**A treatise on the diseases of children / by the late Michael Underwood.**

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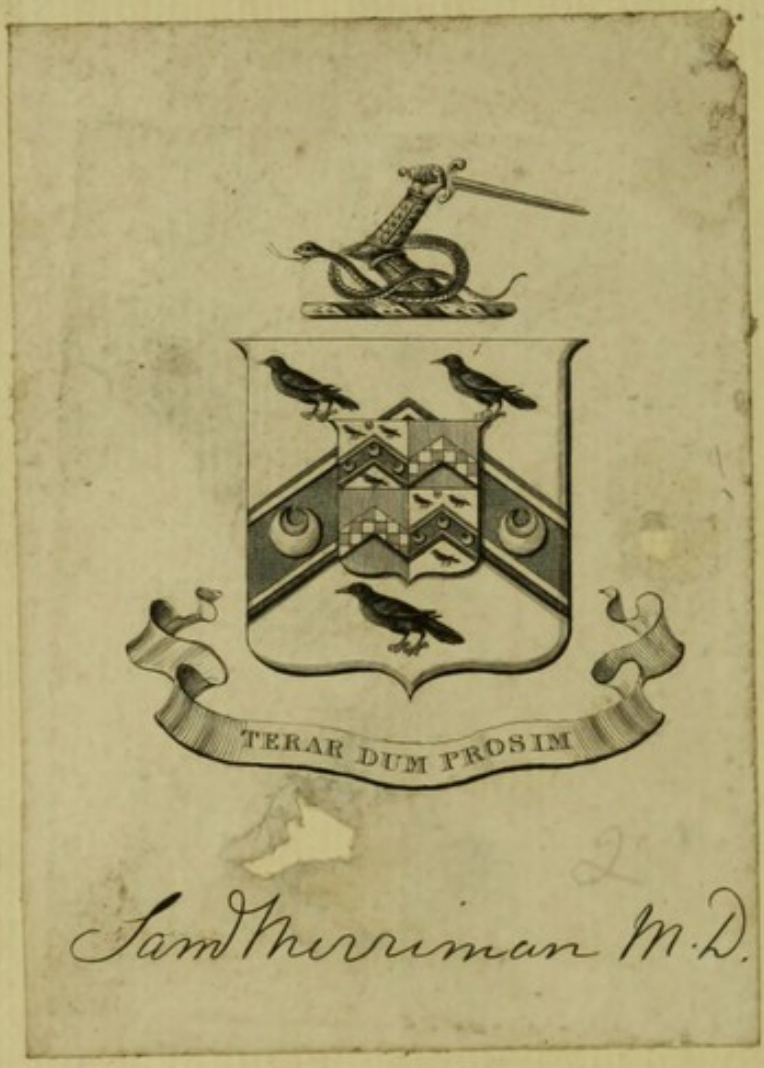


Sam Merriman M.D.

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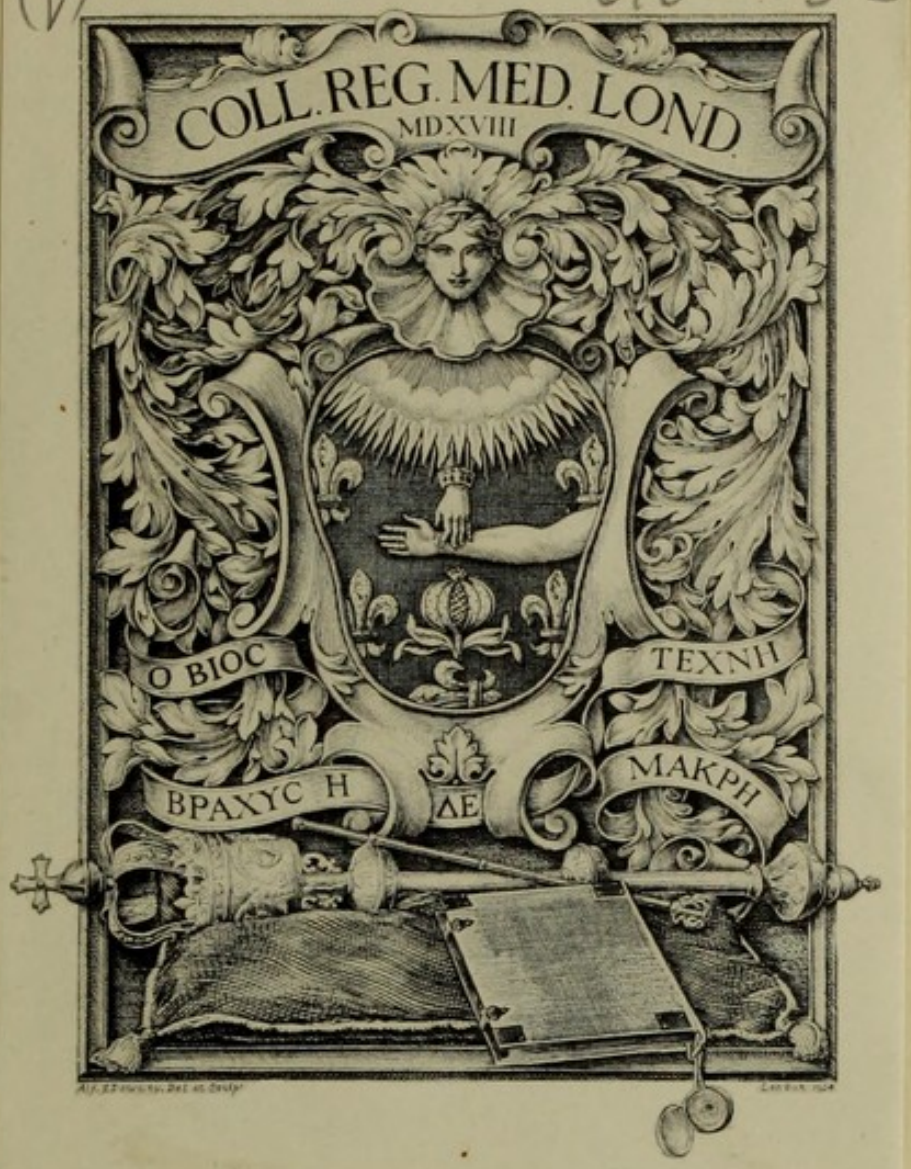

— fell Disease before his Time
Hastes to consume Life's golden Prime.

Warton.

Nascentes morimur, finisque ab origine pendit,
Ipsaque vita sua semina mortis habet. †

† Literary Gazette for 1827 p. 199. the two first Lines of the Tetrastick are

Aspice quam subito marcet quod floruit ante!
Aspice quam subito, quod stetit ante cadit! —

A

# TREATISE

ON THE

# DISEASES OF CHILDREN;

WITH

DIRECTIONS FOR THE

## MANAGEMENT OF INFANTS FROM THE BIRTH.

BY THE LATE

MICHAEL UNDERWOOD, M.D.

EIGHTH EDITION, REVISED,

WITH NOTES AND OBSERVATIONS,

By SAMUEL MERRIMAN, M.D. F.L.S.

CORRESPONDING MEMBER OF THE IMPERIAL AND ROYAL
ACADEMY OF SCIENCES AT SIENA.

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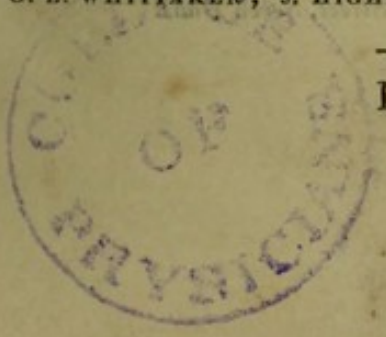
1827.



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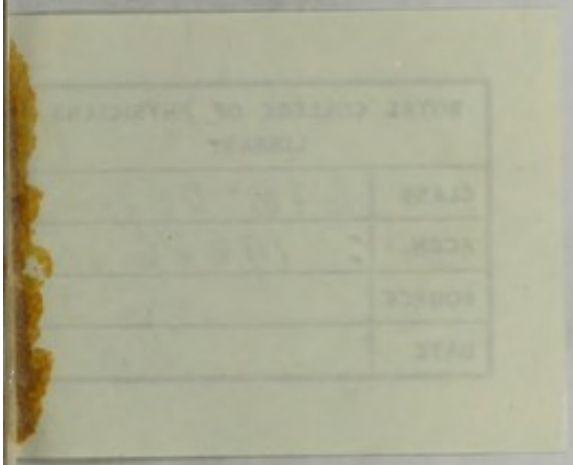

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# SHORT ACCOUNT

OF THE

# AUTHOR.

MICHAEL UNDERWOOD was born on the 29th of September, 1737, of respectable parents, who gave him a good education, by putting him to school, first at West Moulsey, and afterwards at Kensington.

Being intended for the Medical Profession, he was at a proper age placed with Sir Cæsar Hawkins, a surgeon of great eminence, who afterwards introduced him as house-pupil at St. George's Hospital, where he remained for several years, and he ultimately established himself as a surgeon, in Margaret-street, Cavendish-square.

It does not appear certain when he first began to practice Midwifery, but he did not confine himself to that branch of the pro-

fession in the early part of his practice, but combined midwifery with general surgery; and while thus practising, he was appointed surgeon to the British Lying-in Hospital. In 1783 he published a Treatise upon Ulcers of the Legs, to which were appended some Observations on Scrophulous Tumours, and on the Mammary Abscess and Sore Nipples of Lying-in Women, which work was well received, and passed through several editions.

In the year 1784, the Royal College of Physicians of London, having determined to institute a new class of Licentiates, under the title of *Licentiates in Midwifery*, Mr. Underwood was induced to obtain an honorary diploma constituting him a Doctor of Medicine, and he was then elected into this class of Licentiates, together with six or seven other distinguished practitioners of midwifery in London. Other physicians, confining their practice to midwifery, were from time to time received among the Licentiates in Midwifery by the College, but at

In this list were
Dr. Denman
Dr. Osborne
Dr. John Clarke
Dr. Poignand
Dr. Watts

length it was determined to admit no new candidates into this class, so that it gradually wore out; and Dr. Underwood having survived all his cotemporaries, his name was, for some years, the solitary "Permissus ad Artem Obstetriciam exercendam" in the College lists.

Soon after Dr. Underwood had become Licentiate in Midwifery, he was appointed one of the Physicians to the British Lying-in Hospital, and filled this office with great credit for many years.

In 1784 he published his first edition of the Treatise on the Diseases of Children, in one volume; and in 1789, a second edition in two volumes. In the subsequent editions, the work was swelled to three volumes.

Dr. Underwood's great skill as a Physician-Accoucheur, occasioned him to be more and more employed among persons of rank and consequence; and by the friendly recommendation of the late Dr. Warren, he had the honour of being employed to attend

the Princess of Wales, in the year 1796, when the late much-lamented Princess Charlotte was born.

Having been thus conspicuously brought into notice, his practice rapidly increased among the higher circles, and the road to great wealth seemed open to him. Unfortunately, however, a variety of domestic afflictions assailed him, and excited a high degree of nervous irritability; which, acting upon a frame naturally weak, produced a dreadful depression of spirits, and he became incapable of discharging the arduous duties of his profession. In the year 1801, therefore, he resolved to withdraw himself from all further practice, and to pass the remainder of his days in entire seclusion from society.

After several years of retirement, the melancholy state of despondency with which his mind had been overwhelmed was mercifully removed; and he was enabled to resume in some degree his professional duties, but never to any considerable extent.

From this period till the time of his death, which happened on the 14th March, 1820, his life appears to have been spent in tranquillity and pious resignation, and he continued to give advice to patients, at his own house, almost to the last day of his life.

The emoluments of his profession did not place Dr. Underwood in that state of worldly prosperity, which all who pursue their avocations honourably and diligently may reasonably expect. During the period of his seclusion, he was indebted to his Friends for the competency which gave him the few comforts he enjoyed; and at his death he left behind him a widowed daughter, with a very insufficient provision. To aid this afflicted woman, a selection of "Extracts from the Diary of the late Michael Underwood, M.D." was in the year 1823 published by subscription. These extracts consist of "Meditations, Critical and Practical Remarks on various Passages of Scripture, Miscellaneous Essays, and Oc-

casional Hymns ;" which exemplify his peculiar views and impressions of religion ; and to the remarks prefixed to this little volume, the Editor is indebted for much of the information which this brief Memoir records.

His Daughter received for some Years a Stipend from "the Society for the Relief of the Widows and Orphans of Medical Men in London and its Vicinity"

Dr. Underwood was a frequenter of the Lock Chapel and his religious Impressions and Ideas were those which are commonly called Methodistical. He had of course many Patients among this Class of Persons and was in the habit when attending such Patients to call the Family together as soon as his Patient was safely delivered, and kneeling down with them, of offering up thanks to the Almighty for his Merciful Assistance to the poor woman, and praying for his further Blessing upon her during her Recovery. Whether his religious feelings at home were ill directed, and his Children rendered thereby unhappy and uncomfortable at home, I cannot speak positively, but this has been an Opinion that I have heard given: however certain it is that his Children were a great Source of affliction to him and many of them turned out badly— one was a very dissipated young Man, in partnership with Mr. Lewis of Half Moon Street—

Dr. Underwood was a small delicate looking man, apparently ill adapted to undergo great Fatigue or Exertion. He had probably suffered much from ill Health in his Childhood.

I believe there is no engraved Portrait of him.

# PREFACE BY THE EDITOR.

The first edition of this Treatise on the Diseases of Children, was published about forty years ago by Dr. Underwood, whose reputation as an Accoucheur, and as Consulting Physician in all the complaints of Childhood, was very great. That this work, the result of much observation and experience, has proved a most valuable assistant to the Medical Profession, and to discreet and intelligent Mothers of Families, may be inferred, not only from the favourable manner in which it was received by his cotemporaries, and the frequent quotations from, and references to it, with which the pages of subsequent writers abound; but from the convincing fact, that it has passed through seven large editions in England, and has been repeatedly translated and reprinted on the Continent, and in America.

In 1819, the Author, far advanced in years, revised the last edition, which is now out of print; and the Proprietors, justly thinking that a work which had done good so long, might continue to be consulted with advantage, were desirous of publishing a new edition, and applied to the present Editor to prepare it for the press.

It may be laid down as a proper general rule, when the work of a deceased author is to be republished, that it ought to be given to the world, without any alteration of the sentiments or the text. In the present instance, however, the Editor thought himself called upon to deviate from this rule, as far as concerns the Author's language; which is sometimes so verbose and expletive, and sometimes so prolix and involved, as to render the perusal of the book irksome and unpleasant. Besides striking his pen through an immense number of such unnecessary expressions as "it is apprehended," "as has been said," "as hinted," "as noticed," "as I lately observed," "as I experienced only a

few months ago," "as I was told very lately," &c. &c. and an almost equal number of such nursery prettinesses as the infant's *little* mouth, *little* smiles, *little* tears, *little* bowels, &c. &c. which, tired by their redundancy, the Editor has, in many other instances, endeavoured to render the language more exact and clear; but though he has expunged many of these useless intruders, he has, in no instance, broken in upon the sense and meaning of the Author, but has preserved the opinions advanced by him on the Diseases of Children, with the utmost care.

The later editions of Dr. Underwood's Treatise, consisted of three volumes, the third of which was appropriated to Directions for the Management of Infants from the Birth, and other subjects, which seem naturally fitted to precede, rather than to follow, a Treatise on Infants' Diseases.—These directions are therefore now made the Introduction to the single volume; in which the whole of Dr. Underwood's work, with the exception of his Dissertation on the

Properties of Human Milk, is comprised. This Dissertation, written principally to controvert some opinions advanced by Dr. Joseph Clarke, of Dublin, in 1786, it has not been judged necessary to reprint. Nor has the Editor deemed it advisable to reprint some rather long controversial notes, which might perhaps have been spared when first inserted, and for the republication of which now, no good reason can be assigned.

It will not be thought extraordinary, that the opinions of the Editor should not always accord with those of the original Author. If the difference of opinion does not involve any material point of practice, he has not always thought it necessary to express dissent; but on other occasions, he has inserted in a note, what he considers to be preferable doctrine: and throughout the volume, the editor has marked with the initials of his name, the opinions and remarks for which he is answerable.

S. M.

*Brook Street, Grosvenor Square,*
*November* 16, 1826.

# PREFACE OF THE AUTHOR

TO THE

SEVENTH EDITION.

THE repeated and indulgent reception of former attempts to investigate the Diseases of Children, has induced the author successively to extend his original plan. And he hopes he may have so far succeeded, as to present the readers of this seventh impression with an ample and distinct account of them.

Besides something new in the form of the work, it contains several diseases never noticed before, as well as further improvements in the arrangement and description of others; together with complete *directions for the management of the Nursery*, to which is prefixed a dissertation on the nature and properties of human-milk, the result of repeated experiments; forming, it is presumed, a suitable introduction to that part of the work.*

If any thing at all important has been over-

* The Dissertation on the Nature and Properties of the Human Milk is now omitted for the reasons assigned in the Editor's Preface. S. M.

looked, it has arisen as well from the very recent occurrence of some new disease, as from a possible want of peculiar opportunities of information, which the writings or practice of others may, in some instances, possess. He has availed himself, however, of every advantage he could command; and is indebted to one or more friends for some valuable communications. He has at the same time endeavoured to avoid all unnecessary details and useless distinctions of diseases, as well as touching upon subjects foreign from the immediate design. Should the reader apprehend any little exceptions in this respect, he will readily perceive the inducement; and although the accuracy of system should somewhat be violated, it is presumed, it has only given way to motives of humanity and usefulness.

To this seventh edition, undertaken since his merciful recovery from a severe indisposition, that, in an instant almost precluded him for several years from any attention to business, due corrections and several additions have been made; and it is presumed that the work will be found, upon the whole, inferior to none of the kind that has appeared in this country, or in any other part of Europe: and has the credit of being the first that has investigated all the Disorders of Childhood. It has been asserted, indeed, by a learned and popular writer on the Diseases of Children, that the very formidable catalogue of

the complaints of childhood exhibited by some authors, seem to represent that period to be a state of Disease. Whether it be really such or not, it is not only universally acknowledged that a far greater number of our race dies under two years of age than at any other period, (as Dr. Armstrong himself has observed;) and afterwards, in a gradual proportion, to the age of eight or ten years;* but it can, with the greatest truth be asserted, that the author has made mention of no disease that he has not very frequently met with, excepting the few which have been expressly remarked as very rarely occurring. It is very natural, however, for a writer who wishes to notice only a very small number of the diseases incident to the state of childhood, to have it thought he has given a sufficient account of all that are worthy of notice. Perhaps one merit at least this multifarious catalogue of infantile complaints may be allowed to boast of, is the frequent recommendation of calomel, both in large and frequent doses, a medicine peculiarly

* It has been remarked, that the first month, and particularly the first day of the birth, is marked by the greatest number of deaths; so that out of 2,785 children who have died very young, 1,292 have expired the first day, and the rest in the first month; and from the account of births and deaths of the last year, it appears, that out of 19,705, 5,381 have died under two years of age; that is more than a fourth part of the whole.

useful in a great variety of children's diseases: that very valuable drug having never been advised by any other writer thereon to the author's knowledge, till it appeared in the first edition of his treatise; and will in the present, from an extended experience, be more strongly recommended than ever. It is now, however, not only come into general use amongst the ablest practitioners, but is more or less recommended by every late writer; and by none, that the author has examined while this edition has passed under review, nor so properly in what may be accounted very large doses, (often less likely to salivate than frequent smaller ones) as in an anonymous writer, a few years ago, in a small tract on the practice of Midwifery,* to which is subjoined the most sensible brief treatise on the diseases of infants the author ever met with; and were the terms of art and the prescriptions brought to the level of female readers, would present them with a far more valuable and concise Treatise for Domestic Use, than that by Dr. Armstrong, which has passed through vari-

* The work here alluded to, is *The London Practice of Midwifery*, first published in 1803. It is a surreptitious copy of the late Dr. Clarke's Lectures, taken by a pupil, who committed very gross mistakes in various parts, and in others made the subject quite unintelligible. The merits of the work have notwithstanding carried it through five editions, in the latter of which many of the mistakes and errors have been corrected.

S. M.

ous editions, and undoubtedly had the great merit of having led the van, and paved the way for the great improvements made in the treatment of the Diseases of Children; whilst the anonymous writer (probably from the want of longer experience) condemns the use of antimony* (so judiciously first prescribed by Dr. Armstrong) far too indiscriminately.

* The condemnation of antimony by Dr. Clarke, here animadverted upon, is thus expressed.—"In the *early* stage of bowel complaints in infants, no remedy is so useful as an emetic; and ipecacuanha is the best and safest emetic that can be given. Tartarized antimony is sometimes dangerous, and there are instances recorded, where children have died under its operation, even when given in very small quantities. In one case, two grains were dissolved in an ounce of water, of which half a tea-spoonful was given every quarter of an hour, till it produced vomiting, which when it took place, never ceased till the child died. Such violent effects never happen from ipecacuanha, two or three grains of which may be given every quarter of an hour till it vomits."

I have been induced to insert this extract, because my own experience of the occasional ill effects of antimonial preparations agrees with that here recorded. I have several times witnessed mischievous consequences from the indiscreet use of this remedy. The mode in which it is often directed to be given, is a very dangerous one. "Let it be given every ten or fifteen minutes till it produces vomiting," is a very common but very injudicious prescription. No emetic ought to be persevered in, if the child, after two or three suitable, or usual doses, does not cast its stomach, unless under the especial direction of some skilful practitioner. The indiscriminate use, formerly of antimony, and now of calomel, has been, and still is, productive of much evil. S. M.

Though the writer has taken the liberty of commending and censuring the works of others, he has done it with a good design, whilst he is perfectly sensible of numerous defects in his own, and relies again upon the indulgence of the public; though he hopes that, as this edition will be found more complete, it may be proportionably worthy of a continuance of that favourable reception, wherewith the former ones have been so generally honoured. Particular acknowledgments, indeed, are due for the approbation of the faculty: and the like candour, it is hoped, will accept the alterations attempted in the three preceding editions, to render the work appropriate to medical readers.

For the style in general, indeed, the author pretends to have but little to offer; though it is hoped, that many of the greater imperfections which appeared in the former editions are here done away.

Prompted by a laudable ambition of being useful in his generation, and leaving behind him something beneficial to posterity, in the only way he could attempt it, he is persuaded the benefit will not end here; but that others will be excited to perfect this long-neglected, but most important branch of the profession. It has, indeed, been universally lamented, that in no age has the study of the disorders of children kept pace with the advancement of science; nor have

the improvements in the practice of physic in the present century, produced as full and accurate accounts of them, as of the diseases of adults. Indeed, till of late years little more has been attempted than getting rid of the wild prejudices, and anile prescriptions of the old writers, which had served only to obscure the true nature of children's diseases In this attempt, however, and particularly in meliorating the practice, some of the best of the more modern writers have run into a contrary extreme, in not a few instances.

A very principal cause of the above-mentioned neglect, has arisen from an ancient idea, for a long time too generally entertained, that as medical people can have but a very imperfect knowledge of the complaints of infants, from the inability of children to give any account of them, it is safer to trust the management of them to old women and nurses; who, at least, are not likely to do mischief by violent remedies, though they may sometimes make use of improper and inadequate ones.

Futile as such objections most certainly are, they have, nevertheless, had considerable influence, and for a long time retarded a methodical investigation of infantile disorders. This defect has been noticed by successive writers, and particularly in a treatise written about fifty years since by Dr. Armstrong. It is aptly remarked by this writer, that the same difficulty occurs in

a variety of the most dangerous complaints of adults at every period of life, which confessedly require the greatest assistance; such are attacks of phrenzy, delirium, and some kinds of convulsions: to which may be added, all the disorders of idiots and lunatics. But these have been successfully treated in every age, not excepting even lunacy itself, and the melancholy subject happily restored to society, his family, and himself.

It has likewise been observed, that if infants, for the reasons above-mentioned, are to be ex cluded the benefit of a physician's advice, it is difficult to say at what age children may safely be intrusted to his care; since at the age of five or six years, they would frequently mislead the inquirer, who should trust to their own account of their complaints. Their ideas of things are generally too indistinct to afford us sufficient information, and they accordingly often call sickness at the stomach pain, and pain sickness; they will frequently make no reply to general questions, and when they are asked more particularly whether they have any pain in one or another part of the body, they almost constantly answer in the affirmative; though it afterwards frequently turns out they have expressed themselves carelessly; whilst adults with severe nervous and hypochondriacal affections, are full as likely to deceive the unexperienced practitioner.

To the former idea I will venture to add, that

although infants can give no account of their complaints in the manner we receive information from adults, their diseases are all plainly and sufficiently marked by the countenance, the age, the manifest symptoms, and the faithful account given by the parent, or an intelligent nurse. Of this the author is so confident, that he never feels more at ease in prescribing for any disorders, than those of infants, and never succeeds with more uniformity, or more agreeably to the opinion he may have adopted of the seat and nature of the disease. Every distemper may be said, in some sense, to have a language of its own, and it is the business of a physician to be acquainted with it; nor do those of children speak less intelligibly than those of adults.* Limited as is human knowledge in every department, there are yet certain principles and great outlines, as well in physic as in other sciences, with which men of experience are acquainted, that will generally lead them safely between the dangerous extremes

* In neither of these sentiments does the writer stand alone; Harris, of whose work Sydenham is thought to have spoken so highly, has said the same things—"Incertæ verò diagnoseos (quæ multum obtinuit) querela non tam a symptomatum defectu, quàm a preposterâ ac ineptâ medendi ratione ortum suum duxisse videtur."—(page 8.) And at page 3,—"Etenim asserere non verebor morbos illius ætatis generè paucissimos esse, et gradu tantum modó differe; imó curationem puerorum multó tutiorem ac faciliorem, quâm virorum ac mulierum."—*De Morb. Infant.*

of doing too little or too much; and will carry them successfully, where persons who want those advantages cannot venture to follow them.*—How far, however, this and other assertions of the author, are made out in the subsequent tract, he must submit to the judgment and candour of the public.

* Neque potest scire quomodo morbos curare conveniat, qui unde hi sint ignoret—Pertinet ad rem omnium proprietates nosse.—*Celsus.*

Is the Expression "apparently still-born" correct? a child is still-born when it is incapable of any motion. The stillness in this case is not merely apparent, but real. But this still-born child may by active means be brought to breathe and to live, tho it was still born; it was really still-born, it was apparently dead-born.

We might say of a very fine child, "he is a very fine boy now, but he was still-born", the apparently is not here necessary, but if spoken as of a dead-born, it would be necessary to say he was born apparently dead.

# INTRODUCTION.

ON

## INFANTS APPARENTLY STILL-BORN.

THE present Exordium is dedicated to the consideration of the state of apparently still-born children, and to point out the most likely means of their animation. And what I have here to offer is the result of an experience that has been attended with more success than might have been expected; at least from anything recorded by preceding writers.

I have, indeed, both at the Lying-in-Hospital, and elsewhere, met with many instances of children born with very little, and others without even the smallest appearance of life; some of whom have remained entirely destitute of any sign of it, for more than a quarter of an hour, and yet have been happily restored. I pretend to little or no skill in this business, not generally practised, and can scarcely guess to what to attribute this success, unless it be an unwearied assiduity and

perseverance in my attempts, whensoever there are no certain signs of death, till I conceive nothing is possibly to be expected from them. And this has so often succeeded, that I have been tempted to think its importance may not have been sufficiently attended to by every practitioner. I rest this presumption, not only upon some fortunate events where I have had little or no previous ground for hope, but where other practitioners had, in some instances, abandoned it. A certain steady perseverance in our attempts to preserve life, as long as the least hope may remain, is, indeed, not only a duty we owe to the public, but one successful attempt is an abundant recompence for many failures; especially, as I imagine we shall rarely fail whenever there may be the least positive ground for hope of a favourable issue.

As to the means, they consist only of warmth, clysters, stimulants, and, especially, blowing forcibly into the trachea.

The ordinary stimulants are the smoke of lighted brown paper, or tobacco; juice of onions; frictions with hot cloths, and with brandy; cold brandy poured on the thorax, and on the funis umbilicalis, where it is inserted into the belly; striking the nates, and the soles of the feet;*

* A very general excitement of nervous energy is frequently produced, by gently rubbing, and irritating the soles of the feet with a nail or tooth brush. S. M.

stimulating the nose, and pharynx with a feather, (drawing out the mucus that may present;) with every other similar means calculated to excite a strong effort, especially that of crying; to which, and a consequent free respiration, our attempts ultimately tend. On this account, I believe, no benefit is to be expected from stroking the blood along the funis, or immersing the placenta in warm water; the fetal life being extinct, the recovery of the child will depend on the blood passing freely through the lungs, which it cannot do till the child is brought to breathe freely and forcibly: the continuance of which also is never secure, till it begins to cry. To these ends, I have depended above all upon blowing into the trachea, through the mouth; which I am satisfied may be more effectually done by the mouth* of the assistant being placed immediately upon the child's, than by means of a blow-pipe; (although the air is, indeed, certainly less pure) at the same time preventing the return of the air before it has entered the lungs, by the fingers of one hand placed at the angles of the mouth, and

* Perhaps the warmth imparted to the lungs of the infant by the breath of the operator, may be the means of rendering the vitiated air, thus thrown in, more efficacious than the more pure, but colder atmospheric air would prove. The objection frequently made, that it must be wrong to breathe into the the lungs of a still-born infant from the mouth of the attendant, because the air is contaminated, is certainly shewn by experience to be invalid. S. M.

those of the other on each side of the nose. But I have sometimes imagined that I might attribute much of my success not only to the continuance of this, but to the manner of doing it: by attempting to imitate natural respiration, by forcing out the air I have thrown in, by a strong pressure against the pit of the stomach; thus alternately blowing in, and pressing out the air, for a long time together, omitting it only now and then, to make use of some of the above-mentioned means. I believe, however, that these means can do very little to insure the life of the child, until it begins not only to gasp, and that with shorter intervals, but also to breathe in a somewhat uniform manner. At this time, should the child not be disposed to cry, which is frequently the case, nothing seems so likely to succeed as a tobacco,* brandy and water, or other very stimulating clyster; or putting a little Scotch snuff, or other pungent powder, up the nose; which latter, if they induce sneezing, will soon be followed by a strong cry, and the child be with certainty restored.

Amongst other means, that of warmth is very essential, to which end, the infant should be entirely covered with very hot cloths, which should

* Tobacco clysters so often produce syncope, that it seems extraordinary they should be recommended in such a case as this. All direct sedatives, of which tobacco is one, are likely to be prejudicial in this state. S. M.

be renewed as fast as they become at all cool; or the body may be immersed in a tepid bath of salt and water, or milk, and be well rubbed all over: the cord may likewise be suffered to bleed a little, especially if the face or body do not soon acquire the natural colour—but this ought seldom to be done, nor ought the funis to be divided as long as any pulsation is to be felt in it.*

To these means may be added the cautious use of electricity, which appears as likely to be successful in these, as in most other cases to which it has been applied, but I have never been in a situation to make trial of it in time, or I certainly should; as I once knew a child happily recovered by it, after being laid out for dead for near two hours, in consequence of a fall from a two pair of stairs window.

The very great success of the means recommended by the Humane Society, in restoring life to drowned persons, after two or more hours have elapsed, may be advanced as a further in-

* I have never found it beneficial to let the funis bleed, except in that particular case of incomplete animation, where from long continued, or very great sudden pressure, the face and head are tumid, dark coloured, and overloaded with blood; where the pulsation in the funis is heavy and oppressed; and the heart is labouring to maintain the circulation. Under these circumstances, to let the funis bleed to the extent of two or three table spoonfuls, is good practice; otherwise it is not expedient to divide the funis, as long as the circulation between the child and the placenta continues strong. S. M.

ducement to steady perseverance in the plan proposed. For if an infant be not born positively dead, it is well known that the vital spark, though long dormant, may be roused into action: and the living principal, if respiration be promoted, will extend its influence through the animal frame, nor will fail to support itself, if no vital part has been injured in the birth.

But should these several means fail, as a last resource, a very different kind of stimulant may be tried, and instead of laying the infant aside in a warm flannel, it should be exposed to sudden and severe cold; which, I remember, in one case succeeded, after the life of the child had been entirely despaired of. Mr. Herbolt, of Copenhagen, has conceived that many infants perish from the trachea being filled with water; and that infants in these circumstances might in general be saved, by placing them in such a position, that the water should run out.*

I shall just add, that, amongst other symptoms supposed to prove that the child may have sus-

* Before any attempt is made to expand the lungs of a child by breathing into them, whatever mucus or fluids may be in the mouth or fauces should be removed. This may be effected by passing the little finger, covered with a fold of a handkerchief or soft napkin, into the mouth, and wiping away what may be there collected. This should be repeated occasionally, as fresh mucus may accumulate, after the lungs have been made to expand and expire. S. M.

tained irrecoverable injury in the birth, is that of a discoloured and often fetid, or bloody water forcing out of the nose, after the lungs have been two or three times artificially inflated. Under these circumstances, however, I have succeeded in two or three instances so far as to animate children sufficiently both to breathe and to cry; though they afterwards lay in a moaning state for four or five hours, and then expired. To succeed thus far, indeed, if I am rightly informed, may prove of importance, where the course of a family estate may be pending on a living child. I have however, been fortunate enough to succeed more completely under the most unfavourable circumstances, and, in one instance, after a great quantity of discoloured mucus, and something like meconium, had been forced up both from the throat and nose, restored an usually large child to life.

It will be presumed, I dare say, that the above scrupulous attention is not designed to be inculcated in every instance of apparently still-born infants; but where the death of the child may not only not be certainly ascertained, but there has previously been reason to expect it would be brought alive into the world, every possible exertion should be made and persevered in. The great importance, however, of the subject, it is hoped, will be a sufficient apology with most readers for the length of these directions; and as

the attempt to restore infants to life has always been a most pleasing employment to myself, the desire of being an occasion of inducing others to a perseverance in the use of the like means, emboldens me to risk the censure of any who may deem it prolix or superfluous.

A

# TREATISE,

*&c. &c.*

## DIRECTIONS FOR THE MANAGEMENT OF INFANTS FROM THE BIRTH.

### *On Dry Nursing.*

AMONGST the multifarious matter brought forward in the following pages, the aliment most adapted to infancy is one of the first importance. Previously, therefore, to treating of Diet more extensively, and the General Management of Children, I shall enter into a discussion of the case of infants intended to be reared without the breast, or brought up, as it is termed, by *hand*,—a subject esteemed to be of the first importance by writers and practitioners in every age.

An attempt to set forth all the improprieties of this mode of training up infants from the birth, would carry me altogether beyond the limits I have assigned to the work. It would be unpardonable, however, in a work of this sort, not to insist how inadequate every substitute for the breast has been universally found; and therefore

how proper it is, that every child should be suckled, and always by its own mother, where her health can safely admit of it. Reason, instinct, experience, all conspire to support this opinion; and whoever will determine to attend only to matters of fact, may soon be convinced of it.* Nature herself points it out: all the nobler part of the irrational creation is qualified for it, and by instinct obeys—the human race alone, possessed of nobler powers, and rational discernment, perverts those faculties to evade its dictates, and to invent excuses for refusing its claims. But puerile, indeed, are all arguments against it, in the greater number of instances; and herein Dr. Armstrong† seems to have egregiously erred; for though, apparently, an advocate for suckling, he has laboured for arguments to apologize for the spoon and the boat, in too many instances.‡ It were easy, perhaps, to produce as

* The duty of suckling has the sanction of almost every writer, as well as of many persons of rank; and is distinctly noticed in the remote times of Pliny. Van Swieten remarks, that one of the Queens of France suckled her own son, and continued it even during a fever. One of her ladies, however, having, on some occasion, given the child her breast, the Queen was so much disgusted at it, that she forced her finger into her son's mouth to excite vomiting, unwilling that it should receive any nourishment but from herself.

