s
“ to his bed: and from hence the tumor
“ felt in the abdomen was supposed to
“ arise. He frequently complained of
“ violent pains in his bowels, particularly,
“ he said, when the lump, as he called it,
“ was out of its place.”—Although Mr.
Bayly does not remember that there were
any indurated glands externally, it is high-
ly probable, from this account, that he
was a scrophulous subject originally.

The tinea capitis has been supposed to
arise, like the itch, from animalculæ bur-
rowing under the cuticle; but I do not
know that any were ever actually disco-
vered. Although not strictly regarded as
a scrophulous affection, yet as it is accom-
panied with an enlargement of the lym-
phatic glands of the neck, resembling
struma, probably owing to the absorption
of acrid matter from the eruptions on the
hairy scalp, it may with propriety come
under consideration here.

The cruelty of extracting the hair by the roots, either by the hand, or by pitch and other adhesive matters, which has been practised, both by regulars and irregulars, under the notion that the disease was seated in the bulbous roots of the hair, is too obvious to require animadversion. Many applications have been recommended for curing this disease; ointments of pissellæum indicum, common tar, lotions of sublimate, &c.—I mean not to examine either the property or efficacy of those different applications; but only to point out a simple, easy, and speedy method of cure, which is founded in experience. Let the hair be clipped close off the part of the scalp affected; or if it can be removed by shaving with ease it will be better: then sprinkle this singular eruption with a dry powder, composed of one part of levigated cinnabar, and three parts of flor. sulphur. well mixed; rub it in with the finger at night, and wash the parts clean with a strong soap lather

in the morning; repeating these operations until the disease vanishes. Small doses of calomel, with saline purgatives, twice a week, with some proportionate doses of cort. Peruvian. in the day, at the same time, will soon remove the strumous glands.

SECTION V.

IN treating scirrous and cancerous affections, the quantity of the disease, the parts affected, and their importance to life, are to be considered. If the constitution in cancers is wholly involved in the calamity, little relief can be expected from medicine, except in the sedative power of opium, to sooth pain for the remainder of a miserable life.—The scirri of the uterus, bladder, intestines, stomach, &c. or any internal membranous part, generally become cancerous, ulcerate, and destroy the patient.—External cancerous ulcers on the skin, or cellular texture, do not always prove fatal, but admit of a cure, provided the constitution is not contaminated by absorbing the cancerous matter from the ulcer.—Carcinomatous ulcers on the scro-

tum, and neighbouring skin, are always fraught with danger. Of this kind is that called by the late Mr. Pott *the chimney-sweepers' cancer*, which he thought was altogether confined to this class of men; and this excellent surgeon advises the total excision of the parts affected, as the only means of preservation. I have, however, known a disease of this kind in a person who never had any concern with chimney-sweeping or soot. Ulcers of this sort any where in the vicinity of or upon the parts of generation, have been sometimes thought to arise from a venereal cause, by ill-conditioned chancres degenerating into cancerous ulcers, destroying all the neighbouring parts, and terminating only with the life of the patient; instances of which are to be met with in medical writers.

XXXV.

One however fell lately under my care, in a young strong man of thirty years of age, which terminated happily. The ulcer

cer was an inch and a quarter in length, seated on the upper part of the integuments, on the right side of the scrotum, upon, and in a longitudinal direction with, the spermatic cord: it had destroyed the cutis vera; its lips were hard, jagged, and of a fiery red colour, but little or nothing elevated above the surface of the skin. The bottom was ash-coloured, foul, and crude, being the cellular membrane; it was accompanied with an intolerable sensation of pain like burning, and a large ichorous fetid discharge. He had been liable at times to a red pustular cutaneous eruption from his infancy; was allied collaterally to scrophulous relations, but never had any symptoms of this disease in any of the lymphatic glands. These pustulæ sometimes ulcerated slightly, but soon healed, without assistance.

This ulcer had been suspected to arise from a venereal cause, and accordingly treated. Mercury was used externally in dressings and frictions; and internally in
the

the form of calomel first, and last the sublimate solution; and in either way it affected the salivary glands so rapidly, that its exhibition was on that account interrupted at different intervals; and with the mercurials the decoction of sarsaparilla and mezereon was drank daily. But instead of mending it grew worse every day, and the parts continued to be consumed with great rapidity, although the affection of the salivary glands afforded a sufficient testimony that his habit was impregnated with the mercury. The ulcer was dressed with strong mercurial ointment, washed according to circumstances, with lotions of calomel, strong solutions of opium; hemlock and carrot poultices were occasionally applied, and different other dressings, *in vain!* In ten days the spermatic cord was laid bare; in a week more the corrosion had destroyed the parts upwards to the mons veneris; had marched across, above the root of the penis, to the left side; and in its course, beside the skin,

the

the adipose membrane was consumed nearly down to the os pubis, and above an inch in length of the corpora cavernosa; and stretching from side to side, at the root of the penis, was naked, and exposed to the action of the corrosive matter, and in view whenever the jagged edges of the ulcer were drawn a little asunder; and the penis began to grow turgid, inflame, and put on a very threatening appearance. Opium had been given hitherto with the mercury; but when it was found that matters became daily worse under the mercurial course, mercury was laid aside; the opium continued in increased doses, and extr. cicutæ in full doses added to it; and the cort. Peruvian. was joined to the decoction. But all to no purpose. The ulcer seemed now to have acquired a carcinomatous affection, the parts melted away, in the immense corrosive, intolerably fetid discharge, with a burning pain; not a slough cast off, all was dissolved in the current; and its rapid
progress

progress threatened not only the destruction of the penis, but the life of the patient. In this dilemma, as every means already used had proved abortive, it was resolved to try the effect of a hemlock bath, a remedy I had used in a partial way with success, in foul corroding ulcers, many years ago, just after Storck's publication on cicuta, and of which the late Mr. Justamond has since that period spoken favourably in cancers. Accordingly half a pound of the seeds of the cicuta vulgaris, and four large handfuls of the leaves and flowers of the plant, were tied loosely in a large cheese-cloth bag, to prevent the trouble of straining, and boiled in a copper, in seven pailfuls of water to six, which being added to twelve pails of cold water, contained in a wooden trough, constructed of a suitable shape and size for this purpose, made the bath of a proper temperature as to heat: and the patient was immersed in this, up to the arm-pits, at first only fifteen minutes; but in succeeding

ceeding bathings for half an hour or more, as he could bear it: and this was repeated every other evening, about two hours after a light supper, and immediately before he went to bed, where he generally sweated copiously. The progress of the corrosion was stopped, and the pain lessened, by the first bathing. After the second the immense foul discharge was reduced to a trifling one, and took on a thin purulent appearance. In short, he mended every day, and was well in the space of a month from the first bathing. He took five grains of opium, fifteen grains of the extract. *cicutæ*, and a quart bottle of decoct. *guaiac. mezereon* and liquorice, without *sarsaparilla*, daily, during the course of bathing; used a milk diet morning and evening, with generous food at dinner, and port wine after it. No other dressing was used but dry lint, a piece of common plaster over it, from his first going into the bath. The manner of its healing was singular; it did not fill
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up like wounds or abscesses, with granulations of new flesh; but the sides of this deep ulcer contracted closer every day until they become contiguous, and then they united from the bottom upwards, and the cicatrix is pursed up, corrugated, and uneven.

Although the following case was not cancerous, I have added it here, conceiving that the perusal of it may be of some utility in practice.

XXXVI.