† Rules to be observed in the Nursing of Children, with a particular View to those who are brought up by hand, 1777.

‡ I do not recollect to have seen anywhere such good directions for bringing up children by hand, as those published in a little volume, entitled, "Advice to Young Mothers on the Physical Education of Children. By a Grandmother." [1823.] They are much more appropriate and judicious than those of

sound arguments against eating more than once a day, because so many people become diseased from excess. On the other hand, a new and very rational argument in favour of breast-milk, is advanced by Mr. Moss, who observes, that the gastric juices of every animal may be supposed to be the best suited to act upon its respective milks.

But not only is the breast-milk the only natural,* and most proper food for infants, (*experience* demonstrating no artificial one to be equally easy of digestion and nutritious), but suckling

Dr. Armstrong; but neither the Grandmother, nor Dr. Armstrong, nor any other of the advocates for *dry nursing*, seem to be aware of the great fatality which attends the attempt thus to rear children. It has been a part of my duty to endeavour to ascertain the amount of mortality among infants from this source; and after much careful inquiry and investigation, I am convinced that the attempt to bring up children by hand, proves fatal, *in London*, to at least seven out of eight of these miserable sufferers; and this happens, whether the child has never taken the breast at all, or, having been suckled for three or four weeks only, is then weaned. *In the country*, the mortality among dry nursed children is not quite so great as in London, but it is abundantly greater than is generally imagined. The summer is the most favourable season for making the attempt; but if parents were fully aware of the hazard to which their children are exposed, in the endeavour thus to bring them up, they would rarely choose to place them under the care of the dry nurse. S. M.

* In some very northern parts of the world, as those of Greenland, and the neighbouring country of the Esquimaux, the breast appears to be, in the strictest propriety of speech, the *only* food that nature has provided for infants; insomuch that, whenever a suckling mother happens to die, her infant is buried with her; experience (one would hope) having de-

conduces likewise to the easy recovery of the mother, though she should not be able wholly to support her child by the breast, nor to continue suckling so long as the infant may require it. But though, from much experience, I venture to give this opinion, I do by no means intend to assert that every mother is able to suckle her child, even for the month, or would do well to attempt it; but I am, nevertheless, equally satisfied, that many are very well able who do not; and that several, who have only through fear been discouraged from doing it in two or three lyings-in, having afterwards been prevailed upon to make the attempt, have gone on with it several months, enjoyed *better* health when they suckled than at any other part of their lives, and their children have thriven perfectly well. Art and management will likewise afford some assistance, when the natural constitution alone may not be fully equal to the task. In this view, besides a suitable diet, air, exercise, and a regular manner of living, I will venture to recommend cold bathing, especially in the sea, if the season of the year should permit; and this not only from my own experience, but that of the writer just quoted, who asserts that it is often found particularly useful in restoring the strength, and increasing the milk in nurses of a weak constitution; adding, that it can never do any harm to a woman merely

monstrated the inefficacy of the hard and coarse diet which nature has there so sparingly dealt out, it is esteemed an act of compassion to put an end to an infant's sufferings by plunging it into the sea.

as a nurse, where no other reason, independent of that situation, forbids it. The principal caution necessary, being, not to bathe too frequently; more than twice, or at most three times a week, being often injurious to delicate habits.

Thus, besides the advantages derived to infants, it appears that there are others resulting to the suckling mother, and some deserving a further notice. For by this means, where due care is taken, painful inflammations and suppurations in the breast may often be prevented, as may be fairly concluded, not only from the rarity of such complaints in the British Lying-in Hospital, where almost every woman suckles her infant, but from the like authority of Dr. Nelson, who reports, that "out of 4,400 women who suckled their children, only four had milk-sores, and that these had either no nipples or former sore breasts." It has likewise long been suspected, and of late years more generally imagined, that some of the worst fevers, and more rare ill effects of child-bearing, may be prevented by suffering the milk to flow duly to the breasts, and be freely drawn from them, though only for the month. These advantages, one should hope, might tend to induce ladies of rank to set a general example, by performing this kindest and most pleasant office, at least during the month.* But it would be

* I cannot agree in opinion with Dr. Underwood, that it is right to recommend ladies to suckle, "though only for the month," if they do not intend, or have already determined not to persevere in performing that office. On the contrary, I think, if they are to suckle their children "only during the

unjust not to add, that whenever they may purpose to assume it for a much longer time, they should determine to do it effectually, or they will but injure their children, as well as forfeit many of the advantages and comforts which, in a due execution of it, they would have a right to expect.

For a long time, however, writers have successively complained, that notwithstanding the many encouragements often brought to the ears,

month," that it is better, both for themselves and their infants, who, under these circumstances, are never half suckled, not to make the attempt for that short time.

The first month of suckling is confessedly attended with more of uneasiness and suffering than is afterwards felt; indeed after the first difficulties are overcome, this duty is accompanied with sensations of the greatest pleasure and delight; and it seems cruel to require of the mother to undergo all the trouble and pain of suckling, when she is to be debarred of all its pleasures.

But we are told, "It has long been *suspected*, and of late years more generally *imagined*, that some of the worst fevers, and more rare ill effects of child-bearing, may be prevented by suffering the milk to flow duly to the breasts, and be freely drawn from them, though only for a month." If this be only suspected and imagined, much dependance cannot be placed upon the opinion. As regards the mammary abscess, I have much more frequently witnessed its occurrence, when the mother has attempted to suckle for the month only, than when she has altogether declined putting her child to the breast. Certainly, if the mother is not to nurse her babe, particular care ought to be taken to guard against fevers, and other ill consequences, and with such care, they are not much to be dreaded. The suckling of an infant is too serious a matter to be played with; and if there be not a reasonable hope that the mother will be able to perform this duty completely, she had better at once resign the charge. S. M.

and urged upon parents, the tyrant, Fashion, has prevailed over the good sense and natural feelings of many, whose maternal affections can be, in no other instance, suspected. There are honourable exceptions, however; and it is with great pleasure that I have been able to observe, in the later editions of this work, that ladies of rank are every year becoming converts to this maternal duty, and are proud of supplying their offspring with that new nourishment, wherewith nature has purposely endowed them.

Another important and affecting consideration might be brought forward on this head, which I shall, indeed, only touch upon, as it calls rather for the pen of the moral philosopher than of the physician; I mean the sacrifice which poor women make in going out to suckle other people's children, the sad consequences* of which are often severely felt by their own, through neglect or mismanagement, and especially for want of

* It is indeed a lamentable reflection, that there should be such a sacrifice of health and life among the children of those women who hire themselves out as wet nurses. Dr. Clarke, in his "Commentaries on Children's Diseases," speaking of the prodigious mortality among these children, says, "In some families six, in others eight wet nurses had lost their own children." If ladies who employ wet nurses were, in commisseration of the sufferings of these unhappy infants, so far to interfere in their behalf, as to insist upon having them placed out under the care of sober, cleanly persons, and in open, airy situations; and especially if they would refuse to take a woman whose child is very young, unless a wet nurse were procured to suckle it, they would be the means of preserving many lives, and of preventing much of lingering sufferance to these poor victims. S. M.

the breast. Indeed, no attention of the nurse can duly compensate this loss, as only the most common substitutes for it can, in their forlorn circumstances, be allowed them. This has become a source of evil that, I fear, has not been sufficiently thought of, and has led to the sacrifice of many infants every year; a matter of serious importance, indeed, to the public, as well as to the families immediately concerned.

It gives me real concern to find occasion for the least unpleasant reflection upon any part of the sex I so much honour, and upon any of my fair and sensible countrywomen in particular; nevertheless, I cannot help suspecting, that wherever any neglect of parental duties may exist, whether in regard to suckling, or superintending the management of their children,* that does not arise from want of health, or some equally warrantable excuse, it can be charged only on the corrupt depravity of the age, which insensibly corrupts the taste, and perverts the judgment of many who wish to do well; and depravity of manners, when

* This has long been the case amongst the lower class of people in France; and that nation, therefore, has been very much indebted to the goodness of the late monarch, who to the last was making solicitous inquiries through Europe to discover the best substitute for the breast.* Should the method recommended in the subsequent pages, be, amongst others, adopted, its claim will soon be determined; and I venture to hope, will yet be to the advantage of the rising generation in that kingdom, and elsewhere.

* See Questions proposed to the Royal Society of Medicine in Paris, October 1789, by the late King's authority.

once become general, has ever been considered as the leading symptom of a falling empire, and ought to be pointed out, as far as it extends, by every friend to the community, at whatever hazard of giving offence, in every conspicuous instance of it. Tacitus complains of the degeneracy of Rome in his days, though by no means its most degenerate era, lamenting that, while in former times grave matrons attended to their children as their first family concern, they now, says he, intrust them to the care of some Grecian girl, or other inferior domestic. It is no small satisfaction to me, however, to observe, that in this country there has been no ground for much complaint on this head, and that the evil is annually diminishing; there are also examples of the first magnitude of a nobler conduct; and one at the head of all, which, were it copied without exception in domestic life, would prove the glory of the present day, and a blessing to the rising generation.—May the time hasten when it shall be universally followed by *her* inferiors,* whilst I attempt to point out, as far as my observation has extended, the most prudent mode of executing this important branch of female duty.

It may not be amiss, at the opening of the ensuing observations, to remark, that the demand for the multifarious directions here offered, as well as all those given by other writers on the management of children, arises from the false reasoning

* It is scarcely necessary to say, that the Author here alludes to the late exemplary Queen Charlotte, to whom he was permitted to dedicate his treatise. S. M.

of those to whose care the infant-state is frequently intrusted; who, instead of being guided by the sober dictates of nature, have adopted the rules of art, falsely so called, or have followed the wild fancies of anile superstition.

On the other hand, the various tribes of the irrational species act in a thousand instances more prudently than we do; and, being uniformly guided by instinct, are led implicitly and safely through all their operations. Many quadrupeds, fish, fowls, and even reptiles, seem to know what is proper for them as soon as they come into existence, and have strength sufficient to reach after it. In other instances, they are guided by the parent, who seems to adjoin some degree of knowledge acquired by experience, to the instinct with which it is endowed; and gradually leads on its young to imitation, whether it be to eat, to swim, or to fly. Man, on the contrary, designed to be the pupil of observation, has scarce any innate discernment; and consequently his infant race pass through a long period utterly helpless, alike divested of ideas to guide, and of strength to manage for themselves; but to the parent is imparted both, whose province it is to judge for them, and actually to put into their hands or mouths whatsoever they may stand in need of. When the parent, therefore, forsakes the paths of simplicity, and lays down arbitrary rules, the result of false science, instead of patient experience, or mistakes the clamour of fashion for, or prefers it to, the voice of nature, confusion and disease must be the unavoidable consequence.

Awakened by these, man is loudly called upon to return to the simplicity of nature, and the result of dispassionate observation. To lead to this, will be a principal intention of this work, wherever danger and deviation are connected; assured that the experience of the most judicious and successful practitioners will applaud the design, and confirm the generality of the following observations on

*The General Management of Infants.*

To this end let us imagine an infant just born, who, at this moment, calls for our best attentions. And first, it may be observed that it ought not to be exposed to any thing that may violently or too suddenly affect the senses; on which account Moschion and Albinus, have well advised, that it should not be exposed either to great heat or cold; not to a strong light, nor odours of any kind, however grateful to adults; the unpleasant effects of which are sufficiently manifested by the infant itself. It is hoped I may be allowed in this place, to introduce a caution on the too early attention to mental improvement, which is, more frequently than seems to have been imagined, essentially injurious both to the bodily health, and future progress of the mental powers; and I have myself known one or more decided proofs of its inducing a confirmed fatuity.

The attention will next be called to the washing and dressing it, together with other little offices

suited to the occasion; and this first washing is of more importance than is usually imagined, being amongst the *little* things which are often overlooked by writers and others, and by some thought of no consequence;* but it is not every little thing that may safely be neglected, or carelessly done. In regard to poor people especially, and infants born in hospitals, and other crowded apartments, the importance of proper washing is greatly increased; the foulness left upon the skin being a remote cause of some dangerous epidemic complaints.† Some infants also are covered much more than others with a thick, viscid matter, which cleaves so firmly to the skin, that it is not easily washed off. There are, however, many reasons why this should be done; and one very sufficient reason is, that the presence of this foulness is likely to obstruct perspiration, which can never be duly performed where the skin is left anywise foul. On this account nurses should be directed to be very attentive to this first concern of their infant charge; and whatever wash‡ they may make use of, it should always have soap in it, and the child be well rubbed and cleansed, especially under the arms, in the hams, and groins, where this mucus is apt to adhere:

* Dr. Hamilton.

† See Baumes on the Jaundice and Mesenteric Fever.

‡ A mixture of soap and water, with the addition of a *small quantity* of brandy or any other kind of spirit, appears to remove this viscid, tenacious scurf more readily than any other wash. It should always be of a pleasant warmth as to temperature. S. M.

and to this end it would be better that no pomatum should be made use of, or other grease, which tends to stop up the pores, and prevent perspiration. In the same view it were well if it were a common practice to repeat the washing for two or three days, with light friction of the skin; which it is not improbable might tend to prevent the red gum, and other similar affections of the skin, with such other complaints as may arise from the suppression of insensible prespiration.

After a little time, and sometimes on the next day, most nurses wash a child all over with cold water; a practice highly extolled by Dr. Armstrong, as well as many other practitioners; but though no one can be a greater advocate for every thing that is bracing than I am, I cannot approve of this substitute, as it is called, for cold bathing. The cold bath acts on a quite different principle, and is so very beneficial, that I could wish almost every child, especially those born in London, were bathed at three or four months old, (provided they be not costive, nor feverish* at the time, have no internal obstructions, nor the season of the year be improper) which I am certain would remove, or perhaps prevent, many of their

* That Dr. Underwood's strong recommendation of the cold bath should have greatly influenced many mothers and nurses to employ it, cannot be doubted. It is to be feared that, on many occasions, the rule he has laid down has been remembered, while the very important exceptions have been overlooked or forgotten; and the consequence has been, too often, the abuse of a beneficial practice. So many instances

complaints.* But to see a little infant of a few days old, the offspring, perhaps, of a delicate mother, who has not even strength to suckle it,

have occurred, within my knowledge, of cold bathing, improperly and injudiciously adopted, having been productive of serious ill effects, that I should ill perform the duty of an editor, did I not caution my unprofessional readers to be extremely circumspect, before they adopt the use of so powerful an agent as the cold bath, not only as regards infants, but children farther advanced in life. S. M.

* Mons. Le Fébure de Villebrune, in his translation of this work into French, has added a chapter upon *baths*; in which he highly extols the warm bath, and as strongly controverts the idea of the probable good effects of cold bathing, and even makes use of a long chain of arguments against it; deduced, indeed, from an ingenious theory, and supported by quotations from the ancients, who practised, however, in a very different climate. The shortest, and perhaps the best reply to this specious reasoning, might be given in the well-known mode of Diogenes to Zeno, whose metaphysical arguments against the possibility of motion Diogenes laconically refuted, by hastily getting up, and walking across the school. We have, in like manner, only to point to the numbers of children and young people, who, from very weakly infants, have been rendered strong and healthy, merely from a prudent use of the *cold bath*; and may defy any man to produce the like instances of its opposite effects, when made use of with the cautions which every powerful remedy requires. The Spartan women, likewise, afford us sufficient evidence of the salutary effects of cold bathing, notwithstanding the comments made upon the women themselves, by Aristotle, as quoted by our author.

So great, and oftentimes surprizing, indeed, are the good effects of cold baths, that I do not wonder the priests, in times of ignorance, have been known to account them holy, and dedicate them to some saint, to whose influence certain cures were attributed.

The salutary operations of the cold bath are, however, easily accounted for, from its promoting insensible perspiration, and

washed up to the loins and breast in cold water, exposed for several minutes, perhaps in the midst of winter, (when children are more liable to dis-

rendering that excretion less readily affected by the impression of external air.

It may be known to agree with children, when they come out of it warm and lively, and their strength increases on the use of it. On the other hand, if they continue cold, are dispirited, and seem rather to lose strength, it will be as certainly prejudicial.

As a means, however, of acquiring that re-action and glow, which bathing is designed to effect, a loose flannel chemise may be thrown over the child the instant it is taken out of the bath. This will not only secure from the unpleasant shock arising from the cold air, but allow time for friction along the course of the spine, which should be continued all the while that an assistant is employed in wiping the lower extremities, and putting on their usual covering. If this were duly attended to, I am persuaded that both many infants and adult persons would be benefited by cold bathing, who, for want of that kindly glow, are unable to bear even bathing in the sea.

But I must observe, that the above-mentioned unpleasant effects are frequently owing to an improper use of bathing, and for want of making a very obvious discrimination in the habit of body of different children.—For the tender and delicate, not only should a good quantity of salt be put into the bath, but the water may also at first be a little warmed, and children be brought only by degrees to endure it quite cold, which they will not by this means be the less likely to do; or, should the water never be perfectly so, (but merely below the heat of the skin) the advantages of such bathing, will, nevertheless, be considerable; though the late Dr. Hunter and others, have thought differently. For it is not, indeed, merely from the coldness of the water that the benefit arises, but rather from the subject being immersed into a very different medium, in which the contact of the external air is taken off during the immersion, and is as suddenly restored on his being taken out. By this means the blood is alternately pushed forward into the

ease than those born in summer) itself in one continued scream, and the fond mother covering her ears under the bed-clothes, that she may not be distressed by its cries, has ever struck me as a piece of unnecessary severity ; and savours as little of kindness, as plunging an infant a second or third time into a tub of water, with its mouth open and gasping for breath, in the old-fashioned mode of cold bathing ; both of which often induce cramps and pains in the bowels, and weakness of the lower extremities, but rarely an increase of the strength. It surely must be proper, in winter time at least, to use moderately warm water for the general washing ; and all that is required with cold water, is to wash or sponge those parts with it, where any acrid discharge is likely to produce galling or excoriation.

extreme vessels, and suddenly repelled to the heart, (in proportion to the coldness of the water and the powers of the system) and suffers an advantageous attrition against the sides of the vessels. The small passages are rendered pervious, and the contractile power of the heart is increased, as well as the muscular fibres proportionally strengthened. The salt added to the water pretty certainly prevents taking cold, whilst it adds to the stimulus on the skin, and has, therefore, a more salutary operation on the pores.

The infant, having been put quite under water, should be taken out as soon as it is possible. It should be received in a blanket, and wiped dry with a cloth in the most expeditious manner ; and, as soon as it can be dressed, should partake of such exercise as may be best suited to its age. There will need no great attention to its being made perfectly dry, as a child will be less liable to take cold from a few drops of salt water being left upon it, than by being long uncovered in some parts of its body, in an over-caution to wiping it dry.

### *On the First Clothing of Infants.*

Upon the first sight of a new-born infant, every one is struck with the idea of its weakness and helplessness; and we often take very improper methods of strengthening it. It is *designed* to be weak and tender in this infant state, as is every other object around us.* Take a survey of nature, from the first opening leaves of the vernal flower, or the more delicate foliage of the sensitive-plant, to the young lion or the elephant; they are all, in their several orders, proportionally weak, and cannot exist without some exterior support: but they stand in need of nothing but what nature has prepared for them. If seed be cast into a proper soil, it wants only the surrounding elements to ensure vigour and maturity. So, if the tender infant be born of healthy parents, and at its full time, it is usually sufficiently strong; proper food and nursing (with ordinary attentions to screen it from the extremes of heat and cold) are the elements whose fostering influence it requires: if it have these, it will need nothing more.

It is true it is very weak; but is it therefore to be tight rolled, under the idea of supporting it,

* Nous naissons foibles, nous avons besoin de forces; nous naissons dépourvus de tout, nous avons besoin d'assistance; nous naissons stupides, nous avons besoin de jugement? tout ce que nous n'avons pas à notre naissance, et dont nous avons besoin etant grands, nous est donnè par l'education.—*Rousseau.*

and giving it strength? It is a bundle of tender vessels, through which a fluid is to pass uninterrupted, to be equally distributed through the body, and which are therefore surrounded by a soft medium, predisposed to yield to the impetus of their contents. Hence we cannot but conceive how injurious any great pressure must be to so delicate a frame, which before birth swam in a soft fluid. But besides this, the infant requires freedom and liberty on other accounts; the state of infancy and childhood (as Dr. Gregory observes) is impatient of restraint in this respect, through "the restless activity incident to youth, which makes it delight to be in perpetual motion, and to see every thing in motion around it."

Let us again advert to the irrational species, whose more sagacious conduct so often disgraces our own. There is no occasion on which they do not seem to consult propriety; and, having a right end in view, they as certainly accomplish it, and always in proper time. Doth a little bird design to prepare a lodging for her young, it is sure to make choice of the fittest situation, whether to defend them from dangers, or obtain the most convenient supply of their wants; if to this end it is necessary to construct the nest of rough and strong clay, it is still lined with down: the young lie warm and secure, but they lie at their ease.

"In this view of nature (says a good writer*)

* Nelson; whose Treatise on Health I have perused with more satisfaction than most of the modern productions that I have examined, because he has taken Nature for his guide.

we shall find the birds not only provide nests for their young, but cover them with their wings, to guard them from the chilly air, till time has increased their feathers. The beasts, with amazing tenderness, cherish their young till nature has lengthened the hair, the wool, or whatever covers them, or time has given them the power of action. Further, we shall find that insects, and all the vegetable creation, shoot out into life, and receive vigour, comfort, and support, from that glorious body the Sun: so indispensably necessary is warmth, and so essential to the raising and preserving of all." But, necessary as warmth and support most indubitably are, they must not be obtained at the expense of liberty and ease; which, during the fragile state of infancy especially, are of peculiar importance.

I am not ignorant, indeed, that for many years past, the very ancient tight mode of dressing infants has been discontinued, for which we were probably first indebted to Dr. Cadogan. It is certain, also, that for the last forty years the fashion recommended by him has been improving; but there is yet room to go forward; and were every tender parent in this country thoroughly sensible of its advantages, it would soon become fashionable to see children as much at their ease on a christening day, as they are when laid at night in their beds. And I may be permitted to add here, what every modern practitioner has adverted to, that were strings, almost in every instance, substituted for pins, physicians would seldom be at a loss to account for the

sudden cries and complaints of infants, which are too often produced by this needless part of their dress*—a practice, it is to be hoped, which may in time be laid aside, since some of the first families in the kingdom have already set the example.

Nature knows no other use of clothing but to defend from the cold; all that is necessary, therefore, for this purpose, is to wrap the child up in a soft loose covering, and not too great a weight of it; to which ornaments enough might be added without doing mischief. And had this matter been always left to the most ordinary discretion of parents, this is probably all that would have been done; but the business of dressing an infant is become a secret, which none but adepts must pretend to understand. The child itself, however, discovers to us the propriety of such clothing, by the happiness and delight it expressess every time its day-dress is removed, and its night-clothes put on, which are looser, and less thick than those worn through the day, and the lower limbs less confined. *The art of dressing* has laid the foundation of many a bad shape, and what is worse, of very bad health through the greater part of life. Instead, therefore, of a scrupulous and hurtful attention to such

* A gentlewoman many years ago informed me, that one of her children, after long and incessant crying, fell into strong convulsions, which her physician was at a loss to account for; nor was the cause discovered till after death; when on the cap being taken off, which had not been changed on account of its illness, a small pin was discovered, sticking up to the head, in the large fontanelle.

formalities, nurses would be much better employed in carefully examining new-born infants, in order to discover any malformation of parts, especially those concerned in the excretions necessary to life, which have sometimes been strangely overlooked.

The infant being dressed, and having undergone such other little discipline as has been mentioned, is usually so far fatigued by it, as soon afterwards to fall into a sound sleep: we shall consider it as in this state, and leave it a while to be refreshed, whilst I endeavour to conduct my reader through the various other duties which the infant calls for, from day to day, till it happily arrives at an age free from the peculiar hazards of infancy.

In the pursuit of such a plan, we meet with a variety of miscellaneous articles; and though many of them are not of apparent magnitude in themselves, yet in their consequences are highly worthy of notice: and that they may be thrown into some kind of order, it will answer our purpose to class them under the several heads of the *non-naturals*, as they have absurdly been called.*

* The observation of the late Dr. James Mackenzie on this term, may not be unacceptable to some readers: —

"The very sound of the epithet NON-NATURAL, when applied to *aliment*, *air*, *sleep*, &c. so essential to the subsistance of mankind, is extremely shocking; nor is the long continuance of this ill-fancied appellation, which arose merely from the jargon of the peripatetic schools, less surprising. The origin of it appears in a passage where Galen divides things relating to the human body into three classes: Things which are NATURAL to it; things which are NON-NATURAL; and things which are EXTRA-NATURAL. I shall subjoin his

These are air; meat and drink; sleep and watching; motion and rest; retention and secretion; and the passions of the mind: a due attention to which may prevent many of the evils incident to the tender age.—To begin with the first of these:

### *On Air.*

The great importance of this has been set forth when speaking of the *diseases* of infants: I shall here, in a more particular way, observe, that the age, constitution, and circumstances of the child, and the season of the year, ought always to be taken into consideration; that being highly proper on one occasion, which would be very detrimental at another. In general, it has been said that warmth is friendly to very young infants, but they should, nevertheless, be inured

own words from the Latin version, "Qui sanitatem vult restituere decenter debet investigare septem res NATURALES, quæ sunt *elementa, complexiones, humores, membra, virtutes, spiritus,* et *operationes.*—Et res NON-NATURALES, quæ sunt sex, *aer, cibus* et *potus, inanitio* et *repletio, motus* et *quies, somnus* et *vigilia,* et *accidentia animi.* Et res EXTRA-NATURAM, quæ sunt tres, *morbus, causa morbi,* et *accidentia morbum comitantia.*" From this fanciful distinction, the epithet NON-NATURALS first arose, and has been retained in common use to this day, though it cannot be understood without a commentary, by which physicians seem to make an apology for the impropriety of it. Hoffman, for instance, and some others, when they apply the appellation NON-NATURAL to *air* and *aliment,* are obliged to subjoin the following explanation: "A veteribus hæ res NON-NATURALES appellantur, quoniam extra corporis essentiam constitutæ sunt."

gradually to endure the cold air, which is absolutely essential to their health. I cannot, therefore, agree with Dr. Armstrong, who thinks that the reason of the rich losing fewer children than the poor, is from their being kept warmer. On the other hand, it was aptly said by one, that "a warm nursery fills a cold church-yard." In fact, it is not a mere cold, but damp and confined air, that is so injurions to children, and to which the poor are peculiarly exposed, especially during sleep. Much caution, indeed, is necessary on this head in this unsettled climate, and evinces the necessity of parents superintending those to whose care they intrust infant children, since nurserymaids are often indiscreet in keeping them too long in the air at a time, which is a frequent occasion of their taking cold, and deters many parents from sending them abroad so often as they should. Another, and a worse, as well as common fault of nurses and servants, is that of standing still, with children in their arms, in a current of air, or even sitting down with other servants, and suffering children who can run about, to play at a little distance by themselves; to sit down on the grass, or in damp places, and such like irregularities ; the consequences of which are often a long confinement to a warm room, and either a prohibition against going out so much as they ought, or a fresh cold, owing to a repetition of such irregularities.

But if children be properly clothed and attended to, they will not only endure a great deal of very cold, but of other inclement weather; it

is true that caution and prudence are required in training up infants to withstand the influence of cold, and to profit from being abroad when the air is very cold or moist. Yet it certainly may be accomplished; and it is a known fact, both amongst the higher as well as inferior ranks of people, that those children are the healthiest, and suffer the least from colds, who are accustomed to be abroad in almost all kinds of weather. But to render children thus strong and healthy, it is not sufficient that they be abroad daily in a coach; they should be carried on the arm, and be put on their feet at a proper age, and partake of such exercise, for a reasonable time, as shall keep them moderately warm, and bring them home in a glow, instead of wishing to rush towards a fire the moment they return; such transitions being always improper, and only render children more liable to take cold.

Kruger has some such pertinent remarks on this head, as it will scarce be thought a digression to transcribe:—"The important step," says he, "a man takes into this world, imparts to him all the privileges thereof, of which this is one—the ability to bear the effects of the air. Why, then, debar him from this privilege? as he is all his life to be encompassed with this air, at one time cold, at another warm, now moist, again dry. For the cold of the air so anxiously avoided, brings along with it the means that secure against its own inclemency; the great strength of fibres imparted by it to the child, procuring, by means of a brisker circulation, a greater degree of heat,

and consequently the reverse of its violent impression. This, indeed, may seem unintelligible to those who imagine the human body to be only an hydraulic machine, consisting of innumerable tubes, in which the wheel is moved without a proper power, consequently without a sufficient reason: not to those who can distinguish between the effects of nature and art; who are apprised of the power that moves the animal body, and that the sensations are such a power, which arise without our knowledge and our will. To such only it will be intelligible, in what manner an increased resistance, produced by the cold in the solids and fluids, is capable of bracing the heart, the source of life. From a slight knowledge of mechanics we come to understand, that the resistance diminishes that power which in animal bodies is increased; come to see, that the most ingenious constructions produce no manner of motion; that all mechanical laws are, indeed, perfectly just, but more accurately to be determined, in order to a proper application of them to the human body, in which the will, imagination, and sensations are the springs of motion, without which all motion would cease, and only leave a machine resembling a water-work, to be carried about by wind. We need only appeal to experience, which will teach us that, in order to a healthful state, we need not be brought up like those who are indulged with a bed of down, and a warm room, but those, of whom no other extraordinary care being taken, are greatly left to their own disposal."

I cannot better close these remarks on the benefit of a pure air, than by quoting the remarks of the Rev. John Howlett; who observes, that in consequence of the humane suggestions of Mr. Jonas Hanway, about fifty years ago, an Act of Parliament was passed, obliging the parish officers of London and Westminster to send their infant poor to be nursed in the country, at proper distances from town. Before this time not above one in twenty-four of the poor children received into the workhouses lived to be a year old, so that out of two thousand eight hundred, the average annual number admitted, two thousand six hundred and ninety died; whereas, since this measure was adopted, only four hundred and fifty out of the whole number died; and the *greater* part of these deaths happen during the three weeks that the children are kept in the workhouses.

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I am afraid that Dr. Underwood's strongly-expressed opinion *of the absolute necessity of inuring very young infants to endure the cold air, as essential to their health,* supported as it is by other popular writers, has been productive of great and extensive mischief.

That *pure* air is essential to the health and growth of children, is too evident a proposition to require proof; and that from the open air, of temperate quality, all children, even very young

infants, derive great advantages, is daily manifested by their general healthy appearance, by the colour of their cheeks and lips, and by the firm feel imparted to their muscles. But a belief seems to obtain, that the more cold the temperature of the open air, so much the more pure and bracing will it prove. Now the contrary is rather the fact. It is the temperate quality, not the coldness of the air, which renders it pure and salubrious. Our coldest winds blow from the proverbially unsalutary north and east;* and during the prevalence of these winds, the most severe pulmonary affections, croups, sore throats, swelled glands, &c. continually occur; not only among children, but among adults likewise, who are much exposed to their influence.

It is rather extraordinary that we should be urged to expose our "young infants" to "very cold and other inclement weather," for the purpose of hardening them, as it is absurdly called, when we find from experience that the young of the "irrational creation" are injured by such exposure. The gardener, well knowing that "the tyrannous breathing of the north shakes all our buds from blowing," carefully preserves his young plants from the bleak weather; the good housewife secures her young broods of turkies and other poultry; and the husbandman his tender calves and lambs from the cold and piercing winds: it is our children alone that we volun-

* Wind from the east
Is neither good for man nor beast.—*Old Proverb.*

tarily expose to the chilling and inclement sky. Dr. Underwood, indeed, advises that the children should be properly clothed and attended to; this will moderate the evil, but will not cure it. Warm clothing alone is not sufficient to sustain the animal temperature; combined with exercise, indeed, it admirably answers this purpose, but very young infants are incapable of the necessary exercise; and, though warmly clad, soon suffer under the depressing effects of cold. Nor is this consequence of cold upon passive, quiescent subjects confined to infants. Those who drive or ride in open carriages, are usually clothed with as much care to exclude the cold, as the infants who are carried in their nurses' arms; but, notwithstanding, frequently suffer extremely from the degree of cold to which they are exposed; and why should children, who are less able to bear such effects of cold, be inured to that which even strong men and women cannot sustain with impunity?

True it is that some very robust infants endure the cold in a very remarkable manner, and these are often quoted as examples of the benefit to be expected from the hardening system; but a wise man will be cautious how he follows that as an example, which is mentioned only because it is extraordinary. The rules which are to guide our practice should be drawn from what is usual, not from what is uncommon; yet we are too often led away to imitate what is marvellous, and despise that which is more accordant with nature's laws and precepts. Thus, on the evidence

of one strong, vigorous infant, the hardening system is applauded and adopted; and we neglect to inquire what numbers have sunk into the silent grave, in the vain attempt to render them, by exposure to the cold, equally vigorous and robust. S. M.

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*On Short Coating.*

It will be advisable, in order to inure infants to the air, that this change in their dress be made as early as the season of the year will permit: but their dress should be still loose and easy. Children are frequently kept without stockings till they are three or four years old, and boys often till they are breeched; but, on many occasions, this exposure of the legs to cold is attended with ill consequences. For want of caution in this particular, tender children suffer exceedingly in severe winters, and are distressed with chilblains, merely for want of proper covering to their limbs. I have seen a child of four years old, the daughter of people of fashion, whose legs were covered with these sores quite up to the knee, and yet her mother could not be prevailed upon in time to suffer stockings to be put on, because strong and healthy children are thought to be better without them. And there is an additional reason for such cautions, from the fashionable mistake of habiting young children indis-

criminately too thinly: it is obvious that a mode of dress appropriate to the athletic, may be very hazardous to those of a delicate habit. When boys come to be breeched, it will with more propriety be done at the beginning of winter, than in summer, as the dress is, upon the whole, warmer, especially about the chest; and it is always important to keep this part warm, since inflammations of the lungs are often brought on by the exposure of the chest to the cold.

We proceed now to the second article under the head of the NON-NATURALS:—

*Meat and Drink,*

Which, is, indeed, worthy of ample discussion.

In the first place, it may be remarked, that when an infant is to be suckled by its own mother, it can rarely stand in need of food till the time nature will bring milk into her breast, supposing the child be laid to it in proper time; which ought to be as soon as the mother is, by sleep or otherwise, sufficiently refreshed to undergo the fatigue that an attempt to suckle may occasion. This method, however unusual with some, is the most agreeable to nature, and to observation on the irrational species, who in many things are the very best guides we can follow.* And herein I am constrained to differ from a late writer,†

* This subject is largely and elegantly treated by Dr. Gregory, in his Comparative View, before quoted.