In September 1790 I was consulted by a man of about thirty-five years of age, from the Isle of Ely, afflicted with defective vision, a great many small tumors or tubercles of different sizes, from that of a pea to a chestnut, and many fordid phagedenic ulcers on different parts of his body and extremities. The account he gave was, that in the beginning of January he was covered with blotches on the skin,

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had a dreadful inflammation in his eyes, which almost deprived him of sight, and frequently nocturnal pains. His disease was supposed to be venereal, and he was salivated by his surgeon. The ophthalmia abated, but left his sight indistinct and much injured: the eruption had disappeared from his skin, but tubercles of various dimensions appeared in their room immediately under the skin; which in succession came to an imperfect suppuration, with a livid cast in the integuments on the top; burst spontaneously, and degenerated into deep foul corroding ulcers, with hard livid edges, and this had been the case ever since. He had gone from surgeon to surgeon, to irregular as well as regular practitioners: grew worse daily, and tired them and himself in the fruitless pursuit of a cure. His eyes appeared full and prominent, the cornea transparent, the pupil dilated in each, and the crystalline and other humors perfectly diaphanous and clear: and a few distended blood-vessels
of

of no consequence were upon the tunicae conjunctivæ. His sight was so indistinct, that he could not discern small objects; and hence it appeared that the optic nerves and retinae had been greatly injured by the inflammation. The tubercles were still scattered every where upon his body, of various sizes; some were hard and painful, others indolent, and many were in different states of languid suppuration, and were clearly seated in the lymphatic system immediately under the skin. The ulcers had the same complexion they had had, he said, for many months, were of different depths and extent, hard and livid, very foul, and discharged a sharp fetid ichor. It appeared pretty evident that there was a deep scrophulous habit: he was therefore put under the following course—One grain of calomel, one grain of opium, and five grains of extract. cicutæ, were directed to be taken every night, and a solution of one drachm of the bitter cathartic salt every morning,

morning, and one drachm of powdered Peruvian bark, mixed with one scruple of sal sodæ, in the forenoon and afternoon, at a proper distance from his meals, every day, with a warm hemlock bath, as in the foregoing case, twice a week. As he had been a free liver, he was enjoined to leave off that pernicious beverage, ardent spirits and water, to drink wort or new beer (because replete with fixed air) at meals, and a few glasses of wine in the day. The applications to the ulcers were left to the discretion of the surgeon who attended him.

He came to me again on the 25th of October, very much mended, a great many tumors were gone, and the few that remained were wasting; the ulcers were filled up, and all but three healed, and those had a very healthy look. His sight, however, was not much better. He had punctually observed the plan of cure laid down, in every respect but the bath, which he found so inconvenient, for want of a pro-

per vessel for the purpose, and the boiling of the copper, for him to get it effectually put in practice, that it was used only three or four times, and even that had a very good effect both on the tumors and ulcers. He was directed to persevere in his course of medicines as before, until the tumors were gone, and the ulcers completely healed.

He came again on the 23d of November, quite well, every tumor had vanished, and ulcer healed, except one, not larger than a herring-scale, cicatrizing fast. He had persisted in taking his medicines: he was now advised to leave them off a week or two, and return to them again for a fortnight or three weeks longer; which he promised to do, and left me with expressions of gratitude, for what he called his preservation. I was sorry to find his sight so little better; he could only read large print. I am afraid the optic nerves will never recover the shock they received at the first onset of the disease; the turgid vessels on the tunica conjunctiva were gone.

Cancers in the uterus, bladder, rectum, &c. generally terminate fatally. To avert this, or even to alleviate the distress of the sufferer, is an object of great consideration and importance. From the great benefit I have experienced in several instances from the use of the hemlock bath, I have indulged an idea that those distressing maladies might receive relief from its use. And upon this ground I some time since suggested its application in the case of a supposed cancer in the rectum, in a person of distinction above a hundred miles distant from me. And as the liquor of the bath could not get within the rectum, I pointed out the expediency of injecting into the rectum a decoction of the hemlock, in a gentle and continued stream, whilst he was in the bath, by means of a proper apparatus* with a long flexible tube;

* I have for this purpose adapted an air vessel of tinned iron, with proper valves, and a long flexible tube, to a common pewter syringe for clysters, and fixed both in a

tube; and by this contrivance he would have the benefit of the influence of the medicine internally and externally at the same time. I do not however think that this was put in practice in the case I allude to.

The decoction may also be injected by this means into the vagina, and even into the body of the uterus, by introducing the pipe into the os tinæ; and by the urethra into the bladder, by one end of a flexible tube being affixed to the catheter introduced into the bladder, and the other to the pipe of the machine, and used whilst the patient is in the bath.

Although excision is the most certain and safe mode of treating cancers on the scrotum, according to Mr. Pott, in that by him particularly called the chimney-

frame of mahogany; so that when put into a vessel containing water or any decoction it acts upon the principle of a fire engine, and by working the piston of the syringe, throws a continued stream, in what quantity and with what force the operator pleases. It acts upon the same principle as that mentioned by Dr. Adair in the second volume of the Memoirs of the Medical Society of London.

fwEEPERS cancer, it may be worth while to try the effect of the hemlock bath, in the mode already related, before the operation is performed; which, if successful, may preclude the necessity of having recourse to that painful expedient; the watchful surgeon taking care not to delay the operation too long, should the bath prove ineffectual.

Corroding ulcers with hard edges, a burning heat, and fetid ichorous discharge, which, accompanied with intense pain, gradually consumes the parts, in a similar manner with the ulcerated cancer of the breast, may be truly denominated cancers, and appear externally often in many parts, without the neighbouring glands being at all affected at first. Of this kind are those which frequently appear on the lips and nose.—I have known a cancer of this sort destroy a lip without fungi, and gradually descend below the jaw to the salivary glands, which then became contaminated, ulcerated, and destroyed, before the pa-

tient's death; a case by no means uncommon, or unknown to surgeons.—I have seen one begin on the ala of one nostril, destroy the nose, and pass inwardly before it killed the patient.—I have seen a cancerous ulcer of this sort attack the side of the tongue, and gradually destroy it, and the neighbouring glands not sensibly affected until it was half gone; then the fauces partook of the calamity, and the salivary glands, and lymphatics in the vicinity, became swelled and cancerous, before death put an end to the patient's misery.—I have seen a cancerous ulcer begin in a woman of seventy, who never had been married, on the inside of the left labium pudendæ, consume part of that, eat its way into the vagina, destroy part of that, and reach the uterus, before it put a period to the patient's life.

I have seen an ulcer of this kind gradually destroy the penis of an old man from the glands to the root; yet while the ichor was corroding the corpora cavernosa

vernosa and urethra a fungus appeared on the stump of the penis, and continued like a cauliflower, notwithstanding the parts from whose surface it sprung were consuming, until it ended with the patient's life.—I saw a case of the same kind where it was judged necessary to amputate the diseased part to stop the ravages of the cancerous ulcer; but it was performed in vain: no digestion could be established, and no other discharge than the same kind of corrosive ichor ensued. The cancerous fungus sprouted again from the surface of the stump, and destroyed this man also.

Both cases had been thought to arise from a venereal cause, and had been treated with mercury accordingly, until the salivary glands gave evidence of the constitution's being impregnated with the mercury; a ptialism was kept up some time; but the disease growing daily worse under this management, soon evinced them to be cancerous.

I have not seen any similar cases to any of those lately; but if any offer, shall certainly try the effect of the hemlock bath.

SECTION VI.

WHEN strumous glands became scirrous, and that scirrus painful, I have always found that an early extirpation of the tumor by the knife was the safest, and consequently the best practice. And whenever this painful and neglected scirrus had degenerated into a cancer, that the same practice, the extirpation, was the only one that could safely be depended on. If the cancer had been from delay or neglect suffered to ulcerate, the operation then became a doubtful expedient; because, if the ulceration was of long standing, the acrid matter had probably been absorbed from it, and the whole habit, by the medium of the lymphatic system,