† Mr. Moss.

whom I have more than once quoted with approbation; for, by means of putting the child early to the breast, especially the first time of suckling, the nipple will be formed, and the milk be gradually brought on. Hence much pain and its consequences will be prevented, as well as the frequency of sore nipples,* which in a first lying-in, have been wont to occasion no inconsiderable trouble; but should this, or even an abscess take place, they are both far less distressing, under proper management, than has been usually imagined;† and, what is of great importance, the

* It may be proper to notice in this place, that a colour is sometimes given to an infant's stools, from the blood it has swallowed, when the nipples of the suckling mother have continued to be very sore; a circumstance, indeed, that does not often occur, but it has given alarm for want of the true cause being understood. The stools in this case are of a strange blackish colour, very similar to the first stools of new-born infants.

† See the author's Surgical Tracts, in which the *milk-abscess* and *sore nipples* are fully considered, and a successful and easy method of treatment pointed out.

From motives of benevolence, I beg leave to mention here a contrivance, which has succeeded far beyond every former device, for defending the nipples, and enabling women to nourish their own children, that I cannot but wish to extend its advantages by this public recommendation of the *nipple-shield*. It was contrived by Mrs. Relf, an intelligent monthly nurse, and is to be procured from any of the surgeons' instrument makers.

In Struve's Education and Treatment of Children, published in Hanover, some apparently similar contrivance is mentioned, called the *wendelstædtian*, by which it is said that suckling may be accomplished, although the nipples should be very deficient in their formation; but the writer has given no description of this useful invention.

latter is attended with a negative good: no woman, I believe, having been seized with puerperal fever who had a milk abscess. But should the mother be unable to suckle, and a wet nurse be engaged, it will be proper to put the child to the breast after it has taken a dose of opening medicine, which in such a case should be soon premised; or if an attempt is to be made to bring it up by hand, a spoonful or two of thin water gruel or barley water, not too much sweetened, may be given, which will usually set it asleep, after which it will be ready for whatever culinary food shall be thought proper for it.

And on this article, a vast crowd of absurdities open upon us at once; and many of them with the sanction of custom and authority. I shall first advert to the thickness of the food; and it has, indeed, been matter of wonder, how the custom of stuffing new-born infants with thick food, whether made of bread or any other substance, could become so universal, or the idea enter the mind of a parent, that such heavy food could be fit for its nourishment. It would be well that all who are intrusted with the management of children, should have more just ideas of the manner in which we are nourished; and especially, that it is not from the great quantity, nor from the nutritious quality of the food, abstractedly considered. Every one, who gives due attention to the subject, may be led to conceive that our nourishment must necessarily arise from the use the stomach makes of the food it receives, which is to pass through such a change in diges-

tion as renders it balsamic, and fit to renew the mass of blood which is daily wasted and consumed. An improper kind of food, or too great a quantity taken at a time, or too hastily, before the stomach has duly disposed of its former contents, prevents this work of digestion; and by making bad juices, weakens instead of strengthens the habit, and in the end produces worms, convulsions, rickets, scrofula, slow fevers, purging, and a fatal marasmus.

Nature, it should be considered, has provided milk alone for supporting the young of all mammiferous animals; and the milk of women is certainly amongst the thinnest of all, but at the same time far more nutritive than bread, and probably than any other milk, as it contains a greater proportion of saccharine matter,* which is thought to be that quality in all our food which renders it nutritious. It is true, bread, as it requires more digestion, will remain longer in the stomach both of infants and adults; and hence, probably, because it satisfies the present cravings, it has been conceived to afford a greater proportion of nourishment; but bread, when mixed up wholly with water, as is frequently done, is far less nutritive than has been imagined. Children ought to be frequently hungry, and as often supplied with light food, of which milk is really the most nourishing that we are acquainted with. This could

* The sugar, or salt of human milk, is one third more in quantity than in cows; and its extract, or solid contents, is double as much.

never be doubted but from its passing so quickly out of the stomach, on which account, indeed, though not the properest food for adults, employed at hard labour, and many hours from home, it is the fittest of all for the sedentary life of a tender infant, who cannot get the whole of that nutriture contained in bread, or other solid food, which the stomach of the adult is able to extract. It must have been for want of attending to this consideration, that Dr. Armstrong has said so much in favour of bread and other thick victuals; which, by the bye, he began to make use of for his own children (from its success in whom he ventured to recommend it) at the age of six or seven months; a matter very different from cramming an infant with it almost as soon as it is born. Every thing the stomach cannot digest, may be justly considered as a poison; which, if not puked up, or very soon voided by stool, may occasion sickness, gripes, what are called inward-fits, and all the train of bowel complaints, which may terminate in one or other of the evils just mentioned. And this is almost daily exemplified; new-born infants, after being so fed, and seemingly thriving for a short time, are often suddenly attacked with a dangerous purging, or carried off by fits.

Milk itself, like all the other animal juices, is produced from food taken in by the mother, and is the richest part of it. It is in her stomach that the aliment is digested, which, by a combination of powers in the chylopoëtic viscera, is so far animalized as to be converted into a kind of white

blood, from which every animal body is daily recruited. And before an infant has acquired strength enough to convert solid food into this wholesome chyle, the parent, by this wise substitution in nature, has, in a great measure, previously accomplished this work for the infant she is to nourish. During infancy, therefore, both nature and reason most clearly point out the expediency of a milk-diet;* but how long it ought to be persevered in, or infants wholly confined to it, is not easily ascertained, and will be further considered in its place, with a latitude that the question demands. There is a period in life, indeed, to which this nutriment is more particularly adapted, both experience and theory demonstrating it to be more suitable to young people than adults, as Arbuthnot has remarked; and it has been observed, that it does not appear that the gastric juice of the cow will produce the same change upon milk, as that of the calf does, which is, therefore, constantly made use of in dairies, for separating the curd from the whey.

It can scarcely be improper, before I entirely quit the article of suckling, to relate a recent instance, and a remarkable one out of many, as a

* Whether the parent be able to suckle her own child, or that office be performed by a hired nurse, is not here particularly considered. The design is only to prove that milk is in general the most proper food for an infant. Whether that, indeed, be prepared by its own mother, a nurse, or by such animals as the cow or the ass, is equally to the purpose: where the former cannot be had, the best and most natural substitute should be provided.

proof of the degrees to which infants may pine for the breast, even to the great hazard of perishing for the want of it, where the real cause of the disease is not suspected. This little history will likewise further serve to illustrate the preference of human milk, which has been so strongly insisted upon.

The infant alluded to was very healthy when it was three months old, and was then weaned on account of the illness of the wet-nurse; but soon afterwards ceased to thrive, and had continual bowel-complaints. At the age of nine months I was desired to visit it, and was informed that it slept very little, was almost incessantly crying, and had for many days brought up nearly all its food; it was become very rickety, and had the appearance of an infant almost starved. Trial had been made of every kind of food, except the breast, and the child had been many weeks under the care of an experienced apothecary; it was constantly in a state of purging, and seemed to have been just kept alive by art.

On the first sight of the child, and upon the face of this account, it was very evident that this infant was not nourished by the food it received, and that the complaint lay only in the first passages; but, reduced as it was, I had little expectation from medicines, and therefore gave as my opinion that either the child still pined for the breast, (in which case, I doubted not, it would take it, though it had now been weaned six months) or that it ought to be carried immediately into the country, and be supported for

some time only upon asses' milk, or perhaps be fed now and then with a little good broth.

My advice being taken, a good breast was procured, which the infant seized the moment it was put to it; and, after sucking sufficiently, soon fell asleep for several hours, waked without screaming, and took the breast again. It is sufficient to add, that the child ceased to puke or be purged, and, after sucking eight or nine months longer, became in the end a fine, healthy child.

Although this instance has something extraordinary in it, in respect to the length of time the child had been taken from the breast; and though infants are generally completely weaned in six or seven days at the furthest; yet similar occurrences, differing only in degree, are occasionally met with; it being no uncommon thing for children, when ill, to take the breast again after seeming to be thoroughly weaned for three or four weeks. And this circumstance is the more worthy of notice, as it sometimes leads to a very fortunate result, and should induce us to make the trial whenever infants newly weaned may be seized with any complaint, under which a return to the breast may be desirable. Such, particularly, is the hooping-cough; under which I have known a child of more than a year old, and apparently thoroughly weaned for a month, take to the breast of a stranger very cheerfully, in the presence of its former nurse, with the precaution only of leading it to make the first attempts during the night. Such chil-

dren for the few first days turn away from the new wet-nurse to their former one, as soon as they have satisfied themselves at the breast, and go back to the nurse again very readily whenever they find an inclination to suck.

To return: I am free, then, to lay it down as an axiom, that milk ought to be the chief part of the diet of infants for a certain time, whether it be breast-milk or any other;* and that it alone will prove sufficiently nourishing for nineteen out of twenty children; perhaps I might say ninety-nine out of a hundred. Exceptions, I believe, there may be, but these exceptions will be few in number; and fewer children would perish, if so fed, than are destroyed by rushing into the contrary extreme of feeding them with more viscid food. If, however, a strong child, fed upon milk alone, should, at the end of the month, seem really not satisfied, and always craving the moment after it has fed; in such a case as this, it may have, in addition, a little boiled bread, or other farinaceous diet, two or three times a day; but I should be very cautious of extending it further.† In the case, however, of an infant at the *breast*, if

* See Dr. Parsons, who has some judicious observations on this head.

† "In Italy, Holland, Turkey, and through the whole Levant, children are rarely allowed any other food than the breast-milk during the first year:"—(Buffon). And the savages in Canada suckle for four or five, and often six or seven years. In some extreme northern climates, (as hath been already remarked) we know they can have no other food for a long time; and yet there the death of an infant is as rare an event as that of a suckling mother.

it be always craving as soon as it is taken from it, the occasion of its craving will generally be found to be in the nurse's milk; previously, therefore, to allowing more solid food, the quality of the milk, as well as the state of the nurse's health, should be enquired into, and the milk be changed if its goodness be suspected; and, should its quantity be found deficient, its quality is always proportionally inferior. Perhaps, where bread and milk is allowed, whether at a very early or later period, it would be an advantage to boil a piece of roll, together with the upper crust, in a good deal of water, till it is very soft, by which means the bread will part with some of its acescent quality; the water should then be strained off, and the bread be mixed up with the milk, which ought to be boiled if the child is very young, or inclined to a purging.*

It would, I perceive, lead me beyond all bounds to enter further into this matter; I shall, therefore, only add, that infants certainly ought not to be fed lying on their backs, but sitting upright, howsoever contrary to long established usage, as they will in this position swallow their food more easily, as well as more readily perceive when they have had enough. So also children

* For infants subject to acidity and indigestion, it will be found very advantageous to boil the milk two or three times, waiting after each till the milk shall cool sufficiently to allow the curd, or cheesy parts, to rise to the surface, which should be carefully taken off; whereby a much smaller portion of the less easily digestible part of the milk will remain to offend such irritable stomachs.

nourished at the breast, ought to be withdrawn from it for a short time, especially just after waking from a long sleep; whereby, besides other advantages, much undue labour to the stomach may be prevented, as well as enabling it to retain what it has received, a part of which is otherwise very frequently thrown up.

If milk be the proper food for infants brought up by hand, the next inquiry will naturally be, what milk is the best? and what is the fittest instrument for feeding with? And it is from long experience, as well as from reason and analogy, that I venture again to recommend the ingenious contrivance of the late Dr. Hugh Smith, which I shall presently describe. The milk he likewise advises, is cow's milk, in preference to all others, as being the most nourishing, and therefore, in general, the most proper; and I wish to refer the inquisitive reader to such other reasons as the Doctor has given,* to which I can add nothing but my own experience of their validity. To the milk should be added a little thin gruel, or barley-water, which forms a very smooth and pleasant nourishment; the latter being more proper if the bowels are too open. A few weeks after birth, and I think in general the sooner the better, instead of the barley-water or gruel, there should be mixed with the milk a small quantity of a light jelly made from hartshorn shavings, boiled in water to the consistence that veal broth

* See his Treatise on the Management of Children, in a Series of Letters addressed to Married Women.

acquires when it has stood to be cold.* The design of the jelly is obvious and rational, at once calculated to render the food more nutritive, as well as to correct in some measure the ascescency of the milk; this quality being thought to abound in the milk of different animals, in proportion to the quality of vegetables on which they feed.† And the milk of quadrupeds we know is produced from vegetable juices only, whilst breast-milk is formed by a mixture of animal and vegetable food. A little Lisbon sugar may be added to this compound of jelly and milk, if the child be not inclined to a purging; or in that case a little loaf sugar; but the less of either the better. It will be proper to have the milk and jelly warmed separately, and no more at a time than may be wanted; when it should be put into the sucking pot, which must be very carefully cleansed and scalded, at least once every day, and the spout be thoroughly rinsed, lest any sour curds should stick about it; and to this end it may be convenient to be provided with two.‡

* There is sometimes a difficulty in making this jelly, on account of the hartshorn being bad; those who shave it, often mixing with it the shavings of trotters, which may, however, be distinguished by their brittleness. If the shavings are good, two ounces of them, boiled very slowly in a quart of water to a pint, will make the jelly of a proper consistence.

† See Dr. Young, "De Natura et Usu Lactis, in Diversis Animalibus."

‡ The objection to this mode of feeding, made by a writer at Dover, that the pot may often be left foul, and therefore the food become sour, appears to me to be very far-fetched; since if nurses are not to be depended upon in matters of cleanliness,

At first the milk ought to be boiled, to render it less opening; but, when the child is several months old, or may chance to be costive, the milk need only be warmed. If it be fresh from the cow and very rich, a portion of water may be added to it, whilst the infant is very young. Indeed it ought to be as new as possible, since milk, as an animal juice, probably contains some fine subtle particles, which evaporate upon its being long out of the body.

Though I have said cow's milk is usually preferable to any other, it will be conceived that I mean for infants who are strong and healthy. Asses' milk, on the other hand, being more suitable for many tender infants during the first three or four weeks, or perhaps for a longer time, as well as for children who are much purged, as it is thinner; and having far less curd than any other milk, it sits much lighter on the stomach both of infants and adults, although in a few instances it is found to be too opening. And perhaps it may be inferred, from the very different proportion of cream and of cheesy principles which the milks of different animals contain, that Providence has

and the sweetness of the food they are to administer, we can trust them in nothing, and infants must be continually suffering; there being a hundred particulars essential to children's health, in which servants cannot be always superintended, but must be entirely confided in.

Having been often sent to for a direction to the shops where the infant feeding-pot may be met with, I notice in this place that it is always kept at Phillips's, in Oxford-street, near Cavendish-square; and at Neale's Staffordshire Warehouse, in St. Paul's Church-yard.

rather considered the benefit of man than the young of various quadrupeds; though, doubtless, the milk is likewise properly adapted to them.

In regard to the mode of feeding infants, I can say from experience, that for the delicate and tender at least, the boat, the spoon, and the horn, are in no wise comparable to the pot; which is so contrived, not only as to please the child by its resemblance to the nipple, and the milk coming slowly into its mouth; but also to afford the infant some little degree of labour, in order to acquire the quantity it needs, which the horn does not; by which means the food is also duly mixed with saliva. The like little fatigue takes place in children nourished at the breast, and by this means it is, that infants, especially when very young, are not so apt to oversuck, as they are to be over-fed by the boat or the spoon; the food of which being sweet and pleasant, and requiring only the trouble, or rather the pleasure of swallowing it, the child is tempted to take too much at a time; whilst the nurse often forces down a second or third boatful, in order to put a stop to the cries, which indigestion from the former may have occasioned.

The writer just now alluded to, as well as Mr. Le Febure de Villebrune, detracts from the advantage of this mode of feeding, by observing that infants may be fed as slowly and cautiously by the spoon: but the fact is, that this is, indeed, one of the things in which servants cannot be depended upon, whilst there are such temptations to the contrary, (at least I have not met with

many who could;*) nor will children, indeed, oftentimes endure slow feeding, if they can anywise prevent it, but will be screaming all the while, instead of being kept quiet by their food: though the hope of quieting them is frequently the nurse's sole motive for giving it. But, when an infant can get it only slowly from the pot, and yet is itself all the while employed in the business, it will be agreeably diverted, while it is acquiring its nourishment in the same manner that it is amused at the breast.

The pot is formed in the shape of an Argyle, or gravy-pot, with a long spout rising from the bottom, and pierced only with a few small holes at the end, which is to be covered with a piece of vellum, washing-leather, or parchment.†

This covering should be left loose a little way over the spout, which will render it soft and pleasing to the infant's mouth; and it is nearly

* Amongst the exceptions was a nurse, who said, "I always let my children ask for their food:" which she pertinently explained by saying, "I do not feed infants because they cry; but if, after fasting a reasonable time, they begin to moan, I endeavour to amuse them till they anxiously hunt about them, and repeatedly form their lips in a certain way, that assures me it is a want of food only that makes them complain."

† Various other contrivances, similar in intention to this, have been recommended. That which is now most frequently used is very simple and convenient. It consists of a flat glass bottle of an oval shape, holding about six or eight ounces; at one end is the neck, shaped somewhat in the form of a nipple, through which is a perforation of small dimensions, incapable of admitting thick fluids to pass; and consequently no food beyond a given degree of consistence can be taken by the child. S. M.

as acceptable to many children as the breast, as I have often been a witness.

This manner of feeding is not only pleasant to the child, but very convenient to the nurse, and the food equally at hand in the night as the day, being easily kept warm by a lamp, or even in the bed. The only objection I have known made by those who have tried it, is that which I esteem one of its highest recommendations; namely, that children thus fed are frequently hungry; that is, they are what nature designed them to be; this food sitting light on the stomach, and being easily digested, like the breast-milk, children often need a supply of it.

A popular objection to the plan of feeding children here recommended is sometimes made, namely, that children who have been brought up by hand from the birth, and fed with thick bread victuals all the day long, are sometimes found very strong and robust, whilst we every now and then see others, who have been debarred that sort of diet, remain weak and tender till they become a year or two old. Not to stop long to observe, that this objection militates equally against children living on the breast, though that is the food nature has designed for them; it will be sufficient to say, that it is only strong children, who may be bred up almost anywise, that can at all digest thick victuals; that there are others who cannot endure the least thickening in their food, nor any kind of bread; and that weakly infants, who are scarcely preserved by the most careful attention to their food, would be soon hurried out of the

world if that attention were withheld. And this reminds me of an observation of a very judicious friend in the north of England, which greatly surprised me at the time, as I had never met with any observation from him before, the propriety of which was not exceedingly obvious and convincing. Upon seeing one day a number of fine children, he with some shrewdness observed, that we did not seem to have so many weakly half-starved children in the streets of London, as he met with in the country, and that he had often before made the like observation in his journies to town. It appeared to me that my friend must lie under some mistake, and I accordingly mentioned my surprise at such a remark coming from him; when he removed my astonishment by insisting on the fact, with the following obvious solution of it:—I apprehend, says he, there are scarcely any but fine and strong children in London, who live to be two or three years old, the weaker ones for want of good air and exercise, sinking under their infirmities; whilst the tenderest children in the country, by being turned out to crawl in the wholesome open air, or by sitting at the door almost all the day, escape the fatality of your gross air and hot nurseries, and survive the trying periods of infancy, though some of them remain weak and rickety till they become old enough to endure severe exercise; which can alone strengthen them effectually.

I have no doubt of there being certain exceptions to the mode of feeding I have recommended, that are worthy of some attention; although very

few have actually come to my knowledge; and though I am persuaded, that, as a general plan, it is both a natural and salutary one. Instances may be met with, however, of some very athletic children who may require a more nourishing and perhaps somewhat more solid diet; and the state of bowels in others, will call for a greater variety of food, and of a kind not calculated to be administered in the mode here recommended. On these accounts, I would offer another observation or two in regard to the thicker kind of victuals; and first, that in families accustomed to bring up their children by the spoon, I think I have found a greater number of infants well nourished by the French or the Uxbridge roll, boiled in water to a jelly, and afterwards diluted with milk, than on any other kind of pap. From such families I have likewise learned, that some change in the food is frequently necessary; and will be indicated by the degree of relish which the infant may discover towards different kinds of food, as well as by their effects on the bowels; though the child be not supposed to be at such times really unwell. Such changes principally respect the different kinds of bread, or other farinaceous substance usually mixed with milk; and sometimes the substitution of broth, for a few days, in the place of the latter.

When children brought up by hand become four or five months old, especially if strong and healthy, they may, doubtless, be allowed a thicker kind of victuals, because their digestive powers being by this time become stronger, they

are able to extract good nourishment from it; though this change is not equally necessary for children brought up at the breast, at least, such do not require it so early. The first addition of this kind, however, whenever it becomes necessary, I am persuaded, ought to be beef-tea or good broth,* which, with a little bread beat up in it, in the form of thin panada, will be at once an agreeable and wholesome change, and prepare them for further advances in this way. But, as this cannot well be given oftener than two or three times a day, (unless where other food is found to turn acrid on the stomach,) a little bread and milk may also be allowed them every morning and evening, as their strength and circumstances may require. A crust of bread likewise, as soon as the child has a couple of teeth, will amuse and nourish it, whilst it will assist the cutting of the rest, as well as carry down a certain quantity of the saliva; a secretion too precious to be lost, when the digestive powers are to be further employed. As the child grows older, to broth may be added light puddings, made of bread, semolina, tapioca,† or rice; salep

* "I cannot help remarking here, that the gravy of beef or "mutton, not over-roasted, and without fat, properly diluted "with water, is the wholesomest and most natural, as well as "nourishing broth that can be made."—Dr. Hugh Smith.

† The best tapioca, I believe, comes from the French West-India Islands, and is called by the general term, farine. It is in very common use also in our West-India Islands, where it is made into thin cakes, and is called cassada: in this form, therefore, it is most likely to be genuine, and may be preserved for a very long time. Two ounces of tapioca should be boiled slowly

boiled in milk, and such like. But to feed a child with veal, chicken, or other animal food, before nature hath given it teeth enough to chew it, however small it may be minced in the kitchen, is altogether unnatural,* and can prove nourishing only to such children, as from the great strength of their natural constitution, need least of all the assistance of art. It is by degrees only, that children ought to be brought to such food; which at a certain period, indeed, is as necessary as a light diet at an earlier age. For it is certain, that the error of some parents runs the contrary way, and their children are kept too long upon a fluid, or too slender diet; whence their bellies and joints become enlarged, and the bones of the lower extremities too weak to support them, at an age when they want more exercise than their nurses can give them. For when they go alone, not only is a little light meat and certain vegetables to be allowed them once a day, or alternately, with broths, puddings, or blamange, white-pot, custards, and such like kitchen preparations of milk;† but even a little red wine is beneficial to many constitutions. This will not only promote diges-

in three pints of water to a quart, and then be passed through a sieve: a little milk being added, or not, as circumstances may direct.

* Ante dentium eruptionem non conveniunt cibi solidiores. Ideo natura quæ nihil frustra fecit, et non deficit in necessariis, dentes ipsis denegavit, sed lac concessit, quod masticatione non eget.—*Primros.*

† "Infancy and childhood demand thin, copious, nourishing aliment.—*Arbuthnot on Aliments.*

tion, and obviate in a great measure a disposition to worms, but, by strengthening the habit, will also render children less liable to become ricketty, at the very period they are very much disposed to it. Such a plan is the rather insisted upon, because some parents, the most desirous of doing right, fall into a like mistake, even in regard to older children, whom they keep too low, allowing animal food only every other day to those of four or five years of age; which, unless in very particular habits, is surely an error, at least in this damp climate: and disposes our children to scrofula. But so many infants, on the other hand, fall a sacrifice to the use of indigestible food under the age of six months, being carried off by vomiting, purging, or fits, that whoever would preserve them over the most dangerous period of infancy, cannot too cautiously attend to their diet at this time.*

* From a note in Dr. Smith's letters it appears, that the average of births annually, within the bills of mortality, for ten successive years, was 16,283; out of which were buried, under five years of age, 10,145, and from amongst these 7,987 were under two years. So that almost two-thirds of the children born in London and its environs, become lost to society, and more than three-fourths of these die under two years of age. This proves how hazardous a period that of infancy is in this country: and I am sorry there is so much reason to be persuaded, that want of air, exercise, and a proper diet, has added, unnecessarily to its dangers; there being no such mortality in barbarous nations, whose inhabitants live in a state of nature; nor in any part of the known world, amongst other young animals. Although these, and other calculations I have seen, should be found ever so accurate, it is a pleasant reflection, (to whatsoever the circumstances may be owing), that,

It is a common direction in works of this kind, to point out the properest times for feeding an infant brought up by hand, and to direct how often it may safely be fed. But no precise or adequate rules can be laid down on the occasion; and on that account none ought to be attempted, since none can be sufficiently comprehensive: much upon this point must be left to the discretion of those who undertake the office of nurse; but infants who do not usually take much at a time, may generally be permitted to partake of it as often as they might of the breast. This is, however, by no means to be allowed, when children are fed by the spoon, and upon thick victuals, by which, as has been frequently said, they are always in danger of taking too much; an evil that cannot be too often pointed out.

Before I close this head of the Management of Children, perhaps the most important of all, I shall point out the most suitable diet under the different complaints to which they are most liable. This, indeed, will in some measure be done in speaking of the different diseases, but it may be proper to observe, that as light a diet as possible is called for when a child is unwell, let the disorder be almost whatever it may. If a fever should accompany it, the child will require

since the time they were taken, the proportion of deaths at the early period above alluded to, has been very considerably decreasing; and the writer has noticed, that for some years the average of deaths, according to these bills, has not been more than six in sixteen; which is but little more than one-third.

still less food than in any other complaint, but plenty of drink; which may be so calculated as to furnish nearly, or quite as much nourishment as the infant will require, and may generally, if the child prefers it, be given cold. Such are barley-water, in which a crust of bread has been boiled, and thin tapioca; or if purging attends, rice, or arrow-root water; and a drink made of hartshorn shavings, with a little baked flour in it. In purgings, as more nourishment is required to support the child than under most other complaints, (if not attended with fever) baked flour mixed up with boiled milk, is admirably calculated both as a proper diet and medicine. For the like complaint, arrow-root, or the food directed by Dr. Smith, is very well adapted, and will afford a little variety. He orders a tablespoonful of ground rice to be boiled with a little cinnamon, in half a pint of water, till the water is nearly consumed; a pint of milk is then to be added to it, and the whole to simmer for five minutes; it is afterwards to be strained through a lawn sieve, and made palatable with a little sugar. In this way, or joined with arrow-root, milk may generally be made to agree perfectly well, even when the bowels are purged; and when it does so, proves exceedingly nourishing. Should it chance to disagree, owing to the great acidity of the first passages, good beef-broth ought to be made trial of, which may be thickened with baked flour, instead of bread, or mixed with an equal quantity of thick gruel, and makes a very pleasant, as well as anti-acescent diet.

Likewise the patent sago, properly boiled, adding to every half pint a large tea spoonful of red port wine, for the use of infants of a week old; cautiously increasing the quantity of wine, as they grow older. A large family of children, whose bowels had been continually disordered by various other food, has been brought up by this, which was persevered in till they had four, or more teeth, and were able to partake of pudding and other common food. Young children in this country so seldom tasting wine, it may seem strange to advise it for infants in the month; but it will be recollected by some readers, that the practice is very different in wine countries, where it is often exhibited as well for food as medicine; and is one of the best cordials for infants, as I have experienced in various instances.

Perhaps much more has been said on the subject of acidity, by some writers, than really ought to have been; or it may at least be suspected, that a proper attention has not been paid to the peculiar circumstances of infants, who are all much disposed to it. Acidity, when injurious, is probably oftentimes rather an effect than the first cause of the disorders of infants. It seems, indeed, to be natural to them, arising alike from the weakness of their organs of digestion, and the nature of their food; though there is no doubt, that their complaints are afterwards aggravated by an abounding acid, or rather, probably, from this natural acid becoming morbidly acrid, through over-feeding, and other errors in their diet, or from its being accidentally confined in

the first passages. Nature, however, seems to have designed the food of infants to be acescent; and till the body be disordered, and digestion impaired from one cause or other,* this quality of their food is not likely to be very injurious to them: and probably is far less so, in a general way, than food of a very alkaline nature would be, with a like weak digestion. It is true, indeed, that as many similar complaints in adults, who feed on different diets, will, *cæteris paribus*, have their varieties, and each have some relation to the different qualities of their food; so it is not to be wondered at, that the complaints of infants should be attended with wind, and other marks of acidity, which in adults are usually the least hurtful of all; and are, indeed, for the most part, pretty easily corrected in children, while that is the only complaint. When they are much troubled with wind, therefore, it cannot be wrong to mix some carminative seeds, or the waters distilled from them, now and then, with their food; such as sweet fennel, or cardamom seeds, bruised very fine; but the *aq. anethi* is that I have generally commended, and, being a liquid, is always ready to be added to the food, without loss of time.† But though such an oc-

* Such cause, it has been observed, may be an over quantity, or too sweet a food, or heavy and indigestible diet; which, indeed, prove more frequent occasion of a distempered acidity than any thing else.

† The practice of mixing spices and carminatives with the food of infants and young children (among the lower classes in London, common gin is the carminative always used) is very

casional addition to their food is often exceedingly useful, I cannot help speaking against its being made a constant practice; by which children not only suffer when by accident, or absence from home, it has been neglected, but it destroys the very end for which it was used, by the stomach becoming accustomed to it.

Children, however, become less subject to wind and hurtful acidities as they grow older, and the stomach gets stronger, as it is called. But should these complaints, notwithstanding, continue obstinate, a little fine powder of camomile flowers, or a few drops of *tinctura columbo*, mixed in water, and warmed with a little ginger, will prove exceedingly bracing to the stomach and bowels, and render them less disposed to acidity. Exercise also, according to the age and strength, is a grand preventative and remedy; and especially making infants break wind after sucking or feeding. And this may generally be effected, as every one knows, by raising the

objectionable; on no account more, than that it soon begets a habit of giving, every day and at every meal, hot and stimulating food. The more simple and plain the diet of children is made, the more will it conduce to establish and maintain good health. Spiced or spirituous food produces an uneasy sensation at the stomach, and great thirst; this occasions the child to cry, and to quiet it more food is given, which it swallows with avidity on account of its thirstiness, and thus much more is received into the stomach, than can be properly digested and converted into nourishment.

Whatever of cordials or carminatives children may occasionally require, should be given medicinally; and, in my opinion, it is always right to give every kind of medicine distinct from the food. S. M.

infant up, and gently tapping it on the back, or rubbing its stomach before it be laid in the cradle to sleep.

I have only to add, that, when through an abundant acid, milk is frequently thrown up curdled, a little prepared oyster-shell powder may be added to it, or a very small quantity of almond-soap, or of common salt, which will not at all injure the flavour, and will prevent this change happening too soon in the stomach.

It will be proper to include under this head, some observations relating to wet-nurses, and to weaning.

### *On the Choice of Wet-Nurses.*

The first and essential point in a wet-nurse is, doubtless, that her milk be good; to which end it is necessary she be healthy and young; not of weak nerves, nor disposed to menstruate while she gives suck: and that her bowels be rather costive than otherwise.* Her nipples should be small, but not short, and the breast prominent, and rather oblong than large; the large fleshy breasts being distended rather from fat, than from milk. The chief marks of good milk, are its being thin, of a bluish colour, rather sweet, and in great quantity; and if under four months old, it is, doubtless, an advantage: and certainly the

* Though it is not desirable, that the bowels of a wet-nurse should be too freely open, yet I cannot at all agree in the opinion, that they should be rather costive than otherwise. Unless the bowels are relieved once plentifully every day, the milk is rarely good in quantity or quality. S. M.

milk for a young child ought not to exceed six months;* for after this time it generally becomes too thick for a new-born infant, and is not easily digested. On this account, though an infant may not be really ill, I have frequently observed it not to thrive, though it take great plenty of such milk. When the milk is of this age, there is also a greater chance of its failing before the infant be of a proper age to be weaned. A wet-nurse ought furthermore to have good teeth, at least, her gums should be sound, and of a florid colour. She must be perfectly sober, and rather averse from strong liquors; which young and healthy people seldom need in order to their having plenty of milk. She should be cleanly in her person, good-tempered, careful, fond of children, and watchful in the night, or at least, not liable to suffer in her health from being robbed of her sleep.

The diet proper for wet-nurses is likewise worthy of notice. And here, an invariable attention should be paid to natural constitution and habit. Due allowance being made for these, it may be said, that milk, broth, and plain white soups, plain puddings, flesh meats of easy digestion, and a due mixture of vegetables, with plenty of diluting drinks, and such proportion of more

* Some ladies are very anxious to procure wet-nurses who have not lain in more than a fortnight or three weeks. I have seldom found the milk of such nurses answer so well as those, whose children are eight or ten weeks old. They are not sufficiently recovered from the effects of parturition to undertake the duties generally required of a wet-nurse. S. M.

generous liquors,* (spirits excepted) as the variety of circumstances shall direct, will be a proper diet for suckling women.—Respecting vegetables, particularly, the strictest regard should be had to constitution and habit. Wherever vegetables, or even acids, uniformly agree with the suckling parent or nurse, I believe healthy children will rarely suffer by her partaking of them; but, on the contrary, the milk being thereby rendered thin and cooling, will prove more nourishing and salutary, in consequence of being easier of digestion. To these regulations should be added an attention to exercise, and frequent walks in the open air: to these, hired wet-nurses have been previously accustomed, and are therefore sure to suffer by confinement to warm rooms, equally to the injury of their own health, and of the infants they suckle.

I shall close these general directions with the following, from Struve, in a view rather to suckling parents of a delicate constitution, than hired

* Under a very prevailing idea, that porter or other malt liquor tends to produce a great flow of milk, many nurses take it in such large quantities, as to make themselves hot and feverish, and this state of feverishness always diminishes or entirely disperses the milk. The danger of allowing too much beer to wet-nurses has been so often inculcated, that parents sometimes go into the opposite extreme, and refuse to let the nurse have a sufficient quantity of malt liquor. Either excess is wrong, nor is it easy to determine, what ought to be considered a proper daily allowance; but wherever a woman has been used to drink malt liquor, she will rarely make a good wet-nurse if she is denied a reasonable quantity of that beverage. S. M.

wet-nurses. "Let two parts of milk rise over a gentle fire; and add one part of well fermented beer, previously boiled. This beverage is to be taken cold; and has been attended with the greatest advantage by women who were already so exhausted, that they thought it impossible to continue suckling their children; they became replenished in a short time, and recovered their strength with a continued increase of milk."—*Struve on the Education and Treatment of Children, &c.*

### *On Weaning of Infants.*

A principal article under this head, is the age at which it should take place; and this will depend greatly upon attending circumstances. A child ought to be in good health, especially in regard to its bowels; and ought first to have cut, at least, four of its teeth, unless that process should commence very unusually late. This seldom takes place till the child is near a twelve-month old; and it may be observed that healthy women, who suckle their own children, and take proper exercise, do not usually become pregnant again in less time, and this, I conceive, may be considered as one intimation of the properest period. We shall not be very wide, therefore, of the order of nature, if we say that children in general ought not to be weaned much earlier than this; making proper allowances, however,

for all just exceptions to general rules,* and especially as far as teething may be concerned. Small and weakly infants, if rather feeble than ill, are oftentimes benefited by being weaned; they should, therefore, about this age, be taken from the breast, instead of being, on account of weakness, nourished much longer in that way: a cautious trial of such a change should, at least, in most instances be made.