system, contaminated by it: and the cancerous matter being thus disseminated, it was impossible it could be eradicated afterwards; and the patient, after undergoing a very painful operation, would still be liable to this terrible disease. The evidence of the absorption of the acrid matter appears, by the successive enlargement which takes place in the lymphatic glands, first in the vicinity of the diseased breast, for instance; from thence extending in a chain to the glands of the axilla; and from them in gradation involving that system near it, in its way to enter the blood, to be spread all over the body by the circulating vital fluid. And in this extension of this baneful virus the other breast becomes also affected, and frequently ulcerated, in the same way as that wherein the disease first commenced. Therefore, whenever a chain of enlarged glands extends from the diseased breast to the axilla, and the lymphatic glands there are likewise increased in size, and become indurated,

rated, there is an end to every prospect of relieving the patient by an operation. The extirpation of the whole groupe, with those under the axilla, has, I am informed, been done; but the disease returned afterwards, and killed the patients: therefore he who would again be hardy enough to attempt such another operation, would not only put his patient to an unnecessary torture, by a fruitless and horrid operation, but would hasten the catastrophe of her dissolution, and deservedly bring disgrace upon himself, by performing an operation that must be unsuccessful. But when those glands are not become enlarged, nor hard, there is great probability that absorption of the acrid matter has not taken place; and, therefore, if the ulcerated knot is perfectly single, detached, and moveable, it may be removed with safety; and I have seen the operation under these circumstances attended with the most happy consequences.

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The ancient practice of destroying cancers by caustic applications seems to revive.—Reverius (ann. 1645) in *Observationes Communicatæ*, obs. xx. says, that the following application was used to a woman of fifty years of age, who was afflicted with a cancer in her left breast beginning to ulcerate, by a young foreign surgeon:

R Aquæ fortis ℥j. sublimati crudi ℥iv. falis ammoniac. ℥ij. arsenici ℥j. ponantur omnia in alembico et distillentur ad siccitatem, addendo aceti distillati par pulveri pondus: distilletur iterum acetum, donec materia ad pastæ consistentiam redeat.

This paste was applied on a pledget six times less than the size of the tumor, left upon it twenty-four hours, and produced an eschar six times larger than the pledget that was applied, and destroyed the cancer; and the ulcer, after the eschar separated, &c. incarnated and healed.—But he adds: It was worthy of observation, that upon the application of this remedy a fever was kindled, a vomiting and purging excited,

excited, and the secretion of urine was increased; which symptoms continued for two or three days, by the natural powers being irritated by the deleterious quality of this poison.

He also says, that the same remedy cured a cancer, which was eating away the ulcerated extremity of a soldier's nose.

Wiseman tells us that Guido used arsenic to destroy cancers. Wiseman, however, does not seem to follow Guido's practice, but relies on medicines, the properties of the best of which are doubtful, and the majority insignificant; but he uses a method fully as painful and severe as Guido's, the actual cautery, to destroy cancerous fungi.

Arsenic has been detected to be the basis of Plunket's famous nostrum for curing cancers, and also to be that of Guy: both of them disguised it by the addition of different materials.

Dr. Rush, of Philadelphia, gives an account, in his *Medical Inquiries and Observations,*

servations, of a caustic powder which he saw applied in ulcerated carcinomatous cases, by a Dr. Martin, who kept the preparation of it a secret, and said it was a vegetable composition, which he had learnt from the Indians. It was successful in some cases, acted as mildly as the lunar caustic, and destroyed the cancerous tumor to the roots, but did not succeed in scrophulous habits. Dr. Martin died in 1784, and his secret with him. Dr. Rush having procured some ounces of this powder from his administrators, discovered that its basis was white arsenic in powder; and that the composition seemed to be in the proportion of about one part of arsenic to forty parts of the brown powder with which it was mixed; which powder he supposed to be the root of the solanum lethale, the deadly night-shade. Dr. Rush thinks that Dr. Martin used the powders of different roots at different times; and is of opinion that these powders only served to divide and blunt the action of the arsenic,