Any preparation for weaning is generally needless, and especially that of feeding children before-hand, though made a common excuse for stuffing them, whilst at the breast, with indigestible food. I have seen many mothers needlessly torturing themselves with the fear of their children being weaned with difficulty, because they could not get them to feed when eight or ten months old, and still at the breast; but I have always found such children wean, and feed just as well as others, when once wholly taken from it. I, therefore, never have any fear in that respect, and therefore wish to counteract, if possible, a sentiment encouraged by several writers, which has, I believe, no real foundation in fact, but has too often been productive both of much inconvenience and mischief. But I do not by this intend to say, that a child of eight or ten months old would be injured by a little food, once a day, of a more solid nature than the breast-milk; indeed, at that age children are

* Astruc advises children to be suckled till they are two years old, but without giving any sufficient reasons.

often benefited by it, as I have intimated before; but when children are weaned much earlier, and are fed almost from the birth merely with that view, (which is often the case) they may be essentially injured by it.

The objections to immediate weaning, which have been brought forward, have arisen, I am persuaded, from fallacious reasonings, and not from facts and experience. I have lived, as it were, in the nursery for many years, and never found any ill effects from the sudden transition from breast-milk to artificial food when properly chosen;* and as long as I shall continue the pupil of nature, I shall hearken to no argument in favour of adding a less adapted nutriment to that which nature has provided, in order to obviate possible injurious consequences, the existence of which I do not think to have been confirmed by facts.

I have remarked, that infants who are indisposed to feed at all while at the breast, are nevertheless, weaned, and feed just as well as others, when once taken wholly from it. There is, however, in a few children, a little difficulty for the first two or three days under any circumstances; but it is remarkable, that the instance attended with the greatest aversion to common food that I ever witnessed, was in an infant who had been allowed a little chicken broth once a

* Were weaned infants to be immediately crammed with animal food, it might, indeed, bear some analogy to adult persons with dyspepsy, "being all at once forced to live upon Cheshire cheese."

day for two months before the weaning was entered upon. This child was very healthy, slept well, and scarcely cried at all upon its being deprived of the breast, and yet would not receive even the food it had been accustomed to; so that for six and thirty hours it continued averse from every thing that was offered to it, though it appeared in very good humour. After the second day, however, it took a moderate breakfast, and in a little time it fed as readily as other weaned children.

Under such circumstances, if the weaning has been committed to the wet-nurse, or she be still in the house, it will be proper that strict enquiry be made, and the nurse be watched; there being instances of such hankering after the breast being kept up, by her occasionally indulging the child in that way. It may be further observed, that if the infant be in the least degree costive, a little magnesia and rhubarb should be administered, which, besides opening the bowels, will tend to create an appetite. Such infants also, where there are more young children in the family, should sit at table with them when taking their meals; as they will thereby, through mere imitation, be disposed to take food.

When the weaning is once entered upon, a great part of their food ought still to be of milk, with puddings, broths, and but little meat, supposing the infant to be of a fit age to admit of *any*: and every kind of food, and even drink, should be prohibited in the night, even from the first, supposing them to be weaned at a proper

age. The mere giving them drink, even only for a few nights, creates the pain and trouble of two weanings instead of one; and if it be continued much longer, it not only breaks the rest, but the child will acquire a habit of being fond of drinking; the consequence of which very often is a large belly, weak bowels, general debility, lax joints, and all the symptoms of rickets. The only need is, that the last feeding be just before the nurse goes to bed, which may generally be done without waking it; and whilst the child seems to enjoy this sleepy meal, it becomes a most pleasant employment to the mother, or nurse, from observing how greedily the child takes its food, and how satisfied it will lie for many hours on the strength of this meal.

### *Sleep and Watching.*

A few observations only on this subject will be necessary in this place; and first, that healthy children sleep a great deal for the first three or four days after they are born, probably from having been previously accustomed to it. They ought not, however, to be suffered to continue this habit in the day-time to the degree some children are permitted, but should be gradually broken of it; and, indeed, if not indulged, they will not be so much disposed to sleep as is generally imagined, and will, therefore, take more rest in the night, which is mutually beneficial to the child and the mother; who, especially if she

suckle, will be less disturbed, at a time when she particularly requires the refreshment of sleep.

Therefore, when infants are sleepless in the night, they should be kept more awake, and have as much exercise as possible in the day time, which, though they be ever so young, may be pretty considerable, (as will be directed more at large in its place) by playing with them, or dandling on the knee, and otherwise amusing them ; and when older, by every kind of exercise they can bear. The child, if healthy, will soon contract a habit of being very much awake while it is light, through that lively and restless spirit peculiar to infancy : and by this means another evil will be very much avoided, that of often laying a child down to sleep in the day-time for hours together, loaded with a thick dress, and covered besides with heavy clothes, in a soft cradle, or bed.

But, though I am confident these cautions will have their use, I am equally satisfied that many children have much less sleep than they require; but then this deficiency is chiefly in the night, and is often the consequence of some complaint under which the child labours, and which will be treated of when speaking of the Diseases of Infants.

Before I quit this article, it may be remarked, that the custom of constantly placing infants on the back, whether in the cradle or bed, is very improper; for, by this means, the superfluous humour secreted in the mouth, which, in the

time of teething especially, is very considerable, cannot be freely discharged, and must fall down into the stomach, where its abundance occasions various disorders. Infants should therefore be frequently laid on one side, particularly the right, as favourable to the stomach getting easily rid of its contents; to which side also children, when strong enough, will instinctively turn, if not prevented by the weight or confinement of their own clothes, or those of the cradle or bed. The chief apology for all which is, a fear of the infant's falling, or turning on its face; but this is rather an apology for the neglect of that necessary attention to infants, which, whenever it can be commanded, should never be spared them.

It only remains, under this article, to say something of the cradle, which most writers have spoken against. I believe there is no doubt but the custom of laying down children awake, and rocking them in a cradle in the day time, or at seven or eight o'clock in the evening, when they are to go into their night's sleep, as it is called, may be an occasion of making them more wakeful in the night; or at least may cause them to expect that kind of motion whenever they awake. But yet I cannot help thinking, there is something so truly natural, as well as pleasant, in the wavy motion of a cradle, (when made use of at proper times) and so like what all children are used to before they are born, (being then suspended, and accustomed to ride, as it were, or be gently swung in a soft fluid, upon every motion of the mother, and even during her sleep, from the

effects of respiration) that, always wishing to follow nature as I do, I cannot, on the whole, but give an opinion rather in favour of the cradle. It is, at least, among the *little* things in which we may harmlessly err, and in which every mother may therefore be safely guided by her own opinion, or even by her feelings. And if the child, in consequence of being sometimes rocked to sleep in the day time, shall expect it when it awakes in the night, it will not be very difficult to find a substitute for it; and, indeed, parents seem, as it were, instinctively and mechanically, to pat and gently move a child, whether lying on the lap or the arm, whenever it appears to awake prematurely. The objections to the cradle made by some late writers, militate only against the abuse of it, from any violent rocking; as though infants must necessarily be jumbled in a cradle like travellers in a mail coach. For I cannot easily persuade myself, that we are in every thing become so much wiser than our forefathers, with whom, for some ages, and in distant countries, amongst rich and poor, the cradle has been judged to be a necessary part of family furniture.

Since the last edition of this work, some new, and stern objections have been offered to the arguments I had advanced, and from very respectable authority; but, I conceive, not the result of actual experience of any ill consequences attached to the practice I had ventured to espouse. It is objected, however, that infants, after birth, pass into a very different state from

that they had been accustomed to *in utero*. True; but I have not advised children to be rocked all the time they sleep, like the unborn infant; but have merely said, that as some new-born infants certainly do not sleep so much, nor so long at a time as they ought, and are often with difficulty got into that state, through illness and other causes, I conceive they cannot be *injured* by gentle rocking, when they are first laid down in the cradle, nor from being gently, and to themselves pleasantly moved, when they may be disposed to awake prematurely. More than this I never intended; whilst my argument, from the infant having been accustomed to this waving motion *in utero*, was calculated only to combat the frivolous objection, as I conceived it to be, against this very ancient practice, and not as being a reason in itself for its continuance. But the writer observes that "no prudent person would recommend any unnecessary expedient, which may, through inattention, be improperly used." As this argument stands, it must carry conviction with it; but if by *unnecessary* be meant *useless* expedient, I beg leave to deny the supposition; and, in return, to inquire, what actual evils have resulted from the practice? For if these be neither frequent nor great, I would ask again, what good thing is there that has not been abused? or what is there of more importance to children than sleep? every innoxious inducement to which, it should seem, ought to be encouraged; and if so, the cradle, or some similar means of grateful motion, does not appear to be

wholly unnecessary.* In regard to watchfulness, however, as is observed in another place, it is usually a mere symptom, and should be treated according to its cause; but in a general way, it may be said, that nothing can so safely and effectually contribute to procure natural rest, as that exercise to be further considered under the next head.

### *Motion and Rest.*

It is chiefly the former of these that will claim our attention, as infants ought scarcely to be ever in a perfectly quiescent posture, except when asleep; and, happy for them, that active principle with which nature hath endowed them, is so vigorous and overflowing, that they reluctantly submit

* The swinging cot, as at present very generally employed instead of the cradle, is certainly less objectionable than that old-fashioned contrivance. The motion is more uniform and gentle, and devoid of the many shocks which the cradle too often produces. When the child is in perfect health, neither the cot, nor the cradle, cautiously rocked, is likely to be productive of injury; but in perfect health, the child rarely needs, (and never ought to require) such a means of inducing sleep. When the child is ill and feverish, with the pulse quick, the skin hot, the head burning and throbbing, it has always appeared to me that the rocking of a cradle is likely to occasion an aggravation of the ill symptoms; and the swinging of a cot is then not much less improper. If the adult, labouring under disease, is anxious for the greatest stillness and quietude, I conceive that the ailing child, if it could express its wishes, would equally wish to avoid every thing that approaches to jolting, or other unpleasant motion. S. M.

to it. Exercise, like air, is, indeed, of such universal importance, that neither children nor adults can possibly be truly healthy without it; whilst for the former, particularly, care should be taken that it be properly suited to their age.

The first kind of exercise consists in dandling, as it is called, patting the back after feeding, and gently raising the child up and down in the arms; taking care at first not to toss it very high, infants being very early susceptible of fear, and even capable of being thrown into fits by it. Another exercise adapted to this tender age, and of the utmost advantage, is rubbing them with the hand. This should be done all over, at least twice a day, when they are dressed and undressed, and especially along the whole course of the spine; and ought to be continued for some time, being peculiarly agreeable to the child, as it constantly testifies by stretching out its little limbs, and pushing them against the hand, with a smile expressive of the satisfaction it receives from it. Such gentle exercise may be partially repeated every time the child's clothes are changed, by rubbing the lower limbs, and every other part within reach. Likewise dashing the face with cold water, in the manner recommended for the rickets, but more lightly, will produce the effects of exercise well adapted to this age.

When children are older, their exercise should be proportionally increased, and, as has been observed, they ought never to be carried in a quiescent posture, but the arm that supports them should be continually in such motion as

the nurse may be able to continue; for children delight to be in constant motion, and this exuberant activity is given them for the wisest purposes, and ought by no means to be counteracted. And I notice the mode of carrying them, because I have seen children slung carelessly over the arm in such a manner, as neither affords them any exercise, nor allows them to give any motion to themselves; which lively children will always endeavour to do. And, indeed, the manner of carrying an infant is of more importance than is generally imagined: for, from it, the child will contract a habit, good or bad, that it will not readily give up, and may be as much disposed to become rickety by improper management in the arms, as if it were lying wet in the cradle.

It may be a proper inquiry in this place, at what age children should be put on their feet, a point on which people differ considerably; but I apprehend nothing more is required than to follow nature, whose progress is always gradual, as our imitations of her should be, and we shall then seldom run very wide of her intentions. If we take notice of a healthy child, we observe it to be always in motion, and as soon as it gets strength, it will be supporting itself by the help of its hands and feet, and be crawling about wherever it is permitted. From this exercise, it will soon acquire an increase of strength; and whenever it is upheld by the arms, and disentangled from the weight of its clothes at the time of dressing and undressing, it will naturally

walk up the waist of its mother, or nurse:* and by the manner of moving its limbs, and its bearing more or less on the arms, will show what advances it has made. Whenever it is strong enough, it will have attained sufficient knowledge to walk by itself, and will never attempt it till it is fully equal to the task. It will then be perfectly safe to permit it to follow its inclination, at least as far as the straitness of its limbs is concerned; and I think I may defy any one to produce a single instance of a child getting crooked legs, from being suffered to walk as soon as it is disposed to make the attempt. But in no wise ought nature to be forced; a maxim applicable to every other occasion; "aware (as a

* I cannot avoid taking notice here of an imprudence on this occasion, which it is well if it have not been prejudicial oftener than has been suspected; I mean, that of suffering a child to crawl so high up the neck, as to render the mother, or nurse, incapable of raising the arms high enough to support it; for not only may a child be suffered to slip out of the hands, but the mother may be injured. I have felt much on this occasion, from seeing tender and delicate ladies with their arms on a stretch, suffering a heavy child, perhaps with its shoes on, to crawl over the breasts, distended with milk, and squeezing them so forcibly against the edge of the stays, that parents have sometimes cried out from the pain, and yet not been able, at the moment, to bring the infant down into the lap. But the degree of evil attached to this, depends not a little on the fashion which the dress may assume at the time. This note was calculated for an abridged edition of this work, for domestic use; but as every medical gentleman may not have noticed this injurious custom, by not being often present when ladies are suckling their children, it is thought the caution might not be wholly improper here.

writer before quoted* finely observes) that whatever forms may, by artifice, be intruded upon her, and she compelled to assume, to enlarge, or contract her bias and inclination, she can never be made, eventually, to deviate, without manifest injury to herself, from the station and bounds unalterably impressed upon her by the unerring Power, which first created and gave her laws." But the mischief is, we lead on children prematurely to the trial, by back-strings, and go-carts, and other contrivances, calculated only to spare idle nursery-maids some trouble; or, what is really pitiable, to allow poor people time to attend to other concerns, who are obliged to work for their bread. But where this is not the case, such contrivances are unpardonable, and are the consequences of ignorance, or idleness, which are productive of great evils; and then, by way of excuse, it is asked, at what age a child may be put on its feet—a question, I apprehend, that ought to be replied to only in the manner I have done†—leave children to themselves, and they will afford a satisfactory answer in good time.

Dr. Hugh Smith, in his *Letters to Married Women*, says that children's legs do not become

* Mr. Moss.

† I have seen two children walking alone before they were nine months old, and at ten months carrying a heavy plaything in their hands; whilst other children, rendered weak and rickety by mismanagement, have been unable to do half as much at two years of age. I have even seen a child walking fairly alone, for a few steps, the day before it was eight month old.

crooked by putting them too early on their feet; and he asks if any other animal has crooked legs, though they stand on them almost as soon as they are born. But this is running to the contrary extreme; the cases, I apprehend, being widely different: quadrupeds and fowls are designed by nature to be early on their legs, and it is necessary that they should be so. They are accordingly calculated for it, their bones being strongly ossified from the birth; but this is by no means the case with the human species, and therefore no argument can be founded upon it without considerable latitude, and making such allowances for the different circumstances of children as have been pointed out.* But if it be meant only to suffer children *to feel their way*, if I may so speak, for themselves, they will never deceive us, nor do I think their limbs ever become crooked by their spontaneous endeavours to support themselves. It is by urging them to stand and walk by means of our own awkward contrivances that the mischief is produced.

A note of Dr. Buchan, on the subject of giving exercise to children, which some people, from their straitened circumstances, cannot spare time to afford them, charmed me exceedingly. The good sense and philanthropy manifested in it, as well as a desire of extending its useful contents,

* The very great difference between human beings and quadrupeds in this respect, should always be borne in mind, namely, that the whole weight of the body of the infant, in an erect posture, rests upon its two legs; whereas, in the animal, only one half of its weight is thus supported. **S. M.**

will, I hope, be apology sufficient for transcribing it, especially as it is at present so apposite to my purpose; and though I cannot flatter myself that government, however benevolently disposed, will, or perhaps can, at this time, adopt such a plan, either from his recommendation or mine, it is, nevertheless, in the power of people of large fortune, both in town and country, to give it very considerable effect, especially if the premium were made double for such children as should be produced in good health. The Doctor's words are:—

"If it were made the interest of the poor to keep their children alive, we should lose very few of them. A small premium given every year to each poor family, for every child they have alive at the year's end, would save more infant's lives than if the whole revenue of the crown were expended on hospitals for that purpose. This would make the poor esteem fertility a blessing; whereas many of them think it the greatest curse that can befal them;" and I may add, I have known them express great thankfulness when any of their children have died.

The advice contained in this chapter is further worthy of serious attention, from late discoveries of much greater fatality amongst the children of the poor of this metropolis than I ever suspected.

To ascertain the fact, an inquiry was set on foot, at the British Lying-in Hospital, at the suggestion of Dr. Combe. Inquiries have likewise been making since, in different ways; and I have no reason to suspect that the statement made

out from the report of the women offering themselves at the Hospital, is at all beyond the fatality in other poor families in London, but, indeed, rather under it, in regard to still poorer people.

The following is a brief statement of the result of the investigation at the hospital, during the first year:—

Several women who had borne

| | |
|---|---|
| 3 children, had lost as many as | 2 |
| 4 - - - - - - - - - - - | 3 |
| 5 - - - - - - - - - - - | 4 |
| 6 - - - - - - - - - - - | 5 |
| 7 - - - - - - - - - - - | 6 |
| 8 - - - - - - - - - - - | 7 |
| 9 - - - - - - - - - - - | 8 |
| 10 - - - - - - - - - - - | 9 |
| 11 - - - - - - - | 8 and 10 |
| 12 - - - - - - - | 10 and 11 |
| 14 - - - - - - - - - - - | 11 |

And several of the mothers of the different numbers had lost them all.

During another long period, only one woman, having borne as many as five children, had reared them all; and one, having had twelve, had *eight* living. But some having had four, had lost *three;* and five, had lost *four;* and six, *five;* and seven, *six;* and eight, *six* and *seven;* and ten, *seven* and *nine;* and women having borne eleven and twelve, had lost *eight, nine,* and *ten;* and fourteen, *eight;* with many who had borne four, five, and six, one twelve, and another twenty-one, had buried them all. In addition to

this, may be remarked the sad and rickety state of many of the surviving children.*

The above, indeed, contains the most formidable view of this matter, but the most favourable is, by no means, such as to counterbalance it; there being, during a year and a half, no more than three women, I think, who having borne only three children; and one woman, lately come from the country, having four children, who had lost none of them. Only one having had as many as six had them all living; and another, who had preserved eight children out of ten. Amongst the surviving ones, however, it was frequently observed, was the last born; therefore, one less likely to be reared than an older child.

From these different degrees of fatality, further contrasted with the small number of deaths in the hospital, within the month, we may suspect the different care and attention bestowed upon young children, as well as the want of certain accommodations; and may fairly argue on their effects, there being no such fatality amongst the opulent. A singular corroboration of this remark, I have an opportunity of noticing: a lady, who had borne fifteen children, and no more, had them all sitting around her table at dinner; and in two other families there were twenty-one children at table; and a lady once told me, that

* During the time that I was the obstetric physician to the Westminster General Dispensary, I instituted a similar inquiry, and the result was similar: there was scarcely an instance of any woman who had preserved all her children, if she had borne more than three. S. M.

the number of her children and grand-children amounted to forty-seven.

It would be unpardonable not to add a few words in this place with a peculiar reference to *females;* upon whom, besides every infirmity common to the other sex, is imposed the painful task of child-bearing. It is the benefit of the lower class of people, indeed, that I have here principally in view; though the caution is not utterly unnecessary elsewhere. The many distressing, and sometimes fatal labours I have been witness to, have led me to regard with a kind of horror, a rickety, distorted female infant; whose parent's or nurse's neglect, or ignorance, is heaping up for it additional sufferings and dangers, to those which are great enough under every advantage that art and good health can contribute.

From the age of two years, therefore, or rather earlier, this care is especially called for; and besides every caution already pointed out, lays a strict prohibition on girls being suffered to sit, for hours together, on a low seat; whereby the pelvis is pressed between the lower extremities and the spine, and is made to grow out of its natural form. The consequences of this change of figure, if it be anywise considerable, cannot fail to be productive of increased pain and dangers in parturition, frequently equally fatal both to the parent and her offspring.

I am aware that many poor people are not in circumstances to give their children all the exercise they require; they may, however, suffer them to afford as much as possible to themselves, by allowing them to crawl about on the floor,

near an open window or door, instead of compelling them to lie on their backs, or to sit upright, pinned in a chair; the ill consequences of which are so exceedingly evident.

It is hoped no apology may be thought necessary for these obvious remarks: since no pains should be thought too great if they may prevent the evils here pointed out, nor can too much be said to inculcate good nursing, (and especially exercise) which is alone adequate thereto.*

A very few words may suffice on the head of *Rest*; the irregularities therein being far less numerous and important than the former. In a general way, it will be sufficient to notice them in regard to the improper inducement of young children to continue in action after they feel themselves wearied, and in keeping them out of bed beyond a proper hour. Children in health never wish to sit still when they do not actually feel it to be necessary, much less to go to bed over early. But it is to be remembered, that young people require more sleep, and to be longer in a recumbent posture than adults; for though they usually rise very early, they get to rest more than proportionally soon, being disposed to fall asleep almost the moment they are still; and this is natural to them, and is a demonstration of the advantage of exercise.

* A proper attention to this, and many of the preceding articles, has been conceived to be of so much importance, that the benevolent governors of the British Lying-in Hospital, some years ago gave orders, that suitable directions on these heads should be drawn up, and given to every mother, on her leaving that charity.

*On some slight Natural Deformities.*

Prolix as these articles may already have appeared, it may, nevertheless, add a completeness acceptable to the younger part of the profession, to comprehend under them other particulars of no small importance, that relate equally to both. These will respect the different *modes* of motion and rest, in order to point out the several improprieties that have a natural tendency to induce, or increase, various corresponding deformities.

Such will relate to the manner of children's *standing*, *walking*, *sitting*, and *lying;* and will particularly respect the position of the head and feet, and the form of the back, shoulders, and hips. It may not, therefore, be improper in this place, nor, it is hoped, be thought going out of the true line of my profession, to advert a little to each of these. Indeed, to propose regulations of any kind, merely with a view to graceful standing or walking, would be highly incompatible with the intention of the work; but since this part of it is appropriated to the general management of children, it is hoped the reader may not deem it altogether impertinent that he is invited to pay attention to certain things, which, for want of correction whilst children are young, and frequently under the eye of medical people, may, by the neglect of their ordinary, and less intelligent attendants, grow up to real evils. For it is very certain, that, from an im-

proper manner of resting upon any of the extremities, whether in sitting or otherwise, different parts may take an ill form; and what is worse than an awkward appearance, (to which their parents are apt to confine their attention) children often grow up weak; whereby the poor become unfit for those labours and exercises for which they are designed, and the necessities of their situation frequently demand.

And I here beg leave to remark, that the very means frequently made use of by people of rank, to prevent some of these deformities, may, on the contrary, occasion them. Such are the use of steel collars, various sorts of stiff stays, and other tight bandages. For I am confident, nor am I singular in the opinion, that when recourse is had to these things, before any parts have taken a wrong turn, they are very likely to occasion it. Not that such contrivances are afterwards improper; for when the bones have, by any means, been thrown out of their natural direction, art can frequently rectify it, and point out where to apply, or to take off pressure. But before this, and while the bones are growing, compression, however properly applied, is, in effect, oftentimes ill-directed, owing to the continual and irregular action of children, especially when they feel any parts unpleasantly confined.*

* The very interesting subject of curvature of bones, deformities, debilities, &c. has attracted the attention of several very eminent practical anatomists and surgeons of great mechanical skill and ingenuity, and much light has in consequence been thrown upon the pathology of these complaints; and

I come now to the circumstances immediately hinted at, and first those which regard the head or neck.

Many infants come into the world, either with the neck drawn a little to one side, or an awkward turn of the head appears to take place afterwards. In the latter instance it may be the effect of habit, and, amongst other causes, may be owing to children being placed in the cradle, or carried improperly, so that the light, and other objects that forcibly attract their notice, are too frequently on the same side. The remedy in either case, as far as it may become such, is obvious, differing nothing from the intentions noticed in the chapter on squinting: every thing should be so contrived as may tend to draw the head to the other side, and especially such things as may have a sudden and forcible operation on the muscles, by producing strong voluntary motions. It may not, perhaps, occur to every one, how much may be effected by such means: several striking instances, of it, however, have been met with;* and we daily observe

appropriate means of relief have been devised. The writings of the late Mr. Wilson, of Dr. Harrison, Dr. Jarrold, Mr. Ward, and Mr. Copeland, &c. on the diseases of the spine, ought to be consulted by all who undertake the treatment of these calamitous complaints. The practical and scientific works of Mr. Shaw are particularly deserving of attention.

S. M.

* An Ambassador from Morocco, being at Paris, went to see the Charity Hospital, where, passing the ward for the wounded, six of them, who had not stirred for several months before, rose up, and came to the ambassador, to the great surprise of

similar effects of a certain position in flowers and shrubs, which, without any help from the hand, turn about, obedient to the air and sun operating upon their internal structure.

The next observations respect the back and shoulders. Some young children, naturally well-formed, acquire after a while what is termed round-shoulders; the vertebræ of the neck and back projecting too much, and forming an unsightly curve.

The morbid affection of this part will be considered in its proper place; I have only to notice here a change arising merely from some bad habit or custom, through an improper manner of *sitting* or *standing*. In regard to the former, it may be observed, that the soft concave-bottomed chairs, in which young children usually sit, are on many accounts improper for their years, who should always make use of a flat and hard seat, and generally without arms, as directed for the *prolapsus ani;* which complaint it would have a tendency to prevent. But in the hollow-bottomed chairs children find themselves obliged to recline in one way or other, or to be making certain exertions for keeping themselves

the whole hospital: * curiosity or surprise effecting that which the most powerful medicines could not, in so short a time.—The like circumstance is reported to have taken place, from a fire happening in the house where an elderly lady had long lain bed-ridden; who, perceiving the fire, suddenly rose up from her bed, without any assistance, and ran into the street.

* Histoire de l'Ambassadeur de Moroc, Envoyé au Roi de France, en 1682.

upright, and preserving an equilibrium of the body; and it is obvious, that either a bending posture, or the efforts necessary to avoid it, often repeated, may become hurtful to weakly children.

An improper manner of *standing*, though less frequently a source of this kind of mischief, on account of the position being more frequently varied than in sitting, is, nevertheless, capable of giving an awkward turn to the back and shoulders, as well as to the feet. We are creatures of habit, both in respect to our bodies and minds, so that to whatever we may have, for a little while, accustomed ourselves, we have an increasing propensity; and when the habit is once formed, it is with difficulty broken. Children should, therefore, be early accustomed to stand very upright, instead of being suffered to lean upon whatever may happen to be near them, as they are frequently disposed to do.

Should one of the shoulder-blades *project* more than the other, the child should lie, as much as may be, on the contrary side; as the shoulder upon which one lies always projects beyond the plane of the back. When the shoulders themselves happen to be too high, a child so disposed should never be suffered to sit in an elbow chair; nor should any child sit before a table that is either much too high or too low for the seat in which he may be placed, especially if it be for the purpose of reading, writing, or any other employment that may engage him for any length of time. But if one of the shoulders is *higher* than the other, the child should frequently be

directed to stand only upon the foot of that side, at least to bear his weight chiefly upon it; by which means the shoulder that is too high must necessarily fall lower, and the other be raised; or a small weight may be put upon the shoulder that is too low, which will incline the child to raise it up. Or he may be caused frequently to carry a light chair, or such like, or plaything, in the hand of that side, which will have the same effect. The like means should be used when one hip is higher than the other, which is both a very common and peculiarly unfortunate complaint, especially to females.

Another easy and efficacious means of rectifying the shoulders, is to make the child support himself with a very short cane on the side where the shoulder is too high, which will oblige him to lower it; and, at other times, to put one that is too long for him into the other hand, which will raise the shoulder on that side. He may likewise often sit in a chair with two arms, one of them being made a little higher than the other.

These, and other similar means, may be very easily complied with; and several of them so managed as to be made a sort of play or amusement to the child; and, if properly persevered in, will correct many deformities that have originated merely from bad habits, as well as conspire with other contrivances to remedy such as may depend upon a slight mal-formation.

The *feet* of children are likewise liable to receive an improper turn; and this may arise from habit, as well as from original mal-formation.

Children, when conversing with those with whom they are familiar, seldom stand firmly on their feet, but are apt to lean upon one side of them, so as to bear almost upon the ankle, instead of the soles of the feet. By degrees, this habit is not only increased, but the tendons themselves are disposed to contract, or those on the opposite side become weakened. In the like manner, by standing upon the toes, the tendon of the heel, in time, becomes shorter, as was formerly very manifest in women who wore very high-heeled shoes. To obviate the former, little more is required than to correct the child's manner of standing, by teaching him to bear firmly on the bottom of his feet; or if a foot be turned very much to either side, the sole of the shoe may be thickened upon the side on which the child bears. If, by treading upon the toes, the heel is become contracted, the heel-piece should be taken off from that shoe, instead of its being raised, as hath sometimes been very improperly done. Beside this, such children should be frequently caused to walk up steep ascents, by which they will be obliged to raise up the fore-part of the foot, whereby the tendon of the leg will be stretched, and the heel must fall lower.

Most of the remedies proposed for these little disorders, will have another advantage, as they necessarily inculcate exercise, in favour of which so much has been said; the great neglect of it, especially among the younger children of the poor, is daily lamented by every man of observa-

tion and feeling, and the more so, as it is a good they cannot always command.

If I had not already far exceeded the bounds I had intended, I should be induced to say something on the manner in which exercise becomes so beneficial to children. Let it suffice, however, to extract a few of the pertinent and elegant remarks of Desessartz * on this head, whilst

* "La liaison et la dépendance que l'auteur suprême de la nature a établies entre toutes les parties de ce composé merveilleux, sont si intimes, que le Prince de la Médicine nous a répresenté le corps animé et jouissant de ses fonctions, comme un cercle dans lequel on ne peut reconnôitre ni commencement, ni fin. En effet, les instrumens destinés à la chylification tirent toute leur force des organes de la sanguification, ceux ci des nerfs et du fluide qu'ils contiennent : et ce fluide (si nous en croyons le système le plus universellement adopté, et auquel il manque peu de chose peur être démontré : ce fluide) tire son origine du sang, et le sang des alimens que nous prenons tous les jours. De la constance et de la régularité de fonctions aussi différentes, et multipliées dépendent notre santè et notre vie. Il ne suffit pas de prendre des nourritures, il faut quelles soient bien digérées, changées en sang, et ce sang doit être assez travaillé pour fournir non seulement la lymphe nourriciere de tout le corps, mais encore un fluide très-subtil qu'on apelle fluide animal. Chaque liqueur doit être separée dans ses glandes, et celles que la nature rejette comme inutiles et dangereuses, doivent être poussés au dehors.

"Or, rien n'est plus propre à faciliter et a perfectionner toutes ces opérations, que l'Exercise. Si nous jettons les yeux sur notre corps, nous y appercevrons une multitude de vaisseaux qui sont entrelassés les uns dans les autres, serpentans entre les fibres musculaires, à la pression successive desquelles ils doivent une grand partie de leur movement et de leur actions sur les fluides. A mesure que les muscles entrent en

I more briefly observe, that exercise tends to push forward the blood through the small vessels, and to unfold them in the manner nature has designed them to be extended, in order to promote the growth of the infant, whilst it preserves the blood in a proper state of fluidity, and promotes both the secretions and excretions; which are the next things it was proposed to consider.

### *Retention and Secretion.*

Every medical reader will be sensible, how greatly health depends upon a due proportion between the daily supplies and the various discharges of the body; the latter will vary according to the diet, age, and particular mode of life of each individual. The excretions of infants, however, insensible perspiration excepted, are chiefly from the bowels and bladder. The latter is not very liable to disorders: as these sometimes take place, however, the subject ought not to be entirely passed over.

jeu, ils produisent des secousses reiterées sur les vaisseaux sanguins, qui se communiquent dans tout le système artériel et veineux. Ces secousses non seulement procurent aux fibres la force, et la souplesse, qui caracterissent leur bonne constitution, mais elles broyent, atténuent et subtilisent les liquides contenus dans les vaisseaux, achevent la transmutation du chyle en sang, en lymphe, et en fluide animal; la circulation est plus libre, les sécretions se font mieux, et plus uniformément, et la digestion en devient plus parfaite."—*Traité de l'Education corporelle des Enfans en bas Age.*

*Retention of Urine in New-born Infants.*

Retention of urine during early infancy, is usually removed by applying a bladder of hot water to the belly, and gently rubbing with a little warm brandy, with oil of juniper, and oil of almonds, or an onion, and throwing up a clyster; or, should these fail, the infant may be put up to the breast in a pan of warm water, and take a spoonful of marsh-mallow, or parsley, or wild carrot tea, sweetened with honey, with the addition of two or three drops of the *spirit. æther nitrosi.* This, if there be no mal-formation of parts, will generally produce the desired effect in the course of a few hours :* though cases have occurred in which infants have voided no urine for the space of four days, and have suffered very little inconvenience: I have even known one instance of the suppression continuing for five; and it is remarkable, that two former infants in this family voided no urine for three days. Should the suppression, however, continue for two complete days, the

* The urethra of new-born infants is sometimes obstructed by inspissated mucus; it may be proper, therefore, when many hours elapse without any water being voided, to pass a small probe, or bougie, in order to ascertain whether there be an actual impediment to the passage. In general, the non-voidance of water arises, not from want of expulsatory power in the bladder, but from want of secretion in the kidneys. In this case, clysters, fomentations over the loins, the warm bath, and emollient diuretics, are the appropriate remedies. S. M.

following cataplasm may be applied warm to the region of the pubes.

Take of parsley and mallow-roots, leaves of cresses, and juniper-berries, of each a handful, and of the roots of garlic one ounce; boil them slowly in water, or in wine, to the proper consistence for a poultice. On the other hand, the sudden application of cold to the *regio pubis*, has sometimes produced an immediate good effect. Where all these means have failed, and the infant been in much pain, I have directed a clyster with a few drops of laudanum, which has presently removed both the pain and suppression.

As in adults a suppression of a very distressing kind, sometimes occurs ~~merely~~ from a spasmodic stricture of the urethra, and not only resists, for a length of time, the ordinary means of cure, but is found to recur again after a temporary removal, it may not be amiss ~~just~~ to notice it here, as the complaint may, possibly, be met with in robust youths, although I have never yet seen it. The remedy for it is also very simple, and, I believe, newly-discovered, and first announced by Mr. Cline,* consisting only in the *tinctura ferri muriatis*, which he advises in the dose of gtt. x. to adult persons, every ten minutes, till some relaxation shall take place; which generally happens in the course of an hour.

Some of the old writers have spoken also of incontinence of urine, arising from weakness of the sphincter of the bladder; but I have never met

* Medical Records and Researches.

with it in early infancy. They prescribe agrimony and myrrh, and direct astringent fomentations of red wine to the belly, perinæum, and loins: for adults, (it being no uncommon complaint in old people) three grains of camphire in a pill, and fifteen or twenty drops of laudanum in a dose of camphire julep, twice a day, have speedily removed the complaint.