senic, and that wheat-flour would do full as well for that purpose. But, with deference to his opinion, did not the narcotic powers of the solanum serve to render the parts torpid in some degree, and, therefore, less susceptible of pain from the caustic? Would not a portion of opium have answered this purpose also, without impairing the action of the arsenic? — Dr. Rush says further, that it had no effect if applied to skin that was whole; and when not ulcerated, he had reason to believe that Dr. Martin always broke the skin first with Spanish flies. He also says, that it seldom produced an eschar; hence it insinuated itself into the deepest recesses of the cancers, and frequently separated those fibres in an unbroken state, which are generally called the roots of the cancer. Upon this account he thinks in an ulcerated cancer it is to be preferred to the knife. Dr. Martin used also a liquor, in which he dipped a feather, and touched the parts sometimes with it: it had a white sedi-
ment,

ment, and Dr. Rush believed it to be a watery solution of arsenic.

Mr. Justamond used arsenic both internally and externally in cancers; but from the incurable palsy it produced from being taken inwardly, which ended in the death of one patient, and other horrid symptoms which it caused in others, he gave up the internal use of it. Externally he used an arsenical caustic, which he calls *magnes arsenicalis*, sometimes, which is a preparation of arsenic and antimony; sometimes one with a mixture of flowers of zinc and opium added to the arsenic; at other times arsenic alone; sometimes a composition of arsenic one grain, sulphur four grains, fused together with opium; and sometimes he mixed the arsenic with corrosive sublimate. He extracted the glands by those arsenical caustics; but confesses that arsenical applications have produced dangerous consequences in some cases, although in others they have done much service.

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He recommends flor. martial. made into pills, with mucilage of gum arabic, given to the quantity of two drachms of the flowers a day, in cancerous disorders, every where; speaks highly of the hemlock bath, and of the application of a certain liquid to the edges of the ulcers, by means of a hair pencil. This liquid is the panacea anticanerofa xaverii: he gives the author's preparation of it, which, after a long and most operose process, seems to possess little more virtues than brandy impregnated with martial flowers, or the sal martis.

Dr. Mosely's method of extracting cancers is this—If the cancer is not ulcerated on the surface, and especially in the middle of it, a blister must be first applied, to break the cuticle; then a piece of thin leather, of the size of the cancer, is spread with diachylon, with the gums: upon this is to be sprinkled a scruple (or more, in proportion to the size) of the corrosive sublimate mercury, finely powdered.

dred. This plaster is to be applied to the cancer, and to remain upon it forty-eight hours; but if there is any apprehension that it has not done its office in that time, it must remain longer. Then it is to be taken off, and a poultice of bread and milk and olive-oil applied, which must be renewed frequently, till the cancer comes entirely out by the roots: the part is then to be dressed, digested, and cured, like a common ulcer. A purge or two, with calomel, must precede the application of the caustic; nothing else is wanted, unless the patient is gross, and requires a cooling regimen. Bark, he says, is sometimes necessary, to forward the digestion and cure. He says, it is surprising to see how entirely the corrosive sublimate thus applied will separate the un-sound from the sound parts: and let the figure of the cancer be what it may, and its ramifications ever so numerous, the whole diseased part will be detached, and come away altogether, leaving the cavity

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clean, and free from the smallest remains of diseased flesh. This he calls extracting a cancer, and believes there is no other way of curing a genuine cancer except by extirpation with the knife. He tells us that arsenic will not produce similar effects; that he tried it indiscriminately by every mode of application, in consequence of the reputation it has undeservedly borne in cancerous diseases; that it destroys sound and unsound parts without distinction, wherever it comes in contact; that arsenic deadens the powers of life; corrosive sublimate tends to inflame and quicken the circulation. He condemns arsenic; thinks Justamond mistaken as to its specific effects in cancers; says that corrosive sublimate can be used with safety and benefit, but arsenic cannot.

I never saw any practice of this kind, and must confess that I would much rather rely upon removing the tumor by the knife, as the safest method. As, however, we can have no reason to doubt of the facts

affirmed:

affirmed by those gentlemen, this practice may be put in execution with advantage in the cases of timid females, who cannot be brought to consent to an operation.