### *On Retention and Excretion of the Bowels.*

So many particulars relative to these points are discussed in the following pages, as render it needless to say more now, than that (generally speaking) infants are rarely healthy long together, who have not two or three stools every day; or should they be more, for the first three months, if the child be brought up at the breast, and the nurse have a sufficiency of milk, it will generally thrive the better. The stools likewise ought to be loose, of a yellow colour, free from lumps, or curdy matter, neither of a very acid nor fetid smell, and should come away without griping. When children are about a year old, or perhaps earlier, pains should be taken to procure one stool at least every day, as well periodically as constantly; and for this the morning is most adapted, and after their breakfast, by which the stomach and bowels will be stimulated. To this end they should be set on the chair, and not suffered to play till they have had an opening, for which they should strain, till at length it be-

comes customary, which may be easily effected; by which we shall gain a point with respect to the health of children. On the other hand, if an infant be dry-nursed, the danger generally lies in the other extreme, such children being disposed to be purged, and to have griping and sour stools, from the acescent, and oftentimes indigestible nature of their food, especially if fed by the spoon; and therefore require an early attention when their bowels are disposed to be open, or, on the other hand, the feces are too stiff and clayey; and their food ought to be changed, in the manner directed under the article of Purging.

### *The Passions of the Mind.*

This is the last article mentioned as included in the *non-naturals*, and on which I shall be very brief, it being the happiness of infants to be very little affected by them. This article can, therefore, relate to them merely in regard to their mode of expressing such passions, and principally respects laughter and crying. The former, if long kept up, or very violent, may not only induce the hiccough, but may even throw an infant into fits. The latter is much oftener suspected of being mischievous; and chiefly by occasioning fits, or a rupture; the excess of both these affections should, therefore, be guarded against. Moderate, and not too frequent crying, however, ought not to be alarming; and, indeed, a variety of considerations in-

duce me to think, that this expression of the passions in infants is not only much more harmless in itself than is generally imagined, but is also, in some respects, salutary. The first cries it makes we know to be so, and that children recover from the paroxysms of some complaints by an effort of this kind. It is evident, likewise, how very much health depends on a free circulation of the blood through the lungs, and on their free expansion from the dilatation of the bronchial vessels. But as new-born infants are incapable of giving themselves any exercise, and, indeed, of receiving that kind which tends to promote such an effect, I have conceived crying to be an effort which nature may have wisely substituted in its stead.* Whatever is truly natural I always conceive to be right, though every thing is capable of being abused; and the most beneficial dictates of nature may be exceeded. I am satisfied, however, that the pacifying of children by improper means, and especially cramming them with food when they are not hungry, occasions far greater evils in thousands of instances, than ever were produced by the irritation from crying.

The cries of infants, however, it must be confessed, are, very commonly, plaintive; and, as they seem to argue distress, cannot but create it in every person of sensibility around them, and merit a strict inquiry into the particular oc-

* Fletus moderatus pueris non obest—pectus dilatat et calefacit.—*Primeros.* See also *Aristot. Politic. lib.* vii. *c.* 17, where the idea is supported more at large.

casion of them. The nurse, therefore, who can with calmness hear an infant cry, without attempting to pacify it by every proper means, is a monster in human shape, unfit to be trusted with the care of rational beings; much less with a tender, helpless creature, whose only language, by which it can express its wants or its sufferings, is its TEARS.

I cannot take my leave of the reader, without offering one apology more for having dwelt so long on this, and some other heads less important than the rest; my motive has been the desire of instructing, though in some instances at the risk of tiring, or otherwise displeasing; but practitioners, who feel as parents, will endeavour by every other means to lessen a mother's fears, as far as they may appear to be needless, wherever no other remedy can be offered.

I shall conclude by observing, that though the passions of the mind refer so little to infants, they relate very materially to the wet-nurse; who, besides endeavouring to keep her spirits as calm as possible, ought to be exceedingly careful not to put a child to her breast, when under the influence of undue passion, of whatever kind it may be, the bad effects of which are instanced under the head of diseases. And I shall think myself well recompensed for the trouble I have had, if the counsel I have been able to offer, may prove the means of lessening the dangers of the infant state, and the consequent sad fatality that attends it; as well as of abating the anxiety of the fond mother, who, after having brought her tender

charge into the world with sorrow, is pierced with double pangs at its leaving it; an event which, as experience warrants me to say, may by art and good management, be often prevented, and the author ardently hopes, that both parents and practitioners may have fewer occasions to lament.

ON THE

# DISEASES OF CHILDREN.

## PART I.

THE following account of the diseases of children, which in its later editions has made its appearance in a somewhat new form, and less exceptionable to professional men, it is hoped may place this branch of medicine upon a respectable footing, and exhibit a practice as founded and rational as in any other. That no such serious attempt had been previously made, is sufficiently acknowledged; although detached parts, and some of the more important diseases of childhood, have been ably considered at different periods.

For the manner in which the work is now executed, the author can only say, that in addition to a long experience, he has carefully consulted the most respectable authorities, as well ancient as modern; while, by a close attention to facts, he has endeavoured to obviate the effects of that peculiar veil,* which is said to obscure infantile

* There is nothing to which this peculiar obscurity may be referred, but the incapacity of infants to describe their own feelings. There are, nevertheless, other sources of information, less fallacious, sometimes, than the more literal description

disorders. A practical arrangement of them has been studied, comprehending likewise the natural consecution of parts, and the order of time in which the complaints severally appear, that some conformity may be every where observed. Regard has also been had to their respective causes and symptoms, tending to elucidate their nature, and render their treatment more obvious than has been generally imagined.

To their immediate diseases, is added an account of some of the principal accidents and injuries to which the earlier periods of childhood are peculiarly liable; and though such articles may, indeed, be very unimportant to some readers, it is presumed they will have their use; and may, possibly, prove no small satisfaction to others. And here it may not be improper to observe, that whatever merit the publications of others may possess, they either form a part of some large systematic work, or else they are far too concise, and have omitted complaints of too much importance to be over-looked, as well as been necessarily silent on many, with which the authors themselves were unacquainted.

The judicious treatment of infantile disorders, demands, indeed, equal attention and experience; close and repeated observation being the great means of supplying the want of that kind of as-

of adults, which, in nervous complaints particularly, would tend to perplex the ablest physician, if he should always be led by them; and the like necessary discrimination will serve him equally well in the treatment of infants.

sistance, which the personal information of adult patients frequently affords. The disorders of childhood, however, are nowise mysterious, nor would ever have been thought so, if they had always been submitted to proper hands, and been as carefully investigated as the diseases of adults. Nor is it otherwise with the diseases of the earliest infancy, of which it may be safely asserted, that as they are more obvious than they are generally supposed, so is their number comparatively small, their cause uniform, and the treatment of most of them simple and certain.* This is especially true of the disorders of this period, though it may, perhaps, be objected, that their various diseases cannot all originate from one and the *same* cause; nor is it my intention to assert it, though it may be safely advanced in regard to a great number of them. It is to be remarked, likewise, that it is precisely the complaints of *early infancy* that are here spoken of; though it is, nevertheless, very evident, that there is a greater *uniformity* also in the *causes* of the several disorders, even of older children, than there is in those of adults, which have very often various, and dissimilar remote causes, at different times, and in different habits; *e. g. obstructed catamenia, ascites*, &c.

For the proof of these assertions, as well as in order to establish a rational practice, I shall first

* Facilimè inquam in morbos dilabuntur infantes, et nisi aut seriùs aut imperitùs tractentur, facilimè in sanitatem restituntur. —*Harris, de Morbis Acutis Infantum.*

consider distinctly the causes and diagnostics of their complaints, before I attempt to enter upon their cure.

And here I shall not attend to their various remote causes, but I shall confine myself to a practical consideration of the subject, and point out their obvious occasions and symptoms. And, on this account, I shall not take notice of all the changes which Nature herself induces during the growth of infants, as they pass from one stage of life to another; which are, doubtless, remote causes of some of their complaints. A more minute attention, indeed, would lead only to diffuse and uncertain theories, which have been established in one age only to be rejected in the next. In this country, at least, such vague theories are now deservedly laid aside; though an era, perhaps, better calculated for their investigation, than those wherein such subjects were agitated with a zeal proportionate to the writers' comparative ignorance of anatomy, and those principles of the animal economy, which can be established only by a close observance of facts.

A principal cause, mentioned both by ancient and modern writers, is the great moisture and laxity of infants; which is necessary, however, in order to the extension of parts, and the rapid growth of young children. This laxity arises from the vast glandular secretion, their glands, in general, being much larger in proportion than those of adults. I might instance in the thymus gland, and particularly in the pancreas and liver. But, besides these, there are innumerable glands

situate within the mouth, œsophagus, stomach, and bowels, which are continually pouring out their contents into the first passages. This is, doubtless, a wise provision of nature; and I cannot, therefore, think with Dr. Armstrong, that the gastric juice renders the chyle less fit for absorption, for without a due proportion of it, no good chyle can be made; but as even the best things may sometimes exceed, and as we do not strictly follow the dictates of nature in the management of children, as to their food, manner of clothing, sleeping, &c. this abundance of slimy matter may often overload the stomach and bowels, the constant seat of the first complaints in the infant state.* A second cause arises from the great irritability of the nervous system, and the delicacy of the muscular fibres, whereby the serous juices do not readily enough return, but remain longer than is consistent with a free circulation through the extreme parts. The quality of the milk, or other food, with which infants are nourished, may be accounted a third. In addition to these general causes, may be reckoned the want of exercise,† which at a more advanced age, happily for

* Non quod ætas per se sit causa ullius morbi, est enim res naturalis et temporis determinatio, sed quia disponit ad morbos quosdam facilius suscipiendos si causæ eorum accesserint.—*Primeros: de Morb. Infant.*

† Exercise is the grand mean of health. The irrational species are capable of affording it to themselves almost as soon as born; and though infant children are not, they are passive, and can be *exercised*. Nature and instinct point out the expediency of it, and the fond mother, who follows only her own

us, we are obliged to make use of, and which art, in general, does not duly supply in regard to infants.*

Hence arise acidities in the first passages, a constant attendant upon all their early complaints.† Among the first of which, may be reckoned the retention of the meconium, and the last (which may be termed a disease peculiar to infants) is the cutting of the teeth, in which likewise the state of the bowels is very much concerned.

Upon each of the above heads, it will be necessary to make further observations as occasion may offer, in order to take notice of certain accidental causes arising from mismanagement, or errors in the *non-naturals*; especially in regard to the quantity of nourishment administered to infants, and inattention to the state of their bowels.

inclination, naturally and insensibly adopts it. On this head see the article of Motion and Rest.

* Together with these sources might be noticed another, not mentioned by writers, though not, indeed, an efficient cause of infantile complaints, but an occasion arising from that constitution the Creator appears to have established, as a law of nature running through the animal race; I mean, the rank which the several species hold in that scale. For, whatever their apparent comparative strength may be, the more noble and useful amongst them, whether domesticated or wild, (though, indeed, we cannot say precisely what the latter would be in a perfect state of nature) seem to be liable to far the greater number of evils. It is possible, indeed, some philosophers may be disposed to draw very unbecoming inferences from such a position; but there are others who conceive it to be very justifiable, and analogous to various established facts in the dispensations of Providence towards lapsed creatures.

† Sylvius de le Boe, Harris.

The symptoms of these first diseases of infants, (by which we also judge of their nature) are chiefly retention and excretion; sour belchings; sickness; vomitings; purgings; the nature of the matter thrown off; watching; inquietude; contraction and sharpness of the features; blueness about the mouth; turning up of the eyes; thirst; heat; the manner of breathing and of crying; retraction of the lower extremities; and pustules, or eruptions, external or internal. The pulse and urine are less certain marks in the greater number of their complaints, than they are in older children, and adults. To this may be added, the openness, or firmness of the fontanelles, and of the sutures; the size and figure of the head, and the strength of the bones; and the relaxation or contraction of the skin in general, and of the scrotum in particular.

Having thus briefly adverted to the general causes and symptoms, I proceed to the consideration of the disorders themselves, beginning with one hitherto unnoticed by writers; which, though very rare, seems to be the first that can take place after the birth, and is a kind of

*Syncope, or Fainting.*

Many new-born infants, it is well known, lie, for some time, in a very feeble and uncertain state, with no other sign of animation than a weak pulsation of the heart, and the arteries of the umbilical cord. But I have only in one in-

stance seen any thing at all resembling the true syncope, after the living powers have once prevailed. In this case, the child was born at the instant its mother was moving from her chair into her bed, and in consequence, unfortunately, fell with violence on the floor. It, however, very soon cried, and did not appear to be materially injured; but, a day or two afterwards, fell into a strange, languid state, very different from any thing I had been accustomed to see. Stools being procured, it revived, and frequently took plenty of nourishment; but at intervals sunk into its former languor, breathed very faintly, and died about the sixth day.

But, with the following case, which comes precisely under the idea of *syncope*, I have been favoured by the ingenious Mr. Hey, senior surgeon to the infirmary at Leeds.

He reports that an infant, born at the full time, lay moaning and languid for four or five hours, and was then seized with a fainting fit, in which it continued for half an hour. In this state Mr. Hey found it. It had ceased to breathe, except now and then giving a gasp, or sob; and was as pale as a corpse. There was, however, a sensible pulsation of the heart, though feeble and slow; but whether the circulation had been kept up all the time previous to his visit, could not be ascertained.

As soon as Mr. Hey had time to consider the case, he directed the infant's nostrils and temples to be stimulated with the *volatile alcali*, and when it became capable of swallowing, a few drops of

the *tinctura valerian. volat.* were administered in a tea-spoonful of water, and repeated at proper intervals; it likewise took a tea-spoonful of the *ol. ricini.*

The child had three other similar attacks in the course of the day, though it had slept composedly between whiles, and sucked at the breast. It had seven more fainting fits in the night, two of which were severe ones; but Mr. Hey was not called again till the next morning. He then observes, that reflecting on the case, and comparing it with that of a man whom he had seen thrown into convulsions by a large bleeding, after having hanged himself, which were cured by the above tincture given in wine; Mr. Hey pursued the like plan with the child, and administered the drops in a tea-spoonful of a generous white wine, every two hours. The infant was very sensibly refreshed by the first dose, and had no return of the disorder, except in the slightest degree, and became a very healthy child.

The *tinct. valer. volat.* administered in this manner, is also an excellent remedy in other instances of debility and languor, when the *primæ viæ* have been previously cleansed.

A kind of syncope not dissimilar to this, but taking place a few days after birth, has been removed by a very different stimulant, which would not have been had recourse to, if various other means had not failed. Infants in this syncope appear to be dying for several days, and have even been concluded actually dead; but reviving again, relapse as before. In this state, the fume

of lighted tobacco has been forced into the mouth with the happiest effect, though at the expense of a considerable struggle, succeeded by a strong convulsion. Upon the spasm subsiding, however, the infant soon falls asleep, and awakes apparently well, and continues so for several hours; but the syncope returning, the fume should be repeated.

If the struggle should return, it will prove slighter than the former: and neither that, nor the convulsion, will probably be renewed after a second recovery.

### *Discoloration of New-born Infants.*

An affection of new-born infants, not much more common than the former, is a discoloration of the face and extremities, and sometimes of the whole body; and, like the former, seemingly independent of the circumstances attendant upon the birth. A mere discoloration of the face after laborious deliveries, is very common, and gradually disappears, without affording any occasion of alarm. But in the present instance, the parts are very black, and afterwards turn of a leaden-blue colour; sometimes appearing at the instant of the birth, and at others not for an hour or two afterwards, or sometimes a day or two. In one instance, I remarked the discoloration of the face to be partial, appearing in spots; the greater number being of the size of small peas, but some

larger. In some instances, the discoloration abates a little, and in others not; sometimes it goes entirely off, and returns again, and in that case is of more serious consequence, and commonly dangerous. From an examination of the parts after death, I have learned, that this recurring blackness depends upon some internal mal-formation or derangement,* and for which nothing that I know of can be attempted, but the general remedies for fits; which indeed usually follow when none of the subsequent means prove effectual.

From the result of this recurring blackness, it seems always to be owing to some fixed cause, excited into action by certain circumstances, particularly any sudden agitation of body or mind. In such cases, the disappearance of the discoloration is followed by a return of the tinge of as deep a colour as at first. But in the innoxious kind, which is the more immediate subject of this chapter, though the blackness in some instances, after abating a little, again returns, it never acquires the deep colour it had at first, and when it has once completely disappeared, it never returns.

This discoloration, therefore, probably depends merely on some spasm affecting the external veins, and interrupting the free return of the blood into the larger vessels. Where this

* In one instance, the subject of which died about the tenth day after birth, the malformation was in the stomach; the pylorus being preternaturally strait, with difficulty permitting the food, (which was only breast milk) to pass into the bowels.

is the sole cause, the discoloration, howsoever great, is probably harmless, and would in every case soon abate, and in time entirely disappear; but is removed sooner by proper remedies. The only necessary means seem to be, to procure stools (which should be immediately solicited by clysters); to excite vomiting, if the infant appears to be sick at the stomach; and to rub, or gently chafe the body and limbs before the fire. But nothing tends to remove the blackness so suddenly or sensibly, as applying a leech or two upon, or near the livid parts; and this should therefore always be had recourse to, if the blackness does not very evidently abate in an hour or two after birth, by the help of one or more of the means that have been recommended.*

* The discolorations which are observable soon after the birth of children, if not occasioned by mechanical pressure, or injury during the labour, frequently depend upon deficient formation of the heart or arterial system, and are consequently little under the influence of medical treatment. When the discoloration is observed before the pulsation has ceased in the umbilical vessels, it may be useful to divide the funis, so that the blood passing through the umbilical arteries may be received into a cup to the amount of one or two ounces. This, and immersing the child in warm water, offer the most probable means of relief, whether the discoloration arises from a permanent or temporary cause. For the discoloration which comes on some hours after birth, nothing seems more likely to be useful than the plan recommended by Dr. Underwood.

S. M.

## *Retention of the Meconium.*

The meconium is that black, viscid, or tenacious matter, which every infant parts with by stool, for the first two or three days after it is born, or retains it with manifest injury.

The ordinary source of infantile complaints, originates from something amiss in the first passages, according to the most ancient and modern writers.* And I am satisfied, that a foundation is sometimes laid for them, from not duly attending to an early expulsion of the meconium, which will sometimes firmly adhere to the coats of the bowels, and remain for many days, unaffected even by powerful medicines; sometimes occasioning dangerous complaints from the birth, and at others, giving rise to more remote evils; and, therefore, on both accounts, calling for the early attention of practitioners. I shall only observe in this place, that though the meconium should not be all retained, yet a part will often remain much longer than has been usually imagined, and will come away, perhaps unnoticed, at a late period, when no retention of it has been suspected. Of this I can have no doubt, having been called to visit infants after the month has been expired, who have been unwell through all that period, and from whom meconium has still been coming away. A tea-spoonful of *ol. ricini*, given once

* Hippoc. Celsus, Ægineta, Harris, Armstrong.

or more, has soon carried off a great quantity; upon which all their complaints have disappeared.

The meconium is, probably, no longer of use after the child is come into the world, unless it be to keep the bowels from collapsing, till they can be replenished with the aliment the child is soon afterwards to receive. If it be not soon carried off, it will not only change the quality of the milk, or other food, as it descends into the bowels, but will itself also become highly acrid, (the greater part of it being bile) and cannot fail to produce indigestion, flatulency, pain, purging, or costiveness, and other similar evils: and the meconium is further disposed to this acrid state, on another account, *viz.* from the admixture of atmospheric air; as well as that which is engendered in the intestines by the food and imperfect digestion. Whilst the infant remains inclosed in the womb, it is secured from all contact of air, and therefore the alimentary contents remain harmless and bland, though increasing for many months; but it is well known how soon every secretion or extravasation will become acrid, upon the admission of air into any cavity where it may be lodged. And it is, doubtless, on these accounts, that provident nature has imparted an opening quality to the colostrum of all animals; a certain indication to the rational species, to assist the expulsion of this matter, now no longer required. For though a child should even be suckled by its own mother, (in which case there is, doubtless, less occasion for other assistance) yet we know that nature doth not, in every

instance, always fully accomplish her own designs; and it is from some striking instances of the truth of these observations, that I have said so much on this subject, which I have also been the more inclined to, because so many writers have passed it over almost in silence; whilst others have opposed our over officiousness.

I am not surprised, indeed, that all those who esteem medical people to be officious disturbers of nature, should object to their assistance in this instance, and conclude that she would do the business much better if left to herself. And there are even some physicians of this opinion, amongst whom I find Dr. Buchan, whose abilities and reputation claim particular attention; though he, perhaps, may not be so much engaged amongst very young infants, as those whose peculiar province it is to attend them from the birth. But there can be no general rule without exceptions; and as, doubtless, many children would do very well without any such assistance, so have I found others would not, though suckled by the parent herself; of which I shall presently give a very striking instance. On the other hand, I believe, no infant can be essentially injured by constantly assisting in this work, provided the means first made use of be lenient, as they ought always to be. It is the province of art to superintend nature, and not only to guard against her excesses, but so to watch over her, as to ensure the accomplishment of her intentions, whenever we perfectly comprehend, and can effect them without the risk of doing harm. And this intention is as rational as the practice is successful, there

being an evident acidity in the meconium, as I have ascertained by repeated experiments. The red-gum and thrush are also much more rank where the symptoms of acidity are most prevalent; and, on the other hand, less commonly take place (as I have for many years observed) where the meconium has been early purged off.

For this purpose, amongst others, a new remedy has of late years been recommended, as preferable to any purging medicines whatever.* Mankind has ever delighted in extremes—no sooner has any thing, formerly judged to be hurtful, or even poisonous, been found, in certain cases, to be very useful, than it is supposed to be capable of doing every thing, and supersedes all that the widom of former ages has proved to be salutary. Hence some advantages experienced from the use of *vinum antimonii*, in a variety of children's complaints, as far as they arise from one common cause, have induced some people to extol it as an universal remedy. But wherefore give an emetic, calculated to empty the stomach, in order to expel the meconium from the lower bowels?† It is universally allowed, and by this

* Dr. Armstrong on Diseases most fatal to Infants, 1767.

† On examining the first passages of still-born infants (newly-dead) it appears, that the large intestines contain the true meconium: the smaller bowels, only a thin bilious fluid, mixed with a little gastric juice. The stomach contains still less, as no bile can enter it but by regurgitation from the duodenum, and the gastric juice is in small quantity, not enough to be brought up by an emetic without violent straining; which I should imagine it can answer no good end to excite by a vomit, the first hour a child comes into the world.

writer also, that emetics are not to be administered when the bowels are full, which, in this instance, is precisely the case. It is true, vinum antimonii does not always vomit children, nor will a little matter oftentimes do this; it is sometimes, indeed, found to act as a purgative: but if this be the intention, why not adhere to the old, and more certain method, and direct at once such things whose proper operation may be depended upon? Not the stomach, but the bowels, are the natural and safe outlet for most infantile complaints, and a want of due attention to this circumstance has been productive of some evils, which many practitioners, I think, are not sufficiently aware of; and of which scarcely too much can be said, it being founded on long experience.

It is very evident, that some gentle purgative is indicated on this occasion, and it should be of such a kind as will create as little disturbance as possible, and not be of an offensive, or indigestible nature. In general, indeed, a very little matter will suffice; perhaps a little syrup of roses, diluted with some thin gruel, and given occasionally by tea-spoonfuls will answer the end; will also serve to keep the child quiet, and so prevent the nurse from giving it improper food. But if this should fail to procure stools, a watery infusion of rhubarb, or a dram of castor oil, will be found preferable to the common oils and syrup in general use.*

But, as has been observed, the meconium is not always disposed to come away, even by the

* See Harris.

the assistance of common purgative medicines. Having, therefore, begun with such as the above, if the child should have no stool for twelve or fourteen hours after birth, and especially if it seem to be in pain, a clyster of gruel and salt ought to be thrown up; which may be repeated, if necessary, a few hours afterwards. And here I would remark, that in the cases where more powerful remedies are required, scarcely any evacuation will be produced by these gentler means; for, wherever I could procure one copious stool by a clyster, or gentle laxative, the rest of the meconium has afterwards come away with little or no further assistance. But as it sometimes happens, that neither clysters nor ordinary purgatives have any sufficient effect for several days, more powerful means must then be made use of; there being reason to suspect a morbid suspension of nervous influence. I shall close this subject with a remarkable instance of this kind, (of which I have seen many) as a proof that powerful remedies may sometimes be required, and to show how necessary it is to pay attention to this early complaint of infants.

A child was born of very healthy parents, (not at all of constipated habits) after a quick, and comparatively easy labour, and appeared to be itself in good health.—To avoid prolixity, I shall briefly observe that the child took a little rhubarb an hour or two after it was born, but having had no stool when I saw it the next day, I ordered a clyster to be thrown up. In the evening, the child became drowsy and insensible, and when

roused, it moaned, but seemed unable to cry. It continued pretty much in this state (except that at times it appeared to be in great pain, and was evidently convulsed) for six days; and was nourished chiefly by breast milk, given by tea-spoonfuls, seldom reviving sufficiently to suck.

It had no stools, but such as made only a few spots on the cloths about the size of a shilling, till the sixth day, and then they were very small, hard, and lumpy. The next day it had more of this kind, and had not, till the eighth day, any thing like a proper stool, which was also mixed with hard lumps; but on the eleventh day, they were thinner, and on the thirteenth came very freely.—In the course of six and thirty hours, I prescribed two ounces of the common infusion of senna, two drams of Rochelle salts, four grains of jalap, and a grain of calomel; besides purging clysters, and the use of the warm bath. The next day, the child took four grains of ipe-cacuanha at two doses, and forty drops of vinum antimonii, at four times, (in the course of an hour) without any effect; and at another period, six drams of castor oil, besides several doses of manna.* Three days after the child had gotten rid of the meconium, the thrush made its appear-ance, which was slight, but continued above three weeks.

* See a similar instance in the chapter on the Croup.—The obvious cause of the inactivity both of emetics and purgatives, which we sometimes meet with in infants, is probably, the great quantity of mucus with which the first passages are lined, together with a deficiency of nervous influence, a frequent concomitant of such a state.

From such instances, the expediency of having recourse to some safe and effectual means of purging off the meconium, seems to be evidently pointed out; more especially when we consider the dangerous complaints which are said to arise in some of the hospitals in *Paris*, from an undue retention of this viscid matter, as will be further noticed in another place.*

* Writers upon the diseases of infants, differ widely in opinion upon the subject of using means to procure a due evacuation of the meconium; some judge it to be always expedient, if not absolutely necessary, to use artificial means for this purpose: others think, that the expulsion may always be left to the ordinary powers of nature:—" of nature," as one of the most urgent recommenders of this method terms her, " *all wise, all provident, and all perfect.*"

The truth, as is usual, lies between the two extremes. A free and spontaneous evacuation of the meconium very often takes place as soon as the child is born, and, of course, it is unnecessary in such a case to give purgatives for that purpose; but not unfrequently, there is a torpid state of the bowels, and, in consequence, the meconium is either not at all or very scantily evacuated. Are we in a case of this kind to be deterred from the use of aperients, by the cry of " nature is all sufficient?"

A prudent practitioner will not wantonly, or officiously, interfere with the natural processes of the constitution; nor will he trust to nature, beyond what nature appears able to effect. We sometimes, however, talk about nature without knowing exactly what we mean; no child that is born in these parts of the world can be said to be completely under the dominion of nature. If we were entirely in a state of nature, it is probable, that our children, like animals in a state of nature, would be born only at those seasons of the year which are best adapted to the rearing of young creatures. The birth of a child in cold weather, when it is necessary for it to be kept in a room artificially warmed, is, of itself, such a deviation from nature, as may demand the assistance of art towards that child, in more

I have often experienced the good Effects in these Cases of directing that the whole Body of the Child instead of being washed in cold should be washed in tepid or warm Water, or be bathed in warm water; but ~~that~~ the Parts actually excoriated may and often do require the application of cold Water to them.

## *On the Intertrigo, or Chafings.*

To obviate these troublesome affections, washing with cold water is certainly useful; but can never call for such severity of treatment, as for an infant to be plunged with its feet or nates into a pan full of cold water, and be afterwards dashed all over with it, to its daily discomfort and terror. Cleanlinesss and bracing the skin are the proper intentions; and, with this view, besides the nates and groins; the arm-pits, folds of the neck, and parts behind the ears, may be occasionally washed with cold water; and, if the discharge be not checked by it, they should be dusted with a little hair powder, the powder of lapis calaminaris, or of ceruse; or a little white vitriol may be added to the water; which, if the excoriations are not very considerable, will generally heal them very soon: should these fail, they may be

important points, than the giving it a dose of castor oil. I am fully sensible of the great benefit which has been derived to the practice of medicine generally, since physicians have more attended to, and been guided by, the regular processes and laws of nature; but we are too much involved in artificial conditions and circumstances, to place implicit confidence in the resources of "all wise, all provident, and all perfect nature."

Upon the whole, it may be concluded, that though an aperient soon after the birth of an infant, may be often properly omitted, yet on many occasions, it is right to have recourse to such an assistant; especially when the child is fed with spoon victuals, or is suckled by a nurse, whose milk is several weeks or months old. S. M.

dressed with the red drying ointment of Bates's dispensatory. But these drying remedies should rarely be applied to the ears. In a very acid state of the stomach, during the month, particularly where there is a purging with very green stools, the parts covered by the cloths are often infested with a still more troublesome excoriation, called intertrigo; and, whilst that state continues, will not be healed by any drying applications. I have found nothing so pleasant and useful in this case, as covering the parts with the thin skin found upon the veal kidney, which softens and cools them, till the cause of the complaint may be removed by the use of proper absorbents. There is a mixed affection of this kind, however, in which these parts are not actually excoriated, but are very hard and swollen, as well as painful and inflamed; and the affection seems to be kept up by the acrid nature of the excretions, though not originally caused by it. In this case, instead of daubing the parts with wetted fuller's earth, gruel, or greasy mixtures, an embrocation of elder-flower water, with as much boiling milk as will render it moderately warm, has been immediately efficacious. By the use of these means, the worst cases I have met with have been successfully treated; having never seen any thing like mortification, or need of administering bark, as recommended by Dr. Armstrong. But one grand means of keeping children from chafing, is to preserve them very dry and clean. A vulgar error may here be noticed, which is still too common, that of wearing a

pilch, as it is called. This, as it is sometimes used, contributes not a little to make children weak; it was originally designed to be worn only for the few first weeks after birth, but is often continued for as many months. It can answer no possible end but that of saving a little trouble, since, instead of keeping children dry and clean, it has the directly contrary effect; for if it has received any wet through the usual cloth laid under it, it ought itself to be changed as often as the other, or must certainly be damp and uncleanly; whilst, by heating the loins and lower limbs, it has a manifest tendency to relax, and dispose infants to become rickety. It may be proper to drop a word more, with a view to counteract a vulgar notion, familiar only to common people, that a frequent change of linen has a tendency to weaken new-born children; an absurd idea, that has not the smallest foundation in reason or fact. It is, indeed, impossible that a child should thrive or be healthy, if the strictest attention be not paid to cleanliness, which is one of the principal articles in which the children of poor people are at a great disadvantage, and which becomes a constant source of rickets and distortions among them. Indeed, infants, if healthy, may oftentimes be so managed as to be much more cleanly than even people of great delicacy have been wont to imagine; so as even to supersede altogether the use of cloths, either by night or day.

## *Tumid Breasts of Infants.*

In many children, a day or two after they are born, the breasts become exceedingly tumid, hard, and painful, containing a fluid resembling milk. Ignorant nurses, and the ignorant ones only, imagine that this milk, as they call it, ought to be pressed out; and it is quite grievous to see how rudely some nurses rub and squeeze the breasts for this purpose, although the redness of the part shows that it is already in a state of inflammation, and the screams of the babe demonstrate the severity of its sufferings under so rough an operation. In the case of inflammation, a bit of bread and milk poultice is the properest application; but if the part be not inflamed, it can want nothing at all; or should it be conceived, that something ought to be done, a little oil, with a few drops of brandy, may be gently rubbed upon the part; or small pieces of the litharge-plaster may be applied, and lie on the parts till they fall off of themselves. I have, indeed, had sufficient evidence of such considerable tumefaction and hardness, as to satisfy me, that when no violence is offered to the parts, the application of a bread and milk poultice will always prevent either suppuration or other unpleasant consequence. I have met with instances, in which the tumour has been much larger and harder than I could have suspected on such an occasion; and yet, after continuing for more than a week, without any sensible diminution or amendment, has soon afterwards subsided entirely.

## *Icteritia, or Infantile Jaundice.*

The jaundice of infants seems always to have been improperly conceived of. Those who have written only on childrens' diseases, have usually passed it over in silence, whilst others have considered it always as rather a serious complaint, and have prescribed as for the jaundice of adults. On the other hand, nurses have usually accounted the yellowness that appears about the third day after birth, if unusually deep, (termed by some the yellow-gum,) as the true jaundice. Certainly neither of these opinions is just; for the latter of these appearances requires no attention at all, and though infants are not very often troubled with the true jaundice like adults, they nevertheless are liable to slighter affections of that kind, which claim some attention. These are easily distinguished from the common yellowness, by the tunica albuginea being always very yellow; but the nails are not tinged, as in the jaundice of adults,* though it is probable they usually would be, if the complaint were long neglected, and the child suffered to be costive. I have waited some days to see if the yellowness would go off of itself, as the usual tinge does; but it has always increased rather than diminished. It arises from viscid matter obstructing the gall ducts, and therefore requires a little emetic. The tartarized wine of antimony is a

* See the note in page 121.

very proper one on this occasion, as it may likewise procure two or three stools; but as children in this complaint are not easily made to vomit, should the wine fail, three or four grains of the powder of ipecacuanha may be given, as more certain in its operation; and the next day, four or five grains of rhubarb. Should the symptoms continue, the emetic ought to be repeated after two or three days, and rhubarb be given about every other day,* till the yellowness disappears; which, under this treatment, never continues more than ten or twelve days, unless the infant be very costive, or the stools are of a very pale colour, which is but rarely the case. Where an emetic has been objected to, and the whole attention confined to keeping the belly open, the yellowness has continued when I have taken my leave at the end of the month, attended with languor, and other symptoms of debility. When the belly is unusually costive, and the stools very pale, infants are generally found to have a true jaundice, and require some saponaceous medicines, such as the liquor potassæ subcarbon. together with daily frictions of the stomach and belly, and the use of the warm bath.

Women long afflicted with jaundice, during any part of their pregnancy, and even actually brought to bed in that state, do not infect their

* The daily exhibition of a few grains of hydrarg. c̄ creta, with one of jalap, or two or three of rhubarb, commonly answers very well in removing this complaint.

S. M.

children,* unless they also suckle them; but from striking instances, I have found, that suckling in that state is capable of communicating the true jaundice to a great degree, and that it will not be cured, but by the recovery of the suckling mother or nurse, or unless the nurse be changed, or the infant weaned, as well as properly treated.

The true jaundice, distinguished by the skin being everywhere discoloured, as well as the whites of the eyes, seems to be much more common among new-born infants in France, than in this country, as appears from a memoir written by M. Baumes, and to which a prize medal of the Faculty of Medicine in Paris has been adjudged.

In that work, the various causes and nature

* I have never met with such an instance; but M. Baumes, who has been very attentive to the disease, is satisfied, that he once saw an infant so infected from the womb; but in this case, the child died very soon in a very diseased state, the internal part of the liver being in a state of suppuration. Other instances are given, but they are not unexceptionable. Vide *A. N. Curios. Dec.* l. *A.* vj. *Obs.* 241. *Dec.* iij. *A.* ij. *Obs.* 40. *Fr. Delaboe. Silvii, Prax. Med. Lib.* j. *Cap.* 46, *No.* xi. *p.* 302. *Theod. Kerkring, Spicil. Obs.* 57, *p.* 118. I have, indeed, seen an infant, (the mother of which, however, was not icteric,) whose finger nails were, at the birth, of as deep a yellow as any icteric adults, and very sensibly from a tinge underneath them; but those of the toes were not at all discoloured, nor had the infant any other symptoms of jaundice. It, indeed, brought up, by puking, a considerable quantity of yellow matter, apparently bile, very soon after it was born; but the tinge of the nails disappeared the next day, and the infant throve very well.

of the disease are distinguished; and a correspondent treatment pointed out with great accuracy and judgment. Throughout the tract, there seems also to be much ingenious and plausible theory; though I cannot agree with that able physician, in supposing the jaundice to be occasioned by the retention of the meconium, otherwise than from this viscid matter sometimes obstructing the orifice of the biliary ducts. For in the several instances I have met with, of the most obstinate retention of that secretion, there has not been the least disposition to jaundice; nor can I conceive, that any part of the meconium is usually absorbed in icteric cases, as M. Baumes has imagined: neither does such an incident appear to be necessary in order to account for the frequency of the disease in that kingdom, or elsewhere.

As to the treatment, under the different circumstances there described, I meet with nothing that militates against the more general account I have given of this disease, or the treatment adapted to it, under the form wherein it appears in this country.

There are not wanting evidences of this disease, both in the more slight and severe forms of it, being in some families hereditary; of the former, Morgagni has furnished a remarkable example in his own family; and of the latter, Mr. Pearson has favoured me with a very curious one, which the reader cannot fail to be pleased with, as no such instance, I believe, is to be found upon record. I shall submit the account

in his own words, and without any comment; as further experience is necessary to enable us to draw any practical inferences.

Mr. Pearson's account runs thus:

Mrs. J. had been the mother of eleven children; on nine of which the jaundice appeared a few days after they were born, and they all died within the period of a month after their birth. The tenth child lived six years, was then afflicted with the jaundice and died. In May 1796, Mrs. J. was delivered of her eleventh child; on the third day after its birth, the skin became yellow, and the child was at the same time remarkably torpid and sleepy, and seemed to be slightly convulsed. On the following days, the colour of the skin often varied, being sometimes of a deeper yellow, and at other times nearly regaining its natural colour; the child continued, however, in the same languid and almost insensible state, but received nourishment, and sucked the breast of its mother, till within a few hours of its death, which took place on the ninth day. I opened the body of this child the day after it died, and shall now proceed to describe the appearances exhibited on dissection.

The skin had nearly lost its yellow colour; and the child did not appear at all reduced by the disease.

The liver was almost twice its natural size; the whole concave surface of the right lobe had a livid appearance, but this dark colour did not penetrate above a line or two, and the internal substance was sound and healthy. The convex

part of the liver was of the natural colour and firmness, except on the margin of both the lobes; there the thin edge exhibited a highly injected appearance; the redness was, however, less vivid and remarkable on the left lobe than on the right. There was also a slight adhesion of the lower part of the right lobe to the peritonæum. The gall-bladder was nearly filled with bile, of a deep yellow colour, and its ducts were permeable. The stomach was in a natural state, and the intestines were without any marks of disease. In the thorax, the lungs were of a healthy appearance. The heart seemed to be larger than common, and the blood vessels on its surface were remarkably turgid. The right auricle was distended with blood, and the pericardium contained about a table spoonful of water. Every person who is conversant with the diseases of children, knows that, although new-born infants are sometimes affected with the true jaundice, requiring its appropriate remedy, this appearance is at others but of little importance, and sometimes even disappears spontaneously. Morgagni has furnished a remarkable example of this in his own family.—De quindecim filiis meis, cum mox a partu flavi omnes, et nonnulli etiam haud ita leviter, essent facti, cunctis per se, nullo prorsus artis auxilio, paulatim icterus solutus est. Lib. iij. Epist. 48. Art. 60.

## *Erysipelas Infantile.*

In a former edition it was observed, that this complaint, (noticed under the term, anomalous inflammation,) did not appear to have been distinctly noticed by any preceding writer. But I have since found that Hoffman, though he makes no mention of any such complaint in his Morbi Infantum, has the following intimation in his chapter de Febre Erysipelacea,* and it should therefore seem, was acquainted with that species of the disease which appears in the more precise form of erysipelas; but which he had noticed only in the region of the belly.—" Umbilicalem regionem in infantibus frequentius infestat, ac inde per abdomen spargitur, cum gravibus pathematibus, funesto ut plurimum eventu." The French have likewise spoken of a somewhat similar affection, combined with different endemic complaints infecting crowded hospitals: and it is certainly sometimes found to follow disorders of the first passages. The disease, however, not appearing to have been any where noticed in its simple and genuine form, it has seemed necessary to give a name to the disease; which, therefore, in my latter editions, has been termed Erysipelas Infantile.

It is a very dangerous species of the spurious or erysipelatous inflammation, which I have not

* Sec. i. Cap. 13.

often met with, but in lying-in-hospitals. The ordinary time of its attack having been a few days after birth, it was at first thought never to appear later than the month; but this has been since found not to be the case. It seizes the most robust, as well as delicate children, and in an instantaneous manner; the progress is rapid; the skin turns of a purplish hue, and soon becomes exceedingly hard.

The milder species of it often appears on the fingers and hands, or the feet and ankles, and sometimes upon, or near the joints; forming matter in a very short time. The more violent kind is generally seated about the pubes, and extends upwards on the belly, and down the thighs and legs; though sometimes it begins in the neck, and is equally fatal. The fact, indeed, seems to be, that it is generally far more dangerous when it seizes, or spreads to any parts of the body, than when confined to the limbs. The swelling is but moderate; but after becoming hard, the parts turn purple, livid, and very often sphacelate, especially in boys, when it falls on the scrotum; the penis swells, and the prepuce then puts on that kind of emphysematous appearance, which it has when a stone is sticking in the passage; or in the anasarca of the scrotum.

Upon examining several bodies after death, the contents of the belly have frequently been found glued together, and their surface covered with inflammatory exudation, exactly similar to that found in women who have died of puerperal fever. In males, the tunicæ vaginales have been some-

The Erysipelas Infantile has in so many Instances attacked Children either during the Time that the Mothers have been suffering under Puerperal Fever, or Peritoneal Inflammation, that I can hardly doubt of some Connexion between the two Complaints, either that the Child's case is contracted from the Mother, or that the two Complaints are prevalent, epidemic at the same time. Mrs Bell died of Puerperal Fever, her Child died of Erysipelas. The same happened to Mrs Ashmead and her Child, Mrs Allen and Child, Mrs Holt's Patient at Westminster & her Child, Mrs Wilkes & her Child.

Mrs Glen is fast recovering, her Child has the Erysipelas — Jan. 1. 1828

In a few instances, the disease has been attended with some varieties. Infants have not only come into the world with several hard, and sub-livid inflammatory patches, and ichorous vesications about the belly and thighs, but with other spots already actually in a state of mortification. A large eschar has soon spread upon the spine of the tibia, with smaller ones about other parts of the legs, and on several of the toes and fingers. In such cases, particularly, the bark and cordials must be exhibited liberally, and the inflamed and mortified parts be well fomented, and dressed with warm applications.

From the good effects attending these means, particularly on a very copious use of the bark, there is further room to hope, that we may be yet more successful in the treatment of this formidable disease.

In two instances, where the bodies of infants dying of this disease were examined by Dr. T. Walshman, the stomach, lungs, and other internal parts were found very much diseased; the former being in so tender a state as to give way upon the slightest pressure: whether any thing of this kind usually takes place in consequence of this disease, further examinations must evince. Such a state of the stomach is, however, by no means peculiar to this disorder, being met with in the examination of scrofulous and hectical children; and occurred also in the body of an infant which I examined, that had lived to be only six days old: and in this instance, likewise, the intestines, kidneys, and other parts, were greatly diseased.

## *Coryza Maligna, or Morbid Snuffles.*

I have given this appellation to an uncommon discharge from the nostrils, taking place in the month, usually in the first or second week after birth; and in one or two instances the infant has seemed to be born with it. This disease has passed under the name of the snuffles, on account of the kind of noise such infants make in respiration; but it is not only a far more severe, but a very different complaint from the one commonly intended by that name. The discharge is much more abundant than that arising from taking cold, and is truly purulent from the beginning, and afterwards sanious: though, in a few instances, children affected with every other symptom of this disorder, have no discharge from the nose. But under every form of the disease, infants always appear weakly, though without any precise complaint, and are constantly incommoded from the stoppage of the head, especially in their sleep; during which they breathe with difficulty. It generally continues for several weeks; and, upon its going off, children who have had the disorder only slightly, have become otherwise unwell, and such has have been brought up by hand, have been dangerously ill in their bowels.

The plan of treatment which I adopted in the first instances I met with, was to keep the body cool and open; or if the infant happened to be over-purged, or was languid, to administer ab-

sorbents and cordials. I recommended the nurse's diet to be attended to, when the child was suckled, and to keep a little blister open on its head, or on the nape of the neck; but this has since appeared, in some instances, to be hazardous, although no evil ever ensued where I had directed it.

I had attained no further knowledge of this complaint, when Dr. Denman obliged the public with a more ample and formidable detail of it; which had fallen more frequently in his way, than it had done in any other practitioner's.

His account of it is so accurate, that I shall in this edition likewise borrow the description of its principal symptoms from him, adding to it such as later experience has furnished. He remarks, that this disease seemed to be new in its manner, though not in its kind, at the time of its first making its appearance, which was frequently in the summer of the year 1790; in the June of which year it was, that I also first saw it.

After mentioning the little varieties noticed in the discharge, and the most formidable symptom of the disease, the difficulty of breathing through the nose; he observes, that the latter was not constant, and that when free from it, children appeared to be in no danger; that the difficulty of breathing was at other times so great, as to require an attendant to watch a child sleeping and waking, in order to open its mouth as often as it might be requisite.

Dr. Denman further notices a singular purple streak at the verge of the eyelids, which he after-

wards considered in a manner pathognomonic of the disease; and, indeed, I have rarely met with the disease without it. He describes also a general fulness about the throat and neck externally, taking place soon after the commencement of the complaint, which he seems to date from the appearance of the purulent discharge from the nose; though it has been remarked, that this symptom, although one of the most formidable, may be entirely wanting.

That, when these symptoms had continued for some days, according to the strength of the patient, and degree of the disease, children became pale and languid; and that, upon looking into the throat, the tonsils were found tumefied, and of a dark red colour, with ash-coloured specks upon them, and in some there were extensive ulcerations. The parts on which blisters had been applied in the beginning of the disease, and which had been apparently healed, often spacelated towards the conclusion.

The infants, he reports, gradually declined in their strength, and had a particular catch in respiration, as if the velum pendulum palati were elongated. They were unable to suck, though not universally; swallowed with difficulty whatever was given in a spoon; and died in convulsions, or with all the marks of great debility, though not on any particular day of the disease.

Dr. Denman observes, that in the course of eight months he had attended eight children in this disorder, six of whom died; that the body of one of them was afterwards opened by the late

Mr. Hunter and Mr. Home, but that nothing was discovered, except that the membrane lining the nose was of a dark red colour, and its blood vessels more turgid than ordinary.

The true nature of the disease, and consequently its appropriate treatment, were for a considerable time but imperfectly understood; and hence arose its frequent fatality. It would be superfluous, therefore, to take up the reader's time with an account of the means formerly made use of; neither can it be necessary to add much to the more perfect, though hasty account, I added to a former impression, by way of an appendix. It need only to be observed, that Dr. Denman, by a fortunate occurrence, having discovered the true nature of this disease, has, in consequence, happily adapted a remedy that has proved an almost certain cure for it, if attended to in time.

The true source then appears to be a defluxion and inflammation over all that extent of Schneider's membrane, lining the antrum highmorianum, posterior nostrils, and contiguous parts. Hence the copious secretion of purulent matter irritates the trachæa, and produces that spasm, and croaking noise, with recurring sense of suffocation, so uniformly observed in this disease. By descending into the stomach and bowels, it disorders these parts; and if not very soon properly treated, induces such general disease as presently debilitates, and at an uncertain, but generally an early period, carries off the little patient in the manner that has been already described. The

stools, it may be noticed, are sometimes thick and pasty, and when otherwise after repeated purges, they are of a peculiar green colour, or sometimes blue, different from what I have noticed on almost any other occasion.

From this account of the disorder, an attention to the state of the bowels, as I intimated in the first instance I had seen of it, is the manifest indication; but with this further light thrown upon it by Dr. Denman, that keeping them very open, so as to prevent the lodgment of the matter falling into them, is the grand mean of cure; there being much less to be effected by absorbents and ant-acids to correct the constant sourness, and ill-condition of the stools, than by carrying them off speedily and frequently.

To this end, one or more tea-spoonfuls of castor oil should be given every day, so as to procure three or four motions daily. If the child should be weakened by this means, some cordial medicine should be occasionally interposed; or should this prove insufficient to support the infant, the purgative must be somewhat abated; but it is remarkable, that even weak infants endure purging better under this complaint than any other, unless it be the tooth fever. If a convulsion fit should supervene, as it sometimes does, clysters, and the usual remedies for spasm, should be administered, and especially the cordial, which, breaking off wind from the stomach, and giving tone to the bowels, becomes a very useful one in this case. In several instances, a recourse to opium, or syrup of white poppies, has been attended with

good effect; and may, in that case, be administered every night, when the purgative has operated properly. Or a good medicine in many cases, is Dalby's carminative,* which may be given every six or eight hours; and particularly when repeated doses of the laxative medicine are given through the day. From eight to twenty drops, or more, may, in that case, be given between each dose of the purgative; and has, in some instances, been considered as a principal mean of cure.

Under such treatment, the morbid snuffles has been found to yield in the course of two or three

* Dalby's Carminative, and Godfrey's Cordial are medicines very often kept in the nursery, and the opium they contain makes them *remedies of great convenience to the nurse.* They are unquestionably medicines of great power and efficacy, and consequently very unfit for indiscriminate use. No remedies for infants require greater care and judgment in their application—none are so carelessly and incautiously given.

The late Dr. Clarke, in his Commentaries, has mentioned a case which he saw, where "forty drops of Dalby's carminative destroyed an infant." Similar instances are not uncommon. A woman living near Fitzroy-square, thinking her child not quite well, gave it a dose of Godfrey's cordial, which she purchased at a chemist's in the neighbourhood: in a very short time after taking it, the child fell into convulsions, and soon died. In less than a month, the child of another woman in the same house, was found to be ill with disordered bowels. The first woman, not at all suspecting that the Godfrey's cordial had produced the convulsions in her infant, persuaded her friend to give the same medicine to her child. A dose from the same bottle was given, and this child was likewise attacked almost immediately with convulsions, and also died.

Mr. Adams, of Charlotte-street, who was called to the last child, related to me these particulars. S. M.

I met Mr. Adams in the Street soon after the Death of this child, and he stopped me to tell me of the fact. Oct. 3. 1841

weeks; some purging medicine being continued as long as the discharge or difficulty of breathing shall remain. It, however, sometimes runs on as much longer, and is attended with a spasm in respiration, as if the infant were dying; this symptom, as well as the snuffling, often recurring some time after an infant has seemed to be cured: and in one case, not only the snuffling, but the discharge occurred more than once, after the disorder seemed wholly to have given way. In such instances, besides purging, it has been thought useful to foment the bridge of the nose, and afterwards apply some aromatic liniment.

When the disorder is found not only to hang on for many weeks, (as it sometimes will even where it has not been peculiarly violent;) but, together with the continued use of purges, to keep the infant pallid and feeble, notwithstanding the exhibition of cordial medicines; a recourse to the decoction of oak-bark has at once removed the snuffling, and given vigour to the child in the course even of a few days. A remedy that does not seem to be sufficiently known, for this and many other complaints. Indeed, where a tonic medicine is found necessary, but where either from a febrile diathesis, or a disposition to glandular obstructions, the cortex peruvianus may be thought inexpedient, the oak-bark will generally be found a safe and efficacious medicine.

It is only necessary to add, that though this disorder is not usually met with after the month, I have seen it at a more advanced age; in one, or more instances, however, it has been thought,

I know not how justly, that some slight symptoms of it had, in that case, appeared in the month.

## *Inward-Fits.*

It has been already said, that any derangement of the first passages, is capable of giving rise to various complaints, among which, that of inward-fits has been taken notice of by some medical people; but I think scarcely deserves the name of a disease. It demands attention, however, because so much has been said about it as to create apprehensions, lest this subtle disease should be insensibly at work, and insidiously making way for more severe and outward convulsions.

This complaint may take place at any period of early infancy, and is thought to be more dangerous the younger the infant may be. A constant symptom in this kind of fit, as it is called, is the infant's mouth being drawn into a smile, which, whoever has noticed it, must have beheld with pleasure. And if the complaint extends no further than this smiling, which is generally while the child is asleep; it arises merely from wind, and is certainly harmless, because, in this case, the wind is not really confined; and, therefore, an immediate recourse to emetics, or purges, is more likely to do harm, by straining the stomach, or by relaxing the bowels, than to do any good. Every body is acquainted with the effects of

different degrees of irritation of the nerves, from the sensation produced by tickling with a feather, to that of a hard gripe, or a violent stroke. The first may be said to be pleasing; and such, I doubt not, is the stimulus in question on the nervous coat of the stomach of infants; and, therefore, produces so agreeable a smile, that I could never consider it as an indication of mischief any more than of pain. Indeed, I know of no complaint that ought to be termed inward-fits; and I mention this, because nurses are continually talking to us about them, when children are perfectly well, and often give the fond parent needless distress, as well as many an unpleasant medicine to the child. They, at the same time, treat the true convulsion,* whilst slight, in the same way, being led into the error by the idea of inward-fits; a term they are ever using, but have no precise ideas of, nor do any two of them intend the same thing. It would be better if the term were altogether abolished, and the word *fit* used only when the child is evidently convulsed. Infants, as well as adults, do sometimes, indeed,

* The remedies commonly employed by nurses, and others, for relieving these inward-fits, as they are called, are Dalby's Carminative, Godfrey's Cordial, Soot Drops, Assa fœtida Drops, and other stimulants and carminatives, composed of various warm and spicy drugs. These, being found generally efficacious in removing the complaint when it depends upon wind, are considered the best possible remedies for all kinds of fits, and are given with an unsparing hand, in inflammatory attacks, if there be any resemblance, real or supposed, to fits. It is obvious, that when such remedies are employed at the commencement of the *true* convulsion fits, they must be extremely prejudicial. S. M.

die suddenly without any manifest convulsion. But this more frequently happens after overfeeding, and arises from a spasm of the stomach (of which I shall treat at large, in the chapter on true convulsions); or sometimes of the heart or lungs; and infants may then be said to die of inward-fits, there being no external convulsion. Infants are likewise carried off suddenly from water in the head; of which I have seen two instances in the same family, (where the disease was ascertained by opening the cranium,) both the children appearing perfectly well only a few minutes before they died; but neither of these was, by any means, the kind of affection usually understood by the term inward-fits. If the infant should sleep too long, and the smiling abovementioned should often return, the infant may be taken up, gently tapped on the back, and its stomach and belly be well rubbed by the fire, which is all that can be necessary. This gentle exercise will occasion a discharge of wind from its stomach, and the child will go to sleep again quietly.

This complaint, however, is largely treated of by some writers, and Dr. Armstrong recommends to give a few drops of the wine of antimony; but it is very apparent, that when he considers it as worthy of more attention than I have just now advised, it is either a true convulsion, in which the eyes are distorted, and the mouth is decomposed, instead of putting on a smile; or else, he is prescribing for another disease under the name of inward-fits, which former writers have treated

under the head of disorders arising from costiveness and wind. But if this little turn of the features should arise, as frequently happens, from constant over-feeding, it were endless to administer emetics; the cause of the complaint is obvious, and upon the removal of it the remedy must rest.

Such has ever been my opinion of this much-talked of complaint; and I have not, after a great deal of attention to infants, seen any thing sufficient to induce me to alter it; or I should have suppressed the preceding observations. As I wish, however, to afford all the information I can on every complaint, I have to observe, that a gentleman of great respectability and experience, has conceived, that though the term inward-fits has been often misapplied, there is really such a complaint, and that it generally proves fatal. Besides a little blueness of the lips, and slight turning up of the eyes, often noticed by nurses, this complaint is described as attended with a peculiar sound of the voice, (somewhat like the croup) and a very quick breathing at intervals; and is supposed to arise from a spasm in the stomach, lungs, or other vital organ.* A spasm

* The disease here spoken of by Dr. Underwood, is, I conceive, the same that has been so well described by Dr. Clarke, in his Commentaries, under the title of "A peculiar Species of Convulsion in Infant Children." It is by no means an uncommon affection of children, arising generally from improper feeding, and close and confined apartments. If timely attended to, the complaint commonly yields to *daily* aperients, so as to produce at least two copious motions; and continued doses of

I have indeed too frequently seen, but certainly very different from that usually accounted inward-fits.

These symptoms are said frequently to attack the child in its sleep; and in their commencement will go off upon taking it up from its cradle. They are likewise observed to be induced by sucking or feeding, and to be increased upon any little exertion of body, or transient surprise, and in this manner to recur for a length of time, before they become alarming. The remedies proposed for the cure of this complaint, are an emetic on the first attack, and afterwards volatiles and fetids: but, as it has been observed, very seldom to good effect.

These symptoms, indeed, I have frequently met with; and however alarming their appearance, if they be not accompanied with any other, they have fortunately turned out more favourably than this complaint is reported to do. Hitherto, at least, I have succeeded in removing this

soda, or a strong infusion of burnt sponge, with proper attention to diet and regimen. When the head is manifestly affected, cupping glasses behind the ears are required; but when the patient has cold, pale, flabby cheeks, as I have, not unfrequently, observed in this disease, abstraction of blood is rather injurious than beneficial.

In two cases of this kind, which were under my care nearly at the same time, the children died in the fits. They were both opened by Mr. Sweatman, a very skilful anatomist, but not the slightest appearance of cerebral affection could be discovered in either of them. The principal deranged structure discovered, was a collection of small glandular swellings in the neck, pressing upon the par vagum. S. M.

extraordinary spasm, in every instance, by treating it, as I had before hinted, as a chronical croup, by administering different anti-spasmodics; assa fœtida, ol. succini. tinct. fulig. musk, or cicuta, being prescribed as particular circumstances have indicated; and so far from its generally proving fatal, I have not been able to learn, by the most diligent inquiries, that any children so affected, ex-

* One of these infants had very severe and repeated convulsion fits for several days, together with the croup, and was suspected to have water in the head. It appeared, however, to be at length perfectly recovered, so that Dr. Reynolds (who attended with me) and I had taken our leave for about a fortnight. The fits then returned, but were so slight that the apothecary only was sent to; but in one, the most slight of any, the infant almost in an instant expired, very much in the manner described by the gentleman above alluded to. But as infants not unfrequently die suddenly of hydrocephalus,* and as that, or some other morbid affection of the brain had been suspected, and as the infant was not opened, the conclusion on either side is incomplete.

Should it be objected, that, although this child had several true convulsion fits, at the same time that it was affected with the crouping noise, and that these returned after the croup had given way; yet it certainly died precisely in the sudden manner that infants are said to do of what has been termed inward-fits; and therefore neither this child, nor others who recovered under the treatment described, had a disorder that ought to be termed a spasmodic croup, but were all ill of inward fits, although only one of them died suddenly as such infants usually do:—should the whole, or any part of this reasoning be granted, (which in my opinion it ought not) yet is the term inward-fits equally improper, and nowise descriptive of so singular a disease as is intended by it; and can only lead to an indeterminate use of a term, calculated rather to obscure a dangerous disease, than to

* See the chapter on Hydrocephalus.

cepting two out of the numbers I have attended, have been carried off suddenly, or by any thing resembling this complaint. I have, indeed, very frequently seen what I have termed the chronical croup, in children of various ages, and indiscriminately in those nourished by the spoon, or the breast. I have known it attended with severe and repeated epileptic fits; (and then the bowels have usually been costive, or the stools very clayey); but in every instance, the crouping noise has yielded, and (with the exceptions above-mentioned) children have continued well, treated in the manner I have described; and I therefore cannot but think, the complaint under consideration is of that kind.

In regard to costiveness and wind, which have been said to be the parent of what nurses commonly term inward-fits, as they do not always arise from one and the same cause, and are productive of other complaints than those above-

lead to any good practical use. The other infant was only five months old, and appeared to be recovering under the use of assa fœtida, when it died very suddenly; and the body being opened, it was with much surprise that the marks of true apoplexy were met with, there being a coagulum of blood on the pia mater of nearly four inches wide. This is the only instance I have heard of where an examination has been made after death: but it is not supposed that the brain is the seat of disease in other instances of sudden death, in the disorder that has been termed inward-fits; such, at least, is the sentiment of the respectable authority, from which the description of it has been given above, but rather, as before observed, that it is a spasm of the lungs, stomach, or other vital organ below the brain.

mentioned, I shall consider them by themselves; which, it is presumed, will be pursuing a more rational plan, than adhering to a term obscure in itself, and indicative of a disease not well defined, and which, therefore, may tend to mislead the inexperienced reader.

*Disorders arising from Constipation and Wind.*

Constipation is either constitutional or accidental, which ought always to be distinguished; the former being oftentimes harmless, and, indeed, children of such a habit of body are frequently the most thriving. If the mother should be very constipated, her children often are so; and such a disposition (whilst they continue in health,) ought not to be forcibly counteracted, though it will be prudent carefully to watch it. And this will be especially necessary, in the case of children who are subject to fits; fine lusty infants being often seized with violent convulsions, without any other apparent cause than a naturally very costive state of the bowels, and these have uniformly recovered from the fits, merely by procuring stools and breaking off the wind. It is likewise sometimes an incitement to recurrent fever, as I have noticed in one of the finest and otherwise healthy children I have seen; who relapsed for two or three years into repeated fevers, seemingly from no other cause than a naturally

very constipated state of the bowels, which it was scarcely possible, either by diet or medicine, duly to counteract. The above-mentioned disposition to fits has taken place long before the ordinary period of teething, and has continued till children have been a twelvemonth old; at which time the solids, and especially the nervous system, have appeared to get stronger. In such habits, a quarter of an ounce of manna, or the like quantity of the syrup of roses, or of senna, may be put into any liquid, and as much of it given by tea-spoonfuls, as shall open the belly. Or should these prove insufficient, a dram of ol. ricini, may be taken two or three times a week; or a few grains of the pulv. fol. senæ, or its extract, with or without a little grated nutmeg, or cloves; or a few drops of the tinct. aloes comp. or tinct. jalap, to infants of some months old. But rhubarb will not be a fit purgative, though it be joined with magnesia, which will not sufficiently counteract its restringency, and nurses ought to be cautioned on this head, with whom it is so frequent a prescription, during the month; and whose indiscriminate use of it is sometimes prejudicial. A few grains of magnesia in a spoonful of dill, or common water, and sweetened with a little manna, or syrup of roses, forms a much neater medicine, (which may be quickened and warmed by the addition of a few drops of tincture of senna) and in costive habits, which usually abound with acidity, answers very well in early infancy.

But if the child be otherwise in health, it is, in general, inadvisable to do much to counteract the

natural habit of body.* I have, even during the month, directed manna, in the dose of half an ounce at a time, to very little purpose, unless it was almost daily repeated, and have at other times given from three to five grains of jalap; till I learned that there are some constitutions, even in infants, where the bowels cannot be kept open without a daily exhibition of some purgative medicine, and that many such children are as well left to themselves, or, at least, require only to be watched. If a stool should be wanted, however, a suppository, (or dry-clyster) made of a little slip of paper, or linen-cloth, twisted up, and well moistened with oil, may be very easily introduced, and will generally answer the purpose; or should this fail, a bit of Castile soap, mallow-root, red beet, or a parsley stalk, may be introduced in like manner. These means will be assisted, and a costive habit relieved, by rubbing the stomach and bowels frequently every day with a warm hand, or a piece of flannel.†

* I have attended in many families of numerous children, all of whom have grown up strong and healthy, but been uncommonly costive, and from their infancy have been for several days without a motion; nor would any gentle means procure it statedly. And on the day when this note was made, I was consulted for an infant of only three weeks old, who had had no stool for five days, and yet was perfectly healthy and easy. This is not mentioned, indeed, to lead practitioners to abate of their attention to a costive habit of body in infants; but in proof only of its being in some instances innoxious, and therefore no cause of alarm as long as children are otherwise perfectly well.

† In some cases of habitual costiveness, a liniment, consisting of liniment sapon. comp. ℥i.; tinct. aloes comp. ℥ß.

Should such a costive and windy state of the bowels produce griping pains, which may generally be known by the drawing up of the legs, or of the scrotum, and a certain manner of crying, it will be proper to apply external warmth to the stomach and bowels, by means of heated bran, or chamomile flowers, put into a soft flannel bag; which will both tend to abate the pain, and assist the operation of the laxative. Or should the costiveness be accidental, it must speedily be remedied; and if the occasion of it be food of an improper kind, or too thick, which is very often the case, the food must immediately be changed. If the child be not usually costive, rhubarb is, indeed, often the best purgative, as it strengthens the bowels afterwards, infants being much more subject to an over-purging than to almost any other complaint, especially if brought up by hand. It sometimes happens, however, that much more powerful medicines than rhubarb may be required, whether the child be naturally costive or not: and in such cases, much caution is necessary; for, where a proper dose of senna tea has proved ineffectual, it is surprising what large doses even of rough purges have been given in vain, or sometimes to the injury of the child. On such occasions, I would rather advise a recourse to clysters, and especially those made of socotorine aloes. From five to twenty grains, according to the age of the infant, dissolved in

rubbed over the abdomen every day, for five or ten minutes, has been found very beneficial in keeping the bowels regular.

S. M.

boiled milk, will rarely, if ever, fail of procuring a stool, and will often procure two or three, especially if preceded by the exhibition of a purge. But even drastic clysters should be administered with caution, and ought not to be very often repeated, especially to very young children, though less hazardous, in every view, than the frequent repetition of purges of a similar kind, and when used alternately with gentle purges, become expedient and beneficial.

Some writers, particularly the French, have much too frequently advised oil of almonds for infants of such a habit. Mr. Le Febure de Villebrune, therefore, in a note to the translation with which he has honoured my first edition of the Diseases of Children, testifies his preference of oils; but I differ from him, being persuaded there are few cases besides disorders of the chest, in which any kind of unctuous oil, but that of castor, will not be injurious to young infants, and particularly in affections of the first passages. It is dubious, however, whether oil of almonds, or of olives, always proves a laxative, or whether, by diminishing the natural force and action of the intestines, it may not frequently prove the reverse.

As there is usually too much acidity in the first passages in costive and windy habits, a little magnesia, or a few drops of liquor potassæ subcarbonatis, may be given for a few days after the costiveness has been removed; and if the child be suckled, the nurse's diet must be attended to. If any flatulency should still remain, (which will

not often be the case, if it has arisen merely from constipation) a little dill water, or a few drops of spir. ammon. comp. properly diluted, are very safe and gentle carminatives; or should one more powerful be expedient, the fluid parts of the warm opening mixture directed in the chapter on diarrhœa may be given, without shaking up the vial. But if the flatulency be an attendant upon a lax state of the bowels and indigestion, its remedy will consist in the removal of those complaints, which will be noticed in their place. Should flatulency, however, continue, it may sometimes prove a real complaint, though it should not happen to be so confined as actually to become an occasion of fits. It is usually, indeed, but a mere symptom of some preceding or attending complaint; nor are its troublesome effects either occasioned or increased by air taken in with the food, as many people have imagined, atmospheric air being essentially different from that produced by indigestion, whether owing to the weakness of the stomach, as it is called, or the improper quality or quantity of the food taken into it. It may, however, in conjunction with other causes, prove a source of many complaints, and create watchfulness, startings, hiccoughs, vomitings, and even convulsions, if not timely attended to, especially if the infant be costive. A principal remedy in that case will consist in keeping the bowels open, with frequent friction of the stomach and abdomen; means of no small importance in every complaint connected with affections of the first passages.

The only instances that I remember to have met with of wind proving of much consequence, when not preceded by other complaints, have been in very lusty new-born infants, whose mothers have also been peculiarly distressed by affections of that kind. This is, indeed, a somewhat anile way of speaking, but it states the precise fact; and one instance of an infant suffering in this way was so remarkable, that it may be worth noticing in this place.

In this case, the meconium began to pass off soon after birth, but not without repeated clysters, purgatives, and the warm bath, and was peculiarly viscid, as well as in vast quantity. The infant the meanwhile appeared for several days likely to be strangled, and was black in the face, merely through the abundance of wind in the first passages, though it was breaking off both by the mouth and the bowels, and with that peculiar and very loud noise, when it came upwards, observed oftentimes in the hysterical spasm of adults, and continuing, with only short intervals, for several hours together; so that the infant was several times thought to be dying. The whole face, except the nose, became exceedingly swelled, so that the infant could scarcely open its eyes, though without any discolouration of the skin; being, probably, owing to wind diffused through the cellular membrane (as hath been known to happen in the case of a small wound of the lungs from a fractured rib); the tumour subsiding immediately upon getting rid of the wind from the stomach and bowels.

These symptoms, however, yielded to carminative juleps, and purging medicines (which is all that mere windy complaints usually require;) and the infant, after the meconium was all come away, was freed from every complaint, without any further semblance of fits, which before had been frequently apprehended.

### *Vigiliæ, or Watchings.*

Watching, or want of sleep, is frequently a symptom of the foregoing complaints, and in that case, may be removed by opening the belly, and afterwards administering a carminative absorbent julep, which will then frequently act like an opiate,* by restoring rest. Sometimes, indeed, this succeeds so well when given in large doses, that we are suspected of having really given some narcotic medicine, which, doubtless, would, in these cases, prove exceedingly hurtful, as the watchfulness is generally a mere symptom, and not a disease; though, when very obstinate, it is sometimes the harbinger of epilepsy, and then requires purgative medicines.

Watchings may arise from worms, purging, or gripings, whether from acrid breast milk, or other food, and from indigestion, as well as from every thing capable of producing pain; each of which probable causes should be very attentively inquired into before we prescribe; and will,

* See Harris De Morbis Acutis Infantum.

When Children are allowed to feed only upon the Breast, they are very much less liable to be attacked by the Thrush, than when Spoon victuals is given to them It may therefore be inferred, that their Liability to this complaint depends greatly upon Management. And I have had occasion to witness on many occasions that the Production or non-Production of Aphthae has depended upon the Nurse in Attendance. Mrs D. had borne several Children all of whom were troubled with the Thrush, she found it necessary to change her Nurse, after which her Children all escaped the Thrush. Mrs H's first Children were all free She then changed her Nurse and was attended by Mrs D's Nurse, this Child had the Thrush, she changed again and the Children again were free from this complaint. This is by no means a solitary Instance.