Whenever the operation is to be performed it is of the greatest consequence, whatever method is adopted—whether the circular incision in the common way, or the single, or the double incision, including the ulceration, as practised by Mr. Fearon, in order to save the skin, and to heal it by the first intention, or any other method of preserving the skin, with a view to shorten the cure—to be particularly careful that every diseased gland or glandule, and every particle of thickened or hardened adipose membrane, should be removed, as upon this circumstance success materially depends; as the smallest morbid remains will soon re-ignite the disease, and destroy the patient. There can be no difficulty in removing a loose detached scirrhous gland, easily moveable in the cellular membrane, through a single incision made in the skin, and the parts

will readily unite in a short time. But in a large complicated morbid tumor, as a carcinoma in the conglomerate gland, the breast, it requires not a little attention to discover minute portions of diseased glands, or morbid cellular membrane, under a large loose flap of pendulous skin; and no small dexterity in the operator to remove all those, apparently insignificant, morbid matters. Frequently, I am afraid, it is not to be accomplished; and I am sorry to say that I have seen more than one instance where the disease has returned from this very circumstance, and destroyed the patient. For which reason, whenever the breast is large, and composed of many cancerous knots, I am induced to prefer the former methods practised by Sharp, Pott, &c. of removing the whole, skin and all, beyond where the suspicious appearances about the breast extend, at once; and although the cure may be protracted thereby, there is certainly a much greater prospect of the patient's safety. Yet after all the operator's caution, and the most flattering

flattering prospect of success, by the speedy cure of the wound, we have the mortification often to see the disease return after an interval of some months, or indeed of several years, with all its train of evils: and this always happens to subjects under the influence of a latent constitutional scrophula in the extreme, which an occasional stimulus may bring into action, and cause the disease: many instances may be adduced in proof of this, one very remarkable is related already, in page 67.

S E C T I O N VII.

MANY expedients have been tried not only to cure the curvature of the spine, after it was formed, but also to prevent distortions from taking place in weak scrophulous subjects. The chief of which were compression, swinging, slings to suspend the children by a bandage round the head, and by the shoulders: all which proved equally ineffectual, some

of them, as compression and suspension by the head, hurtful. The failure of every means which had been attempted, induced Monsieur Vacher, an ingenious Frenchman, to turn his thoughts to this subject; the result of which was the invention of a machine of which he has given an account in the *Mémoires de l'Académie Royale de Chirurgie*, tom. iv. accompanied with a plate. He therein describes its construction fully, and application, and has mentioned some cures accomplished by its use; but tells us, that the success depended upon its being employed in very young subjects, whilst the bones were soft, and had not acquired a perfect solidity: but that after the age of fourteen years no cures were performed; the patients, however, were prevented from growing worse by wearing it two or three years after that age. The principle upon which this machine acts is, the keeping of the head in an erect posture, and the spine in as straight a line as it naturally does, or as it possibly can admit of, in a diseased

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state; and in supporting the superincumbent weight of the head, shoulders, and upper extremities, from pressing downwards on the distorted spine, and increasing the curvature of it. And this he affirms may be effected by constantly wearing this machine, which can be done without any inconvenience, or preventing motion; and the young ladies can amuse themselves by working at the needle, music, writing, drawing, or dancing, with it on; and that it may sometimes be worn to advantage in bed. If it can be worn with so little inconvenience as he says it can, it might certainly be of material use to prevent distortion taking place in young scrophulous or ricketty subjects.

This machine has been lately improved by a Mr. Jones, an ingenious stay-maker, in London; who, as he informs us in his pamphlet, studied the anatomy of the parts with care and attention, in order to enable him to put his contrivance in practice with advantage; and I have learnt lately that some crooked subjects have reaped
benefit

benefit from it; but I have not heard that any account of its construction, or manner of application, has been made public.