But though I believe that the occurrence of Thrush is very often brought on by feeding with Spoon victuals, yet it has sometimes taken Place when the Child has been entirely on the Breast, so that it is not improper Feeding alone that does the mischief

therefore, be distinctly considered in their proper place. The usual source may, indeed, be said to be some default in the first passages, and in very young infants, is frequently owing to costiveness. I shall only observe further, if watchfulness be confined only to the night, it is probable the child sleeps too long in the day time, which may be remedied by keeping it moving, and playing with it throughout the day; of which little matters, more precise notice has been taken in the part devoted to the *Management of Infants.*

### *Aphthæ, or the Thrush.*

Having considered these lighter early complaints, I proceed to others which equally owe their origin to some affection of the alimentary canal, and are oftentimes of a more serious nature.

One the most important of these disorders is the Thrush; a complaint that, probably, depends not a little upon the different natural habits of infants, as well as upon their management, particularly in regard to food, air, and the state of the bowels. This seems to be the case, inasmuch as the thrush is sometimes found to seize every infant in certain families, in whatever way the children may be managed; as well as to occur occasionally in others, upon a want of proper attention to the state of the alimentary canal, where a great number of other children, properly watched, have uniformly escaped it. Instances

of the latter kind may have been noticed, where the mother happening to be ill, the whole attention of the family has been thereby engaged; or, where one infant has been put to nurse, whilst all the rest of the children have been carefully brought up at home.

It is a vulgar error, that the thrush is a very harmless complaint, and even desirable to a child in the month; for it is said, if it does not then make its appearance, it certainly will at a more advanced age, and will then prove fatal. The fact is, the thrush is a disease of debility, and, therefore, attacks very young, and very old subjects, especially if otherwise weakened. From the above foolish persuasion of its harmless nature, the disorder is often neglected in the beginning, whereby the acidity in the first passages is suffered to increase, which always aggravates the complaint. It is, indeed, a much milder disorder in this island, than on most parts of the continent, particularly in France, where it reigns as a malignant epidemic, especially in the Hotel Dieu, and Foundling Hospitals, known by the names of Muguet and Millet.* The thrush, however,

* It has been already remarked, that several hospital diseases in France are more complex than with us, and possibly from their infirmaries receiving a much greater number of patients than ours, and their apartments and beds being consequently less clean, as well as the air foul, and disposed to multiply contagion.

This is remarkably the case in regard to the diseases of infants, whose temperament is a singular union of debility and spasm, which the French have aptly termed Laxité vibratile.

is as much a disease, as any other complaint that appears in the month, and is connected with most of those already described; a proper attention to which may very frequently prevent it.

This disorder generally appears first in the angles of the lips, and then on the tongue and cheeks, in the form of little white specks, which some writers have termed ulcers. These increasing in number and size, run together more or less, according to the degree of malignity, composing a thin white crust, which, at length, lines the whole inside of the mouth, from the lips even to the œsophagus, and is said to extend into the stomach, and through the whole length of the intestines; producing also a redness about the anus. When the crust falls off, it is frequently succeeded by others of a darker colour; but this is true only in the worst kind of thrush; for there is a milder sort, that is spread thinly over the lips and tongue, which returns a great many times, and always lasts for several weeks. I have seen this so very often the case, that when I observe a child to have the complaint very slightly, and that it does not increase after two or three days, I venture to pronounce it likely

The Muguet is a striking instance of the above mentioned tendency, it being altogether an hospital disease, which, though distinguished by this name, appears to be a malignant thrush, and is frequently attended with a species of the infantile erysipelas.* When so accompanied, it is said to be constantly fatal, unless the hard and tumid parts terminate in benign abscesses, and suppurate kindly; which is rarely the case, they being more commonly found to mortify.

* See Memoires de la Societé Royal de Medicine, anno 1779.

to continue a long time, but that it will be of no consequence. I have, likewise, seen a return of thrush in a child three months old, and the infant no wise ill, or costive. Care, however, ought always to be taken that children, with any degree of this complaint, be not exposed to cold. It is an old observation, and there is some foundation for it, that unusually long sleeping in the course of the first week or two, is often a forerunner of this complaint.

The thrush, in its commencement, is said to be generally attended with fever; but I have, by no means, found this to be the case, where the thrush is an original disease. When consequent to severe bowel complaints, erysipelas, and other infantile disorders, it is, indeed, often accompanied with fever; and when so, proves either favourably critical, or the infant usually sinks very soon. In ordinary cases, however, I am confident, in nine out of ten, there is not the least fever, though the mouth is often so much heated as to excoriate the nipples of the nurse, and so tender, that the child is often observed to suck with reluctance and caution.* In very bad kinds of thrush, a fever may attend; but even here, it does not appear at the commencement of the complaint, but rather towards the close, the fever also being of the low kind. And this is owing to the general ill health induced by the morbid state of the gastric juices, and ali-

* A very red and shining appearance of the tongue frequently precedes the occurrence of the thrush: in these cases, a febrile state of the system is generally evident. S. M.

mentary canal, in the same manner as the common hectic fever is induced by the long continuance of other bowel complaints

Zuingerus,* indeed, gives an instance of fever accompanying this complaint; but it was in a child of four years of age, and the thrush not the original disease, which serves only to confirm what I have said. Symptoms of slight inflammatory fever had preceded the thrush, which appeared a little the next day, and both that and the fever were increased the day after. On the third, both were considerably abated, and on the fourth day, the child was perfectly well.

It has long been a received opinion, that the thrush must appear at the anus, and many people will not admit that it is cured, if it does not; and for the like reason, they always suppose it to be going off when this redness takes place. But the truth is, that its appearance there is only a mark of the degree of the disease, or of the acidity that occasions it, and not in the least of its cure; and is not, therefore, generally to be wished for. The redness about this part, is occasioned by the sharpness of the secretions in the bowels, and consequently of the stools, which slightly inflame, and sometimes excoriate the parts about the anus, and, in a bad thrush, will do so long before the complaint is going off; but in the lighter kind, no such effects are produced, or are, at least, very slight. And, indeed, this redness has been so often mentioned to me as an

* Theod. Zuingeri, Archiatri Basil. Pedojatreja Practica, 1722.

indication that infants must, unobserved, have already had a slight thrush, or, according to others, be likely to suffer by it very soon, where children have, nevertheless, escaped it altogether; that I have ventured to imagine such infants may be least of all liable to it, if otherwise in good health, at least, my experience seems to support the idea. And I have even conceived, that the acidity of the first passages, being in some children more confined, may prove a remote cause of such infants being troubled with the thrush; whilst others, by an open belly, and stronger viscera, may escape it, at the expense only of this soreness of the external parts, which often continues for several days. And this has led some people, on the other hand, to call this simple redness the thrush, and we therefore often hear it said, that children have had it only in this part.

A principal remote cause of this disease seems to be indigestion, whether occasioned by bad milk, or other unwholesome food, or by the weakness of the stomach. Perhaps thick victuals, particularly if taken hot, and made very sweet: also, covering the face of the child when it sleeps, or allowing it to breathe the confined air of the mother's bed, may contribute to bring on the complaint, and ought therefore to be avoided. The proximate cause,* is the thickness, or acrimony of the juices

* If such a term, after all that Gaubius and later professors have advanced, may be used in any sense distinguishable from the disease itself, it is presumed that the circumstances enumerated may be distinguished from those termed *remote* causes. Should this not be allowed of, the term *proximate cause* seems

secreted from the glands of the mouth, fauces, stomach, &c. producing heat and soreness in these parts. A tea-spoonful of cold water given every morning has been thought a good prophylactic: but keeping the bowels duly open, is certainly a much better.

The means of cure must be sufficiently obvious, if due attention be paid to the nature and occasion of the complaint. As a general observation, it may be said, that when the thrush attacks robust infants of a costive habit of body, it is easily cured, and, indeed, requires nothing more than keeping the bowels well open; for which purpose, the daily exhibition of castor oil is usually the fittest means. But, on the other hand, the complaint is attended with some hazard in delicate infants, whose bowels have been previously weak, and especially where the child is nourished only by the spoon. Much has been said in favour of emetics, especially wine of antimony, as being almost a specific for this disease, but I cannot say it has proved so with me,—unless in the slight cases just mentioned; nor can I see any

to be perfectly useless, and one to which we can never affix any precise ideas, the *cause* and *effect* being confounded. But I do not mean to enter far into such a controversy, and have touched upon it rather by way of apology for the use I have made of the term, in this and other parts, and to mark an obscurity which I leave those to settle, whose province it may be to take the lead in such matters. It were well, however, if some able pathologist could affix some idea that might be universally adopted, so that when we meet with the term in different authors, no reader might be at a loss for the meaning.

sufficient cause for departing from the more ancient practice, in the treatment of this very common complaint.

There can be no objection, after having properly opened the bowels, to administer an emetic, and where the thrush is of a dark colour, and the whole inside of the cheeks is lined with it, I am persuaded it may be useful, by emptying the stomach of the crude juices oozing into it from the glands of this part. But, I think, it would be generally prejudicial, to persevere in the use of emetics for weeks, or even days together, and it is both a severe and an unnatural method of treating a tender infant, whose bowels are always the most natural outlet for its complaints; on which, therefore, nature uniformly throws the offending matter on almost every occasion, as appears plainly in teething, in which the first passages cannot be primarily affected. Should the vinum antimonii, indeed, be found useful, not merely as an emetic or purgative, but by any alterative virtues capable of removing certain morbid actions of the glands seated in the first passages, a recourse to it would certainly be rational; but I have myself had no such evidence.

I believe, therefore, that where there is no fever, nor any uncommon symptom, testaceous powders are the best and safest remedy; which may be joined with a little magnesia, if the body be costive, administered twice or oftener in the day; or if in the other extreme, and the child is very weakly, three or four grains of the compound powder of contrayerva in its stead. Some such

preparation should be administered for three or four days successively, and afterwards something more or less purgative, to carry down the scales as they fall off from the parts. For this purpose rhubarb is generally the best; but when the thrush is very violent, is of a dark colour, has come on very rapidly, and the child is lusty and strong; a grain or two of the pulv. è scammon. cum calomel. may be joined with it, agreeably to the idea of Heister, and the testaceous powders be repeated for two or three days as before, till the disorder begins to give way. On the other hand, when an infant with this bad thrush is weak and delicate, a decoction of the Peruvian, or oak bark, with aromatic confection, is found the best remedy.

The choice of the testaceous powders, on which some writers have said so much, is, I believe, of very little importance: the purest and softest are preferable. The design of these medicines being to absorb and correct the predominant acidity,* their effect will be discovered from the kind of stools that succeed, and the dose may therefore

* The French physicians are of opinion that the thrush is owing to what they call a putrid alcaline humour, or something analogous thereto, rather than to an acid. But this cannot be the case in the ordinary thrush, as is manifest both from the appearance, and the sour smell of the stools, as well as from the more certain remedies for the complaint, which are alcalies and absorbents. The malignant thrush, (already hinted at) which appears in some of their crowded hospitals, is certainly a very different complaint, and seems, indeed, to be of a putrid nature.

be increased or diminished, or they may be altogether discontinued, as circumstances direct. In the mean time, if the child be suckled, the nurse's diet should be attended to; and, in general, her usual quantity of porter or ale, which is almost always more than sufficient) should be diminished.

In regard to applications to the part, it is necessary to observe, that as they have little to do in curing the complaint, it will be improper to have recourse to them very early. I know, indeed, it is very common to begin with them, but they serve only to increase the soreness of the parts, (especially in the manner they are generally used) and to give a deceitful appearance of amendment. The proper intention of these remedies, at this period, is merely to preserve the infant's mouth clean and comfortable, and to prevent, as much as may be, any pain or injury to the wet-nurse. If, therefore, the inside of the cheeks and tongue are thickly covered with sloughs, it may be convenient to clean the mouth two or three times a day; but otherwise it will in general be improper till the complaint is past the height, the sloughs disposed to fall off, and the parts underneath inclined to heal; which never takes place till the secretions in the first passages are become bland and mild. Proper applications will then have their use, not only by keeping the mouth clean, but by constricting and healing the raw and tender apertures of the excretory vessels.

I have, indeed, met with an instance of a very copious thrush disappearing, after cleaning the

mouth with borax and honey, at noon and night, on the fourth day of the disease. Until this time it had been increasing, and I expected would become worse; and therefore directed the mouth to be cleaned so early, only to render the infant comfortable, and to prevent as much as might be, any inconvenience to the wet-nurse. There was but very little appearance of thrush, however, the next morning, and not the least after that day. It is, therefore, likely that the parts were rendered perfectly clean by the help of the borax, somewhat sooner than it otherwise would; though I can by no means conclude that it had any other share in the cure.

The like observations I have had occasion to make, in regard to an exceeding slight appearance of thrush, which had continued in the same state for three days; but upon being cleared off by once using the borax and honey, never re-appeared. In both cases, the usual internal remedies were administered, both before and after the recourse to topicals.

Of the latter of these, also, a variety have been in use, in the form of lotions and gargles, which from the earliest times have all been of an astringent nature; and, it scarce needs be added, should be of an innoxious kind, as some portion of them will be swallowed: and I mention this because Stoll reports that the English advise a solution of sacch. saturni, which, for my own part, I never heard of before. Honey of roses and spirit of vitriol, or sea salt, as recommended by Ettmuller and Dr. Shaw, form a very good

one; but nothing is preferable to borax, which some advise to be mixed up with sugar, in the proportion of one part of the former to seven of the latter: a pinch of this put upon the child's tongue, will be licked to all parts of the mouth. But I prefer a mixture of borax and common honey, (two scruples, a dram, or even more of the former, to an ounce of the latter) which hangs about the fauces better than in the form of powder. Either of these may, at this period, be made use of as often as shall be necessary to keep the parts clean, which they will effectually do, without putting the infant to pain, by being forcibly rubbed on.

It only remains to take notice of the black thrush, as it is called, which is, confessedly, a very uncommon complaint in the infant state. The late Dr. Armstrong said he had never met with it among the great number of children brought to his dispensary. I have seen only two instances of it, which were in strong and healthy children; but the parts were not perfectly black, and if that be intended by the name, these cases might not be precisely that complaint; they, however, both proved fatal. After the stomach and bowels have been cleansed, I believe the decoct. cortic, and confec. aromat. as before mentioned, with the addition of tincture of snakeroot, is the most likely medicine to be of service. The bark, especially, should be administered very freely, and the bowels be kept open; which is more safely done by rhubarb, than any other purge.

## *Aphtha Gangrenosa.*

The Aphtha Infantum has been generally regarded as an idiopathic disease; but I believe that every other species of aphtha has been considered either as purely symptomatic of fever, dysentery, &c. or as a critical termination of some acute disorder. The aphthous affection which I am now going to describe, does not, however, seem to be the consequence of any preceding general disease; and I am inclined to think, that it is the cause, rather than the effect of those febrile symptoms, which accompany what I shall call by the name of aphtha gangrenosa.

This disease most commonly attacks children that are above two years of age, and, I believe, rarely after nine, unless by infection. Its first appearance is marked by a very spongy state of the gums, and a remarkable tenderness of the inside of the cheeks and mouth. Soon after this, little aphthous sores having a dark coloured surface, appear upon the gums, the inside of the lips, and upon the tongue: sometimes similar ulcers are seen upon the uvula and tonsils; but this is not always the case. As the disease proceeds, the cheeks become slightly tumefied, and are very tender when touched; and there is often an unusual redness upon that portion of the skin which covers the lower jaw. Besides the aphthæ which appear upon the tongue, that part is usually much furred, and the teeth about the edges of the

gums are likewise covered with a blackish fur; the breath is very offensive, and, at this period, the disease is highly infectious, even to adults. In the progress of this complaint, the submaxillary glands become enlarged, and slightly painful; and there is generally a preternatural flux of saliva, which is sometimes discharged in considerable quantities from the very beginning of the attack. Sometimes the angles of the mouth are found to be ulcerated, but this is by no means a common appearance.

The gangrenous thrush is always accompanied with considerable languor, and sense of debility; an increase of heat; a small, quick pulse; the appetite is impaired; but the children do not sleep ill, and they are often cheerful and active, at different parts of the day.

The disease does not observe any exact periods; some children recovering in a fortnight, while others have been more or less affected from a month to six weeks.

Formidable as the appearance of this disease may be, it is not found to be dangerous, and the remedies are obvious. The infus. cort. cascarillæ, warmed with tinctur. cort. Peruv. comp. should be exhibited three or four times a day, in doses suited to the age; and the parts frequently washed with the decoct. cort. Peruv. rendered s sharp with the acid. vitr. dilut. as children can bear it.

## *Eruptions on the Skin.*

It is by no means my intention to enter largely into this extensive subject, imperfectly understood, even to this day, at least in regard to classification and arrangement; though certainly our knowledge of eruptive diseases has been much improved through the pains taken by Dr. Willan, and, in respect to children, what we know is sufficient for every practical use. In another part of the work I shall treat of the scalled-head, and two or three other troublesome affections of the skin, taking place at different ages; but shall at present chiefly confine myself to eruptions peculiar to infancy; adverting first to such as are connected with the state of the first passages.* The earliest of these is—

* The description of "the eruptions peculiar to infancy," which Dr. Underwood has given, is far from being clear and explicit. It is indeed a most difficult task, even with the aid of drawings or coloured engravings, to give such exact definitions of the manifold eruptions on the skin, as shall enable practitioners easily to distinguish some from others. Since Dr. Willan's publication on cutaneous diseases, a more exact knowledge of several of these complaints has been obtained, but much remains to be done to accomplish a perfect classification.

To some of Dr. Underwood's appellations, I have added the name by which the disease is characterized in Willan's and Bateman's arrangement: but on some occasions I have not been able to satisfy myself, that my appropriation of the name to the disease intended to be described, is quite correct. Whenever I have doubted much, I have marked my doubt by a note of interrogation. S. M.

## *The Strophulus, or Red-Gum.*

(STROPHULUS INTERTINCTUS. WILLAN.)

This eruption has been distinguished by different terms: I speak here of the strophulus intertinctus, which is an efflorescence appearing usually in small spots, often confined to the face and and neck; but sometimes it extends to the hands and legs, and even the whole body, appearing in very large patches raised above the surface. Eruptions will likewise appear in the form of small pustules, which are filled with a limpid, or sometimes a purulent, or yellow liquor, and frequently turn dry and horny, and scale off; at least I have never known what name to give this kind of eruption, but that of a *ranker* strophulus, as it happens only in the month, or soon afterwards, and never gives any trouble; this seems to be that termed by some writers strophulus confertus. There is another species as small as pins' heads, or even their points; firmer than the former; often of a pearl colour, and opake, which has generally been accounted a kind of red-gum; but it has of late, for distinction sake, been termed the strophulus albidus, or the *white-gum*,* as the former might be called strophulus subalbus.—

* It is to this complaint that Vogelius seems to give the name of *achores*, but the old writers differ in this respect: of that complaint, however, more will be said in another place, when speaking of disorders described under obsolete terms.

Another species appears in small, circular patches, and is denominated strophulus volaticus ; and a fifth, in which the patches are larger than in any of the foregoing, and are more diffused, appearing chiefly on the loins, shoulders, and the upper part of the arms. Every species of this eruption, like the thrush, is the effect of a predominant acid, but can scarcely be termed a complaint, being a kindly exertion of nature to throw off some acrimony ; consequently an evidence of the strength of the constitution, as the thrush is, usually, of its weakness. In the former, nature throws off the offending matter on the surface more completely, as well as on less irritable parts than in the latter, and therefore, when the eruption is slight, requires no assistance.

On this account it is, I apprehend, that writers have not usually taken notice of it ; though it should seem requisite, both on account of the various appearances of it, and especially of one species, more rank and extensive than the rest. In general, it is necessary only to give a little testaceous powder, or magnesia, according to the state of the bowels, and to keep the child moderately warm ; otherwise, the rash striking in, the acrimony will fall on the first passages, and be succeeded by sickness, or purging, (till the eruption appears again on the skin) or not unfrequently by the thrush. In the case of sickness at the stomach, or any disposition to fits, upon this eruption being repelled, some light cordial, such as a few drops of the spirit. ammoniæ comp. should be given two or three times a

day, and the child's feet, or perhaps the whole body, be put into warm water, and a blister be applied between the shoulders, if any untoward symptoms should continue. The state of the skin and the bowels have a peculiar consent, and on this account, infants whose first passages have been frequently disordered, are always benefitted by eruptions on the skin; and, in such, peculiar care is necessary to guard against their being repelled, as well as to invite their return.

Dr. Hamilton speaks of copper-coloured blotches of the size of a sixpence, or shilling-piece, on the nates or soles of the feet, occuring in the first or second week after birth, indicating a diseased state of the infant's habit, (ecthyma cachecticum? Willan) and requiring the most serious attention. He adds that, if neglected, ulcerations of the palate, throat, and nostrils, follow; the nurse's nipples, arm-pits, and throat become infected; and if the infant survive for any length of time, (which is not common) the arms and legs are covered with an ugly scab, which keeps up a constant degree of irritation. He informs us, that the only cure for this affection is mercury, which ought to be exhibited both to the nurse, in such doses as shall affect her milk, and also to the infant, in doses adapted to its strength, and to the virulence of the disease.*

* Dr. Hamilton does not intimate a suspicion, that the blotches here spoken of originate from a syphilitic affection. Many of the French writers on children's diseases, however, viz. Alphonse Le Roy, Mahon, Combes Brassard, Capuron, &c. seem to consider the symptoms mentioned by Dr. Hamilton,

I have myself never noticed this eruption, but the statement comes from such authority, I thought it ought not to pass unnoticed.

Infants are peculiarly liable to various anomalous kinds of rash, both in the month, and till the period of teething is over. The early ones may be regarded as a sort of red-gum, and children who are most subject to them generally have their bowels in a better state; the rash seemingly carrying off, as has been said, the acidity* with which they so much abound.

It may be remarked, however, that when infants at the breast are inclined to frequent returns of some eruption, if the child be always indisposed at such seasons, the rash will often be found owing to some ill quality in the breast-milk, which ought, therefore, to be examined, and particularly in regard to its taste. On such occasions I have found, that milk, which has been

as conclusive evidence of such an origin. The popular opinion in London leans the same way. During eight years that I was the physician-accoucheur to the Westminster General Dispensary, many cases of this nature fell under my care; I have seen several, likewise, at the Middlesex Hospital and in private practice; and in almost every instance the parents or friends were full of suspicion that this was the origin of the disease; and often an admission has been made that one or other of the parents had been deeply imbued with the venereal disease. I do not recollect that any case was cured, unless mercury was exhibited in some form or other; frequently, I have given very small doses of the oxymuriate with syrup of sarsaparilla, but more commonly small doses of calomel or hydrarg. c cretâ. Unless the mother had evident symptoms of the disease, I have not usually put her under the influence of the specific. S. M.

* See Harris, pages 22, 23.

above a twelvemonth old, has contracted a very unpleasant flavour; and that, upon changing the wet-nurse, a very ill-looking rash has immediately abated, and has soon afterwards entirely disappeared, together with the other complaints.

I am glad to find Mr. Burns, of Glasgow, of this opinion, whose treatise on midwifery, and the diseases of women and children, I had not seen at the time of the former edition of this work; and feel gratified by the polite notice of it by so respectable a writer. A work highly worthy of perusal by the younger part of the profession, as containing the sentiments of various ancient and modern writers.

## *Crusta-Lactea, or Lactumen.*

(PORRIGO LARVALIS, WILLAN.)

This, it is well known, calls for a little more attention, and has oftentimes a very unpleasant appearance; but is, notwithstanding, equally innocent with the former, and even prevents other complaints. I think I never saw an infant much loaded with it, but it has always been healthy, and cut its teeth remarkably well. Indeed, it falls to the lot of the finest children, and such as are well nourished; whence some have imagined it owing only to the richness of the milk.* And

* See Astruc.

it is remarkable in this eruption, that howsoever thick and long-continued the scabs may be, the crusta-lactea never excoriates, nor leaves any scar on the parts. It may, possibly, be different in some other climates, though I cannot guess for what reason it should be so on the continent: it is insisted upon, however, by Dr. Carolus Strack, as well as that healthy children long affected with it become unhealthy. He recommends the viola tricolor. Linn. of which a handful of the fresh, or half a dram of the dried leaves, is directed to be boiled in a half pint of cow's milk, and strained off. This quantity of the decoction is to be taken night and morning.

The crusta-lactea appears first on the forehead, and sometimes on the scalp, often extends half-way over the face in the form of large, loose scabs, which, as the disorder increases, appear not very unlike the small-pox, after they are turned. It begins with white vesicles, larger than the itch, which soon become of a dark colour; to which succeed the scabs, with efflux of ichor, and great itching of the affected parts, sometimes covering the head, and, as some say, but I believe improperly, the whole body. It is also said to degenerate into the scalled-head;* but I have never seen any thing like the true tinea in young infants. It is sometimes confounded with the crusta serpiginosa, which is a much more obstinate complaint.

* Tractatus de Morbis Puerorum. Amstelodami, 1760 — *Anonymous.*

Very little, I believe, is necessary to be done; but in bad cases a blister is sometimes of service; and, further, usually answers the grand purpose of abating the itching, which, in some instances, is exceedingly great: for this end, however, the repetition of a blister, if needful, is preferable to keeping one constantly open. Washing the parts, also, with the anile remedy of butter and beer, is sometimes useful, especially when the discharge is hot and acrid. To the like end the ung. picis, (made with the petroleum, instead of pix liquida) spread thinly on a piece of linen, and applied after the infant has got into its night's sleep, is equally safe; but should be carefully washed off the next morning. If the urine becomes turbid, or fetid, it is thought the rash will be of short duration. At any rate, it usually disappears of itself when the child has cut three or four teeth, though it may sometimes continue for several months, and, in a very few instances, even for years; in such cases, the Harrowgate, or any other sulphureous water, will have a good effect; but the shop medicines commonly prescribed do nothing. I have known testaceous powders, calomel, and other alteratives, administered to no purpose, as people of rank are very anxious to have it removed, if it be possible. This rash will now and then make its appearance very early, and has then been mistaken, by those who are not much accustomed to attend very young children, for the effects of the venereal disease. Though it more usually dies off upon cutting some teeth, yet I have known it disap-

pear suddenly, previously to any teeth being cut, and after some weeks return more violent than before; infants remaining all the while in perfect health.*

It were almost endless to enumerate the various kinds of rash to which infants are liable, but I mean chiefly to confine my remarks to the more important, or rare ones, and such as may not have been described by preceding writers.—Among such are the following, whose unusual appearance is apt to perplex such as are not accustomed to see them.

* Though the crusta-lactea is generally unattended with danger, or ill consequences, yet the state of itching or irritation it produces, is sometimes excessively distressing to the child; and I have known many instances of so much sallowness, emaciation, and other evidences of want of health, as to occasion much alarm. Except when such ill symptoms occur, little of internal medicine is required; yet it is desirable to keep the bowels always regular, perhaps rather active; sometimes a mild, mercurial alterative has been serviceable, and sometimes I have given with benefit a little draught, twice or thrice a day, with liq. ammon. acet. 3 i.; liq. antim. tart. ℥ v. ad x. Where sallowness, languor, and emaciation have come on, the carbonate of soda, with sarsaparilla, decoct. lichenis, or some light bitter, has been employed with advantage.

For external applications, washes are generally preferable to unguents; but I have seen marked benefit from the ung. zinci, when the itching has been particularly troublesome. The lotions should be used of a moderate degree of warmth, and are then very soothing. Warm water, with a small proportion of spirit; warm Harrowgate water; or a decoction of poppy heads, with the addition of a small quantity of liq. ammon. acet. have all proved useful sedatives. S. M.

## *Tooth-Rashes.*

The first I shall notice is somewhat anomalous, being, like the former, not confined to dentition. It appears, indeed, under different complaints, particularly at the decline of fevers, and severe bowel complaints; insomuch that, upon a sudden appearance of it during a serious illness, I have often ventured to prognosticate the recovery. This rash very much resembles the itch, both in regard to the little watery heads, and foul blotches; * and is confined to no particular part of the body, though it appears more frequently about the face and neck. Indeed, I have seen the whole body so covered with it, (mixed with an eruption about the face, of a different appearance, and evidently red-gum) that, in a consultation, it has been by some taken to be the true itch. This eruption is certainly salutary, and even critical, requires nothing but to avoid taking cold, and is mentioned only because it is uncommon, and has alarmed such as are not acquainted with it.

I have two or three times, during dentition, noticed a rash that has so exactly resembled flea-bites, having even a depressed point in the middle of the elevated spot, that I could not be persuaded by the nurse's account, that it had not been occasioned by the sting of some such insect, until I had made repeated observations, and

(* *Miliaria*, Bateman.)

found it recurring uniformly a little before a tooth has been cut.*

Another, a very common rash, appears chiefly in teething children, which very much resembles the measles, and has been sometimes mistaken for it.† It is preceded by sickness at the stomach, but is attended with very little fever; though the rash continues very florid for three days, like the measles, but does not dry off in the manner of that disease. It requires nothing more than the testaceous powders, or sometimes the addition of a little nitre, and compound powder of contrayerva; with a dose or two of rhubarb, or other gentle laxative, on the going off of the rash.

At this period, especially while the double or eye-teeth are cutting, I have noticed a rash which at its first appearance is very similar to the above, and has likewise been mistaken for the measles. It, however, soon spreads into larger spots and patches of a bright red, and afterwards of a darker hue, resembling the ill-looking petechiæ which appear in bad fevers, but is, nevertheless, of a benign nature. It is, indeed, attended with some fever, arising possibly, from the irritation occasioned by teething, and has been followed by small and hard round tumours on the legs, which softening in two or three days, always appear as if they would suppurate, though I be-

* (*Lichen Urticatus.* Bateman.)

† (*Roseole Infantilis.* Willan.)

lieve they never do; * as will be further noticed in a similar appearance of boils under the head of fever. The treatment, like that of other rashes at this period, is very simple, requiring little more than an attention to the state of the bowels, or, perhaps, a few grains of the compound powder of contrayerva, unless the fever be considerable, which must then be treated according to the directions given under the different heads of fever and dentition. Should the lumps succeeding this rash not begin to die away in three or four days, a decoction of the bark will be found useful when the fever of dentition may not forbid recourse to it.

I have seen a third kind of rash, in appearance resembling the measles, and, like it, covering the whole body, but with larger intermediate patches, like the eruption in the scarlet fever; † which is mentioned more for its uncommonness, which might prove alarming, than for its being at all dangerous, or important. It was, however, in every instance, preceded by sickness, by purging, pain, and a little fever; the whole subsiding upon the appearance of the rash, which therefore seemed to be critical, or at least, like some other eruptions, consecutive to convalescence.

Some infants never cut a tooth without its being preceded by a rash; and sometimes by a

* (*Erythema Nodosum.* Willan.) Both Willan and Bateman speak of this complaint as affecting females only. I have no doubt of having frequently witnessed it in children of both sexes. S. M.

† (*Urticaria Febrilis.* Willan.)

very singular one,* the eruption appearing in every part of the body; in some parts consisting of hard elevated pimples as large as peas and in others, of red patches on the fingers, the arms, and about the shoulders and back, as broad as a shilling: but in no case have these eruptions required any particular attention, but, on the other hand, have seemed to prevent the more ordinary complaints of teething.

An eruption still less frequently met with than most of the above, appears after children have cut their first teeth. I know not what name ought to be given to this kind of eruption, which breaks out in the form of round lumps, as large as middle-sized peas, very hard, with a very red base, and white at the top, as if they contained a little lymph.†

They come out suddenly, without previous sickness at the stomach, are not sore, disposed to itch, nor ever give any trouble; and are seldom seen but on parts that are usually uncovered, and are sometimes there in great numbers, resembling the distinct small-pox; but are harder, more inflamed, and less purulent.

Alarming, as well as unusual, as this appearance may be, I believe the eruption is always perfectly innoxious, if not repelled by cold, or improper treatment, and will dry away in three or four days; nothing more being necessary than the little remedies directed for the former, and

* (*Urticaria Febrilis.* Willan.)

† (*Ecthyma Infantile.* Bateman.)

to keep the child within doors, if the weather be cold.

There are, however, tumours of the size and hardness described above, and with a red base, which, after continuing many weeks without occasioning either itching or pain, will suddenly inflame at the superior part, and break, though without sensible pain.* These tumours take place in children who have all their first teeth, or nearly so, and who appear in good health, save that they are rather feeble, and possibly of a scrofulous habit. They are slow in healing, and call for a nutritious diet, and the use of a little red wine and bark.

An eruption of an appearance equally uncommon, and analogous to the above,† I have met with only in children of at least three or four years of age, and such as have also been affected with slight symptoms of scrofula, though I have not seen it frequently enough to ascertain its being, in any degree, owing to that specific virus. It breaks out suddenly, covering at once the greater part of the body, but occasioning neither pain nor itching; nor are children sick at the stomach nor otherwise ill with it, though it lasts for two or three weeks.

This eruption, therefore, like some others, is taken notice of chiefly for its singular appearance; which, though somewhat like the nettle-rash, is of a different figure; and may be pretty exactly

* (*Ecthyma Vulgare.* Bateman.)

† (*Ecthyma Luridum*? Bateman.)

conceived of by the little red lumps left sometimes by the small-pox, after they are turned, and also rubbed, or picked off, especially after the crystalline, or warty species, and where the pustules have been pretty numerous.

If the first passages are at all disturbed, my attention is principally directed to them, otherwise to the state of the skin; and in this case, I have usully directed small doses of the pulv. antimonial. to be taken for a few nights at going to bed, and the polychrest salt and rhubarb, occasionally in the course of the day, with or without the addition of the aqua ammoniæ acetatæ.

In the course of a few days the eruption puts on a darker colour, is less prominent, and begins to scale off in a branny scurf, somewhat like the measles; but should no such change take place; the vinum antimonii, or the hydrargyr. cum creta should be taken two or three times a day; to which, if no amendment should soon be perceived, a few drops of the tinctura cantharidis may be added: a remedy often very efficacious in disorders of the skin, but requiring to be administered with caution.

## *Essera, or Nettle-Rash.*

(URTICARIA. WILLAN.)

An eruption, with every appearance of the nettle-rash, sometimes occurs in children, and more generally under two years of age, and is exceedingly troublesome to the infant, as well as

matter of surprise to those about it, from the suddenness of its appearance. Children going to bed perfectly well, awake very uneasy, and frequently continue screaming for some time, before the cause is discovered; when, upon examining the body, and the lower limbs, they are found covered with large wheals, resembling those arising from the sting of nettles.

The essera, or urticaria, in athletic youths and adults, is attended with slight fever; its accession is sometimes preceded by rigor, sickness at the stomach, and pains in the head, especially when the sudden consequence of exposure to a very cold wind; but it is never dangerous, and demands particular notice only when it may happen to continue a very long time. The nettle-rash of infants is of still less importance; and the species now under consideration requires less than any other, and, indeed, often disappears in a few hours. When it continues longer, a few grains of the pulv. contrayervæ comp. or other of the milder absorbent powders, with or without a few drops of the spirit. ammoniæ comp. may be given two or three times a day, and the bowels kept open.

When the body is more covered with the rash, and it continues long, a little more care is required to prevent its being repelled; and if it should, the tepid bath and light cordials, as before mentioned, should be had recourse to, in order to procure its return to the surface, which is always of the greatest consequence if the child should continue unwell.