One circumstance, however, strikes me forcibly, which is, that Monsieur Vacher's machine is fixed to the back of *le corset baleiné*, that is, whale-bone bodice, which only differs from stays by lacing before, and adjusted to the two haunches (*i. e.* spines of the ilia) by two small bags, well moulded to the shape of the parts, in order that they may rest in this place without uneasiness*. Probably Mr. Jones's machine is supported in the same way.—But as I have already noticed the dreadful mischiefs brought on by stays, and as those machines must be attended with some confinement, from the very bodice to which they are affixed, I must confess that I have my doubts as to their very great utility. And I must add, that

* “ *Le corset baleiné ne diffère des corsets ordinaires que parce qu'il doit être lacé par devant, et s'ajuster sur les deux hanches par deux petits sacs, bien moulés à la figure des parties, afin qu'il puisse appuyer dans cet endroit sans gêner.*”—Vide the above-named volume, p. 604.

It is clear (at least to me) that it is much easier to prevent an evil of this kind than to cure it; I am therefore firmly of opinion that a total abolition of stays, and consequently strait-lacing, and a light soft easy dress, adopted in their room, would be of more advantage than all the machinery that ever was or ever will be invented: and with the adoption of this light and loose attire, and the frequent use of the cold bath, to invigorate the system, that distortions of the spine would be wholly prevented, unless in such subjects as are unfortunately loaded with scrophula in the greatest extreme, and from thence labour under a general debility, a mollities ossium, and a hectic fever, incident to such constitutions; or are contracted by bad habits, as in sitting in one particular attitude, frequently for a considerable length of time, for instance, in working at tambour or other frames for embroidery or quilting; or from falls or other external injuries materially affecting the spine or ossa innominata.—I have only

to recal to the reader's remembrance the state of the peasantry of all nations, as well as those in this country; but more particularly to those nations supposed to be in a state of savage nature, where no restraints in dress are to be met with, and no distortions to be seen.—Dr. Rush, in his *Inquiry into the Natural History of Medicine among the Indians in America*, says: It is remarkable that there are no deformed Indians.—We may also suppose it to be the same with the inhabitants of the many islands lately discovered in the South Seas, as none of our voyagers have mentioned any thing of deformity amongst either the men or women of those several nations, but take particular notice of their being well made and well proportioned. And this circumstance was particularly remarked by Monsieur Vaillant, in his travels into the interior parts of Africa, from the Cape of Good Hope, among all the nations he conversed with, Caffres, &c. where the women were formed with the greatest symmetry and elegance: which

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was also observed by Mr. Bruce, among the Abyssinians and other nations he passed through, in his travels to discover the source of the Nile.

In the rapid growth of the tall scrophulous stripling, about the age of puberty, there seems to be a defect in the supply of that part of the nutriment which furnishes the principles of solidity to the bones, adequate to their hasty increment; and consequently there must be a softness, a morbid laxity in their texture, and hence the distortions of the limbs, which sometimes happen to those subjects, arise. To strengthen the tone of the system under those circumstances seems to be the principal object; and nothing here answers this purpose so well as a free use of the cold bath, moderate exercise, cool air, light clothing, with a full and nutritive diet.

In the treatment of the rachitis there are in fact two intentions of cure: the first is to remove the obstructions of the mesenteric glands, which, by preventing the
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chyle's entering the system, is one principal cause of it; and the second is, to strengthen the tone of the habit.

The first of these is generally answered by small doses of calomel frequently administered, and suitable purgatives after them. Some preparations of steel have been much recommended for this purpose, given in the intermediate days, and in particular the flor. martial. This medicine, as it acts chiefly by its tonic powers, comes rather under the second intention, and as a corroborant is a good auxiliary to the Peruvian bark; and as it is difficult to get children to take a sufficient quantity of this last remedy internally by the mouth, a strong decoction, with powdered bark in it, should be frequently used in clyster, and a jacket, with the powder quilted in it, applied next the skin will be found highly beneficial. But above all, the cure must chiefly depend upon a free use of the cold bath.

T H E E N D.