In athletic youths, the nettle-rash is sometimes attended with the usual symptoms of fever, during which, the patient should be confined to the bed. It will also, in some instances become chronical, and is then not always easy of cure. The following has, in such cases, been found useful.

R. Hydrarg. sulphuret. rubri ʒss. Radic. Serpentar. Virg. pulv. ℈j. Syrupi simpl. Q. S. ut fiat bolus, bis die sumendus; superbibendo haust. Infusi flor. sambuci.

Amongst rashes attended with some little fever, there are various anomali, and one resembling both the above, and the febris scarlatina, but without the marked symptoms of the latter, or drying off in branny scales, in the usual manner of that eruption. The form and colour of the rash, and degree of fever, however, are more of that kind, than of the nettle-rash.

## *Phlyctænæ.*

(PEMPHIGUS INFANTILIS. WILLAN.)

Another rash, or rather eruption, takes place both in bowel complaints and in teething; and I have seen it in new-born infants, resembling the pemphigus of adults, but seems rather to be what the old writers have termed phlyctænæ, or phlyctides, and always appears to be beneficial. It consists of vesications, or blisters, of different sizes, resembling little scalds or burns, and continues for several days. They come out in dif-

ferent parts, but chiefly on the belly, ribs, and thighs; and contain a sharp lymph, which it may be prudent to let out by a puncture with a needle, especially from the larger ones. No medicine is necessary but such as the particular state of the bowels may call for, which usually abound with acidity, whenever there is much eruption on the skin.

An eruption, vulgarly termed scorbutic,* infesting the face and neck, sometimes also the nates and thighs, and even about the finger-nails, and discharging a sharp ichor that excoriates wherever it runs, will often yield in a short time to the expressed juice of the sium aquaticum. From one to four or five table-spoonfuls may be given, mixed with one or more spoonfuls of new milk, three times a day, according to the child's age, and the state of its stomach; taking care, at the same time, to keep the bowels open by senna tea, or other common laxative. Should this fail, or not be to be procured at some seasons, the calx. hydrarg. alb.† or the hydrargyr. cum cretâ, may be administered two or three times a day. In some instances, however, and especially in children of a costive habit, purging has done more than any thing; in teething children, indeed, the eruption will recur many times, until

* (*Herpes Phlyctænodes?* Bateman.) S. M

† I have no knowledge of the effect of the calx. hydrarg. alb. taken internally. It probably possesses no medicinal virtue superior to that which is found in the more common preparations of mercury. In Powell's Pharmacopæia, its dose for adults is stated at from gr. v. to gr. x. S. M

all the first teeth are cut. To allay the intolerable itching, the application of the unguent picis, prepared as recommended for the crusta lactea, and spread upon linen, is frequently efficacious, and has no tendency to repel.

## *Psora, or the Grocer's Itch.*

(PSORIASIS INFANTILIS. WILLAN.)

I have several times met with an eruption resembling the Psora of the Greeks, or what is called amongst us the grocer's itch; whether depending at all upon the weather, it is difficult to say, but it is remarkable, that I have seen it chiefly during a cold season, and have then usually met with several children affected with it about the same time. It often begins about the arms and thighs, but always extends soon afterwards to other parts, and frequently spreads quite from the head to the feet.

It appears in some parts in very small eruptions like the points of pins, with watery heads; and in other parts as large as peas, and sometimes in foul blotches; which, after breaking, form sores, and broad, ugly scabs. These die away, and the like appear, successively, in other parts, sometimes for two or three months, leaving the skin of a dirty, adust hue. In other parts, the eruption has the form of small, hardened pimples, which do not break, nor are at all sore to the touch.

This eruption occurs in children who have cut all their first teeth, as well as in infants at the breast, though more frequently in teething children, and it then seems to be connected with dentition. This appears evident from this fact, that children who had taken a variety of medicines, and continued to have the eruption break out in fresh places, have suddenly got rid of it altogether, upon lancing the gums, and giving freedom to three or four teeth.

When this eruption has appeared in infants at the breast, I have several times known the suckling mother, or nurse, affected in a few weeks after with the same complaint: but whether by accidental coincidence, or from contagion, I was for a long time unable to ascertain; but I have now no doubt of its contagious nature like the true itch: yet it does not appear to be communicable by a slight and more distant intercourse. A very useful discrimination in such a disease.

I was for a while much puzzled with this ill-looking eruption, the long continuance of which could not fail to be very distressing to the parents, who have sometimes suspected the eruption to be the itch, and at others venereal, which it certainly is not.

It has been always benefited for a while by washing the parts with two drams of the aqua kali puri in a pint of water; which I would always recommend, though it will not alone effect a cure. Various internal remedies, also, which remove other eruptions, have generally failed in this, such as the hydrargyrus cum cretâ, and

hydrargyrus cum sulphure, given in large doses; as also the sium aquaticum. The external application, however, of an ointment, consisting of the unguentum sulphuris, and unguentum hydrargyri nitrati, with a greater or less proportion of the latter, has hitherto never failed me, together with the internal exhibition of one or other of the forementioned remedies. In some of the more obstinate cutaneous affections, and particularly in this, I have noticed a spontaneous purging taking place upon the decline of the rash, and have always accounted it a good sign, having never observed the child to be weakened by the purging, though it has sometimes continued excessive for two or three weeks.

I shall close the account of eruptions with the description of one that is singular enough, resembling very much the herpes, or broad ringworm, or the adust-coloured spots left on the face after an attack of St. Anthony's fire. I have seen it in various parts, but I think only on such as are more or less liable to be fretted by some part of the infant's dress, especially on the nates and contiguous parts covered by the clothes, where the blotches are always the broadest and most rank. Were it to appear nowhere else, it would seem to be occasioned by some sharpness of the urine and stools, as the skin has sometimes a very heated appearance, though the eruption, I believe, is not at all painful. It frequently breaks out before the period of teething, but the bowels are generally somewhat disordered, and the stools voided very green, or else

become so very soon afterwards. This I take to be one of those eruptions occasioned by some bad quality of the breast milk: as, I think, I have never met with it but in young infants whose nurse's milk has been old, and has also contracted a very disagreeable taste. If that should not be the case, the rash will probably require nothing but the light absorbent medicines before mentioned, and to guard against constipation. But if these means should not succeed in a short time, the nurse ought to be changed, lest some worse consequence should ensue, as will be noticed under the head of convulsions.

In all the eruptive complaints of infants, exposure to cold ought to be carefully avoided, and great caution be used in regard to all external applications, as well as keeping the belly open. If the child is sick at the stomach, a little magnesia, or testaceous powder, with or without the addition of the pulv. contrayervæ comp. may be given now and then: or should the rash be hastily struck in, and the child be ill, the remedies before mentioned should be had recourse to; particularly bathings in warm salt and water, which indeed will expedite the cure in many eruptive complaints of the more permanent kind. The reader is reminded of this, from the great importance of attending to such retrocession; as I have known it, in a previously healthy child of only six months old, followed, not only by vomitings and purgings, but by a rapid decline; and upon examining the body after death, the lungs have been found as replete with tubercles, as I have ever seen

them at a more advanced age. Instances of so great marks of disease have, however, occurred to me only in families inclined to scrofulous, or hectical affections.

Should any scabs become very dry and hard, which the crusta lactea, for example, will sometimes be, especially when they extend to the crown of the head, and seem to give pain, they may be touched with a little cream, or with oil of almonds mixed with a few drops of the aqua kali, but not a large surface at a time. Or should they be very moist, and cause pain by sticking to the cap, they may be dusted with a little common powder, or with the flos sulphuris, and covered with a singed rag; but I should be very cautious of doing much more with desicative applications, for the reasons above-mentioned, especially during the time of teething.

## *Sore Ears.*

Slight blisters and ulcerations behind the ears of infants are very common, and in general require only to be washed with cold water, or covered with a singed rag, to keep the cap from sticking to them, and thereby giving the child pain. They are, moreover, very often beneficial, especially during bowel complaints, or the irruption of the teeth; and will sometimes get well and break out again into very foul sores, several times, without any cause of alarm. But in children of a gross habit of body, and especially about the

time of teething, there is a species of ulcer that often requires attention, on account of its extending low down in the neck, occasioning great pain, and spreading into large and deep sores; insomuch that a gangrene has sometimes come on, and even the processus mastoideus become carious. Here fomentations will be necessary, especially those of bark; and its powder should be administered internally. Such cases, however, do not very frequently occur; but whenever the sores are large and painful, fomentations of white poppy heads boiled in milk, will be beneficial. If such ulcers are very foul, the cure should be begun by a blister on the back, in order to draw off the heated serum that flows to the parts. Where the bark has not been indicated, I have usually given an opening powder of testacea and rhubarb, with a little nutmeg, or sometimes nitre, to which is added either calomel, cinnabar of antimony, or hydrargyrus cum sulphure, the latter of which I think I have found more serviceable in some eruptive complaints in young children, than seems to be imagined; but then it must be administered in much larger doses than it usually is. But above all, if this species of ulcer be not soon disposed to heal after such treatment, some mercurial application should be made use of, which, though the sores are often apparently inflamed, never offends them. A very clean and elegant preparation of this kind is the following.

R. Calomelan. ʒj. ad ʒij.
Ung. Sambuci ℥j. m. ft. linimentum.

A little of this liniment spread on each side of a piece of doubled linen cloth, and applied twice a day, will do more than all the fomentations, or healing ointments, that I have ever seen used; and, indeed, has always succeeded with me, though I have often been told, that the sores had spread deeper from day to day under various other applications. From such treatment I have never found the least ill effects, but children have preserved their health as well as if the sores had kept open; which, when benign, are certainly designed by nature as a preservative from other complaints, especially those of the stomach and bowels, which are the next in order to be noticed.

## *Vomitus, or Vomiting.*

I come now to the several disorders of the alimentary canal, and first of those of the stomach.

Vomiting, considered as a disease, is certainly not a common complaint of infants, unless it be attendant upon some other malady, of which, indeed, it is then rather a symptom, or the consequence of such disease improperly treated. Neither are infants in health disposed to vomit frequently, unless the stomach is overloaded; the milk is then usually ejected as soon as it is taken, and comes up unchanged. Nor is this to be considered as a disease, or as calling for the discipline recommended by some writers. Wherefore should the residue of the aliment be forced off the stomach by an emetic, when nature has

already parted with all the oppressive abundance? This spontaneous puking is not attended with any violence to the stomach: the milk, or other food, comes up without any sensible action of the part, or the child being actually sick. Nay, it is so common to some of the finest children, that it is a saying with some experienced nurses, that a puking child is a thriving child; and when such ejection comes only soon after sucking or feeding, and the aliment is cast up scarcely changed, matter of fact verifies the observation.* I have even known clotted blood† thrown up, without any apparent effort, in an infant not two days old, and without the least ill effect. But if the food remains some time on the stomach, it will then be thrown up in a curdled state, which is an indication to attend to it, if it happens frequently. Not that the milk ought not to curdle on the stomach, which it always must, in order to a due separation of its component parts, and is the chief, if not the only digestion, it undergoes in the stomach. The whey and the rich oil are there separated from the curdy and earthy particles, the former being taken up by the lacteals,‡ is

* See Primeros: De Morbis Infant.

† It is not a very unusual thing for blood to be drawn by the child from the nipple of the mother, and the blood so received into the stomach is generally vomited up by the infant. Unless the clotted blood proceeded from such a source as this, it could hardly occur without injury to the child.

S. M.

‡ It is not intended in this place to speak with physiological accuracy, but in a mere reference to the first digestion; in the

converted into blood; whilst the bulk of the latter is carried down and expelled with the other excrementitious parts of the food, and gastric juices, for which nature has no longer any use. This curdling of the milk, therefore, is the natural course of digestion, though many writers have not been sufficiently attentive to it, and Harris has asserted that it is owing to a predominant acid; implying that an undue acid is the only cause of the separation; which it certainly is not. It may, indeed, occasion it to take place too suddenly, or form too hard a curd, and give rise to various ill consequences, although such separation ought to be made, as the natural and proper effect of mixing duly with the gastric juice. When infants, therefore, not over-fed, throw up the milk uncurdled, after it has been some time in the stomach, it is always a worse sign. But when the milk comes up in a curdled state, it proves that the stomach having digested what it has received, hath not power to push it forward into the bowels, and therefore throws up a part of it.* If this be the case, and the infant be not im-

second, indeed, it is probable, that some portion of every constituent part of our food may be further prepared to become nutritious; the thinner serving to renew the finer parts of our system, and the grosser, such as the earthy particles, &c. more adapted to the renovation of the muscles, tendons, bones, &c. may be deposited in these parts.

* I have known children throw up a piece of curd full as large as the thumb of a grown person, and as firm as a piece of dough, and be perfectly well the next minute; though it might, doubtless, have done much injury, if it had remained on the stomach.

mediately relieved by it, the stomach may perhaps require to be emptied of its whole contents, which may then be easily done by giving a little warm water, or chamomile tea. The cause of the indigestion was an accidental repletion: that removed, together with the consequent foulness, or bad juices of the stomach, the effect also will generally cease; and unless the vomiting returns, from any further injury the repletion may have occasioned, it requires nothing more. To distress the child, on every such occasion, with a sickening emetic, or drench it with rhubarb or magnesia, is as needless as it would be to awake a patient out of a sound sleep to give him an opiate. Only let the child fast a little, after having emptied the stomach of its load, and the nurse be careful not to overfill it for the future, and it will rarely want any other assistance.

If the vomiting, on the other hand, has arisen from acrid diet, a little further discipline may be requisite, because some half digested food has got into the bowels, perhaps for several days together. In this case, a gentle laxative, and change of food for one of a milder kind, is all that is generally necessary; or if there be a prevailing acidity in the stomach, either the testaceous powders, or magnesia, (according to the state of the bowels) may be mixed with the food, or be otherwise administered for two or three days, as the occasion may require. Or a drop or two of the aqua kali, or a little Castile, or almond soap, are excellent remedies, especially when the stools are unusually green or clayey; not only as they will

to correct acidity,* but promote the secretion of bile, as well as a generous warmth in the first passages, and assist the digestion. For which purposes also, myrrh is an excellent remedy, when infants are a few months old. Should the vomiting be a symptom attending some other disease, its remedy will turn on the proper treatment of its cause. Should it follow upon a suppression of discharge behind the ears, and more especially if consequent upon the use of drying applications, a return of the discharge should be solicited. Or if the cause be the sudden disappearance of some eruption on the skin, appropriate remedies must be employed; the infant should be put to bed, and some light cordial be administered; and if the vomiting continues, an emetic should be given, and afterwards a blister, or warm plaster, applied to the pit of the stomach.

Having mentioned emetics, I shall take this occasion to observe, that the choice of them will be always best determined by the nature of the complaints for which they are administered. In those of the first passages, ipecacuanha is generally the best; but if a fever should attend, or it be wished to promote a gentle perspiration, those of antimony are preferable; or lastly, in disorders of the breast, the oxymel, conserve, or tincture of squills.

* It is well known, how small a quantity of soap put into a churn, will prevent a due separation of the component parts of the milk, so as to allow very little or no butter to be made; whereas a little vinegar effects the separation almost instantaneously, and saves a vast deal of trouble.

But a more troublesome vomiting will sometimes arise in unhealthy children, from too great a sensibility, or too great an irritability of the nerves of the stomach. Such medicines are then indicated as will brace, or strengthen that organ, and abate its sensibility. For the former, a cold infusion of the bark, or of chamomile flowers, with orange peel and ginger, and sometimes a little rhubarb; for the latter, a saline mixture with a drop or two of laudanum. And the benefit of these may be increased by aromatic and spirituous fomentations to the pit of the stomach, or by the labdanum plaster, with a little theriaca* added to it; or the emplastrum cumini may be applied. Also the following:

℞. Ung. simpl. ʒiij.
Olei Macis (dict.)
—— Rorismarini, āā ℈ss.
Bals. Peruv. ℈ij. M. F. Unguent. quo

* The theriaca andromachi is seldom to be procured now, but the confect. opii forms a very excellent substitute. The emp. labdani is also superseded by the emp. picis comp. Dr. Underwood had given in this place a prescription for a plaster, difficult to be prepared, and not at all superior in efficacy to the emp. cumini, which I have therefore substituted. All plasters are apt to produce about the parts they cover, an eruption of pimples, which are often thought beneficial, and are at least not injurious. The most efficacious mode of applying spicy opiates to the abdomen of children, is either to rub them upon the part in the form of liniment, or to make a confection of oil of mace, camphor, and opium. Of this a proper quantity may be spread upon leather, with a margin of emp. plumb. c. resina, and immediately applied over the part. S. M.

tota quotidiè Regio Stomachi atque Umbilici calidè inungatur, supraponendo ulterius morsum lanulæ.

Lastly, a vomiting may arise from a strangulated hernia. When, therefore, scarcely any thing is found to stay on the stomach, or all the above remedies fail to remove a frequent disposition to vomit, practitioners will be aware of it, and make a due examination of the several parts where ruptures appear.

### *Cardialgia, or Inflammation of the Stomach.*

This is a disease very seldom met with, I believe, in this country, but is common in France, as appears by a paper read before the Royal Society of Medicine, in Paris, by Mr. Saillant, and is said to attack children of four or five years of age.

The pathognomonic symptoms of this disease are, great pain in the region of the stomach, sometimes recurring every quarter of an hour; violent contortions of the child; and the application of a hand to the seat of the disease. Mr. Saillant, in the first instance, suspected these symptoms to be owing to worms, and prescribed accordingly; but that child dying in a few days, the body was afterwards opened, and the presence of genuine inflammation of the stomach, and of part of the intestinal canal, was clearly demonstrated.

The treatment of this dreadful disease is, however, represented as very simple, consisting only in cooling and laxative remedies, which, when administered in good time, are said to be usually successful. For this purpose, Mr. Saillant has generally administered the juice of lettuce, by spoonfuls every hour; an idea he took up from Baglivi, who directed the juice of the sow thistle in the hemitritæos, under symptoms analogous to those of the cardialgia. The juice of lettuce was generally found to relieve the pains in a short time, and some infants who had been judged to be in a hopeless state, and even at the point of death, were perfectly recovered.

Mr. Andrij has done me the kindness of acquainting me, that he has sometimes met with this complaint in the Hospice des Enfans Trouvés, especially during the summer, and at such other times as infants have been obliged to continue there without the breast, for the want of wet-nurses, (who are usually otherwise engaged in the harvest and vintage seasons) as well as during a hard frost. In the instances Mr. Andrij has seen, the infants were found to vomit up every thing that was given them, which, it is probable, must generally be the case where the stomach is actually inflamed. In such instances, perhaps, fomentations, or a blister to the stomach, and the use of a warm bath, together with castor oil, or other demulcent laxative, ought also to be made trial of.

In the Spring of 1827 many cases of Diarrhoea occurred among Children, which proved very suddenly fatal. The Complaint was probably caused by cold, as the East Wind was generally prevalent of a most austere Feel. Small Doses of Laudenum seemed to give more relief than other Remedies, calomel and Aperients were injurious. All the Children that I saw under the Attack were fed as well as suckled, or had been recently weaned.

## *Tormina, or Gripes.*

The Gripes is a very common term amongst nurses, and some writers on children's diseases have treated of it under a distinct head; but this serves to perplex matters, instead of explaining them. If a child be not hungry, nor hurt by some parts of its dress, there will always be symptoms attending to account for its crying, and other expressions of pain. The cause is, indeed, very commonly in the bowels, and may be increased by costiveness and wind, which have already been treated of; but more commonly manifests itself by a purging, which comes next in order to be considered. I shall only previously observe, that children, when very much griped, sometimes refuse taking the breast, though offered them repeatedly, when placed, in the usual manner, on the nurse's arm, but will take it, nevertheless, very readily, if they are held upright before her. The reason of this perhaps is, that the offensive and irritating matters in the stomach then descend from the cardia, which is exceedingly sensible from its numerous nerves; and this may further manifest the impropriety of infants being so uniformly fed in an horizontal posture, which I have noticed elsewhere.

## *Diarrhœa.*

Under the article of vomiting it was observed, that frequent puking is oftentimes an attendant upon some other complaint, and then demands a peculiar attention, and is to be treated agreeably to the nature of such complaints; and there is, perhaps, none which it more frequently accompanies than a diarrhœa.

Both vomiting and purging very often arise from unwholesome milk or other food, and from a moist, cold air; as well as from the sudden disappearance of some eruption on the skin. The purging is not then hastily to be stopped, nor even absorbent powders to be given, till the offensive matter be first carried off; and if a vomiting attend, the cure should begin by administering an emetic. But though the purging ought not to be checked without previous evacuations, nor to be stopped hastily, yet it is not to be treated with a daily exhibition of rhubarb, especially in very young infants, howsoever small the dose; which, though a common practice with many, serves to prolong a purging after the cause has been removed, by keeping up a continued stimulus, as I have frequently seen. The diarrhœa, indeed, is a complaint often as difficult to treat as any in the infant state, and therefore demands the most precise directions. In a general way it may be said, that a sufficient dose or two of rhubarb should be

administered in the beginning, and afterwards absorbents. If the purging should still continue, an emetic will be necessary, as purges do not always lie long enough in the stomach to carry off the offensive matter it contains. After this, it is often necessary that the child be purged again; for it should be always remembered, that many complaints of infants, whether seated only in the first passages, or attended with fever, will frequently seem to be giving way upon procuring stools freely, but will soon return if the same means be not repeated, till the whole irritating matter be carried down. Should such repetition fail of success, though the diet has been carefully attended to, the use of them at present should be laid aside, and recourse be again had to absorbents, and if there be no fever, to light cordials, and even to opiates; without the latter of which, many bowel complaints will not admit of a lasting cure, owing to the great irritability of infants. Such medicines are not, indeed, very often required, till children are some months old: but when they are found necessary, not only may syrup of white poppies, but even laudanum be given with the most perfect safety: though from the time of Galen, (who cautions against giving theriaca to children) till of late years, many physicians have been fearful of directing them, (arguing from their abuse against their use) and especially Harris, who, in other respects, has written so well on their diseases. I remember being called to see an infant of only two days old, who, through a mistake, had taken, some hours before,

four drops of laudanum. The parents were greatly alarmed at the child's lying in a comatose state, without being able to take the breast, or open its eyes. I advised, therefore, to get a little breast-milk down with a tea-spoon, and encouraged them to believe that the laudanum would do no kind of harm; the infant having no disorder for which that medicine was improper. Accordingly, though the child lay sleeping above six and thirty hours, it afterwards awoke perfectly well.* This is mentioned, however, only by way of encouragement to such as may be fearful of administering opiates, even where they are necessary. They are, nevertheless, very powerful medicines, and should be prescribed with due caution for patients of every age, especially for infants, and particularly when a purging is connected with teething, or is attended with fever;

* Infants, as well as adults, vary much in their capability of bearing opiates. In some, a very small dose is followed by very alarming symptoms; and death has not uncommonly ensued from the incautious exhibition of some preparations of opium. The children mentioned at p. 134, (note) probably had not taken so much as four drops each of laudanum, yet both became convulsed and died. I once saw a child in the month thrown into a state of excessive stupor, by taking one dose only of a mixture, in which were four drops of laudanum: the actual quantity swallowed could scarcely amount to a single drop. In the exhibition of many medicines, we find that children bear a larger proportionate dose than adults; as is the case with calomel, scammony, jalap, &c. but with opium, and other narcotics, they generally can only bear a smaller proportionate dose: it is best, therefore, not to give, in the usual diseases of children, a full dose of laudanum. S. M.

in which cases, I am almost daily seeing the fatal effects of arresting a purging. A like caution may be necessary in regard to cordials; which are, nevertheless, in many cases equally proper, notwithstanding a modern prejudice against them. There is a certain coldness and languor in infants when they are ill, especially under some bowel complaints; and whenever they may be in that state, a judicious use of that class of medicines will have a very happy effect.

It is to be remembered, however, that a purging is not always a disease; but, on the contrary, a remedy, and a very common and important one. The bowels are the great natural and critical outlet in infants, as the pores of the skin, and the kidneys are in adults; although in both, from their vast extent of surface, they spread a very broad mark for the shafts of disease. Not the mere discharge, therefore, but the cause of it is, in the first instance, to be removed; whilst the ill effects are to be guarded against by keeping the purging within bounds. For this purpose, the chalk julep, as it is an astringent only by absorbing the acrid, or changing the acid, and irritating matter, is as safe as it is useful; becomes an excellent anodyne; and after the bowels have been well cleansed, and the irritating cause removed, will usually accomplish the cure.

Dr. Armstrong takes occasion to speak against the use of absorbent powders, and prefers wine of antimony, from a suspicion he has entertained of the great dependance that modern writers appear

to have placed in them, previous to the exhibition of purges, on account of their known property of correcting acidity; and says, that in cases of extreme danger, a physician who is called in late, should, according to this practice, often find no opportunity of purging at all. But surely this is scarcely an argument to prove the superiority of his method, since no writer that I know of, ever designed it as a rule without exception; and Harris, who has said as much as any man in commendation of the absorbent powders, does not deny the expediency of sometimes beginning with purgative medicines. But had it been otherwise, the argument goes no further than to prove, that in cases of great danger, the wine of antimony, being both an emetic and a purge, ought to precede the use of the testaceous powders. Instead of this, Dr. Armstrong slides into a general conclusion from premises evidently limited, though he has advanced nothing against an established, and successful method of treatment. And I may add, that whilst he is fearful that the absorbent powders (which nobody prescribes without some purging medicines) should check the looseness, and thereby increase the fever, he ventures, after a repetition of the antimony, to administer what he calls a gentle paregoric, or opiate, to appease the pain; consisting of a dram of syrup of white poppies, repeated every three or four hours, till that end be obtained. So that if the pain should continue for nine hours, a child will take half an ounce of the syrup; and this, Dr. Armstrong observes, is the only medicine he gives, except wine

The frequency of Underwood's References to Armstrong was proper enough when he first published; because Armstrong's was then a very popular work on Children's Diseases, but as Armstrong's Publication is now almost obsolete, to refer to him is no longer necessary. However as I was to be the Editor of a new Edition of Underwood — I could not very properly omit these References ~~as posterity~~. The use of Wine of Antimony as recommended by Armstrong is not now at all general, nor is the Remedy by any means the same as it was in his Day.

of antimony, which (notwithstanding the opiate) he supposes to be the efficient remedy—but how much more powerful a restringent, in its ultimate effect, the syrup is, than the absorbent powders, it is unnecessary to say.

It is an improper exhibition of absorbents, I apprehend, rather than their dose, that has made some practitioners so averse to them; for they certainly ought, in many cases, to be given in large quantities; but if administered too early, and long continued, the stools may become like plaster of Paris, and be with difficulty excreted. Such an instance is mentioned by Boerhaave, who had, nevertheless, a very favourable opinion of them, as will be noticed hereafter. There is, however, some fallacy in regard to the colour of the stools, as this kind is observed, on different occasions, in children who have never taken any of the testacea, if the secretion of the bile be obstructed, (as in jaundiced adults) and will be noticed in its place.

In his second edition, Dr. Armstrong mentions another method he has fallen upon for curing this disorder, which, however, appears to be recurring to the ancient method of treating bowel complaints; and seems, indeed, to overturn the idea he had entertained, of the superiority of wine of antimony over every other medicine. This method, he tells us, is by cleansing the bowels, by means of proper purgatives, joined with anodynes, intermixed in such a manner as to correct the griping quality of the medicines, and lessen the stimulus occasioned by the acrimony of the stools.

A plan worthy of imitation, and though not likely to be proper in all cases, yet, as an occasional practice, safe and beneficial.

Regard is to be paid to the kind of stools that come away, which are seldom healthy and natural, and are usually distinguished into the sour and curdled, slimy, mucous, green, pale, clayey, watery, over-tenacious, and bloody,* some of which are at times also fetid. Under some of these, and particularly the latter two, some powerful purgative, such as senna tea, is generally necessary, if the child is not very young. True, bloody stools are less common in infants than adults, and seldom occur but in the last stage of the disease; but a few streaks of blood may sometimes be mixed with the fæces, which arising only from the hemorrhoidal veins is a matter of no consequence. Watery stools will be considered apart, under the head of the true watery-gripes: I shall here anticipate only to say, that very threatening appearances of that affection, when green and curdled matters are purging off, are sometimes happily removed, in a day or two, by a gentle emetic, and such a warm purge as that noticed below. When the stools appear very slimy, and more especially sour, or curdled, or when the child is much disposed to hiccough, the magnesia, and other absorbent powders, are calculated to afford peculiar assistance, and may be warmed by any suitable

* On fæces discoloured by blood, or otherwise blackish, particular notice has been taken under the head of Fever.

aromatic. When the stools are very green, or white and clayey, a drop or two of the aqua kali may be occasionally put into the other medicines, or a little almond soap be dissolved in the clysters, which are essentially necessary when much griping attends this complaint. Some light cordial is also frequently useful, and the child's belly may be rubbed with a little warm brandy, or be fomented with a decoction of chamomile flowers, or white poppy heads. But if the tormina be great, clysters of the whey of cows, or asses' milk, as advised by Hoffman, will often be found very useful; and should the infant be much emaciated, a portion of the sugar of milk* should be added to them. Where anodynes are judged proper, the tinct. hyosciami is often preferable to laudanum.

It may be observed in this place, as a pretty general indication, that purgatives for infants ought to be made potentially warm, by the addition of a little ginger, pounded cardamon-seed, carraway tea, or dill water, which is of more consequence than is usually apprehended. I have, indeed, known a careful attention to this circumstance alone, happily suppress complaints in the bowels, which had long continued obstinate, though, in other respects, properly treated. On this account, I venture to recommend the following as an excellent general remedy, especially as

* The sugar of milk may be procured by evaporating the whey by slow boiling; and may be made more pure by first clarifying it by the white of eggs.

infants are pleased with it, and it will keep for a great length of time.

℞. Pulv. Rhei gr. xv.
Magnes. albæ ʒss.
Aq. Fœniculi
— Anæthi āā ʒvj.
Syrupi Rosæ, ʒss. fs.
Spir. Ammoniæ comp. gtt. xv. ad xxx. ft. mistura, cujus sumantur Cochl. ij vel iij. minima, bis, terve in die, vel ut opus sit. Or,

℞. Pulv. Rhei
Nucis myrist.
Magnes. albæ āā gr. iij. vel iv. Sit pro pulvere, deglutiendo è cochleari minimo syrupi Rosæ.

Should purgings return frequently, it will be very useful (especially in the time of teething, or upon the striking in of some eruption on the skin) to procure a little discharge behind the ears, or to apply a Burgundy-pitch plaster to the back. For the former purpose, some finely pounded Spanish flies may be rubbed on the part, till a slight excoriation, or rawness, is produced; or perhaps a better method, which I have long recommended, is to draw a piece of coarse doubled worsted, or a bit of narrow tape, through a piece of the emplast. Lyttæ, and lay it close behind the ears where they rise from the head, and repeating it occasionally; which will produce a discharge exactly from the spot where it is wont naturally to arise. The following preparation is highly extolled by Boerhaave,* as an almost universal me-

* Epist. 1: ad J. B. Bassand, a physician at Vienna.

dicine in the diseases of infants; and is certainly a good remedy, especially in their bowel complaints, and particularly when attended with green stools, after the exhibition of proper opening medicines.

℞. Sapon. dur. Hisp. ʒij.
Margarit ppt. ʒi.
Syr. Alth. ℥ss.
Chel. Cancr. ppt. ʒiss.
Aq. Menth. sativæ
— Fœniculi āā ℥iij.
ft. mistura, cujus sumatur cochl. infantum octavâ quâq. horâ.

Notice is taken in another place,* of pale stools being no uncommon occurrence when children are breeding their teeth. They are also met with in fevers, as well as in simple disorders of the bowels; and therefore might be introduced under either of the former heads, instead of this place; but as the stools are very numerous and watery, and the purging itself is the first occurrence, it has seemed, upon the whole, proper to give it a formal discussion under the present article.

The complaint, however, has been found the most obstinate in children who are turned of a year old, and cutting their double teeth. The stools are not only clayey, thin, and very white, but curdled like those of very young infants at the breast. In the beginning, it is seldom attended with any degree of pain, or other complaint, except it be the loss of appetite; and this

* See the chapter on Teething.

has led parents, and sometimes other people to think, that the discharge ought to be checked by absorbents or opiates. But nothing can be more improper: the skin soon becoming hot, the tongue white, and the disorder rarely yielding to any treatment under two or three weeks. This is almost always the case, if teething be any wise concerned in the complaint, unless the teeth happen to be nearly cut through; though a purging with pale stools, as has been said, is met with in fevers of another kind, where the cause is confined wholly to the first passages.

Whatever the age of children may be, they are always somewise indisposed, while the alvine discharges are of this colour; and whether there be either fever or purging, or not, children lose their flesh; as it is, indeed, likely they should, from this clay-like matter sticking to the coats of the intestines, and preventing the due absorption of the nutritious parts of their food. This is especially true, when the stools are thick as well as pale; or if they be of a leaden blue colour, and very adhesive, or pasty, and in amazing quantity, as is sometimes the case.

Under these last circumstances particularly, small doses of calomel, administered as an alterative, is an admirable remedy. The safety of the use of this medicine for any length of time, has, however, been disputed by Dr. Curzons, of Birmingham; * but his opinion seems rather to be supported by theory than established by facts,

* Medical and Physical Journal, vol. iv. No. 21.

the Doctor asserting only that "many children have fallen a sacrifice to the improper exhibition of this medicine"—and of what medicine may not this be said? On the other hand, I am persuaded that the benefits derived from a proper, though long-continued use of this drug, are, at least, equally numerous.

In confirmation of this sentiment, I take the present occasion of observing, that since I left London, and have had leisure to admit all the poor in the neighbourhood to receive my advice, I have had abundant evidence of the expediency of repeatedly administering laxative medicines in these cases, even when children have been in a very debile state, and of the great benefit especially of calomel; having thereby both shortened the diseases, and preserved the lives of many children, who have previously had what they thought the best advice in the neighbourhood. It being also more frequently the children of the lower orders of society, that suffer and perish under disorders of the first passages; and to which the want of good air in their apartments, taking too little exercise, and the administering improper and indigestible food, contribute considerably.

Whether teething be materially concerned or not, purging, by one mean or other, is the proper and principal remedy, unless the gums are in a state to be lanced, or the stools should continue a long time very pale, or clayey, after the fever and purging disappear. In the latter case, some saponaceous medicine will prove serviceable, such as the aqua kali præparati, or a few drops of

spiritus ammoniæ compositus, taken two or three times a day; the bowels being still carefully kept open.

Where dentition is the probable source of irritation, and of these pale stools, and lancing the gums has not accelerated the irruption of the teeth, or the period is too early to expect benefit from it; children are oftentimes not only free from fever, but are, on the other hand, cold and languid, and should, therefore, be purged less frequently. Some cordial medicine should also be administered on the intermediate days, as well as on the evenings after the physic has operated.

In the early part of the disease, the active purges are the most proper, such as castor oil, senna, and frequently calomel; or, if the fever be considerable, an infusion of burnt sponge and senna; a preparation equally adapted both to the fever, and this kind of purging.

Another bad kind of stools appears sometimes during teething, that has been alarming to many, as nothing like it, that I know of, appears spontaneously in infants at any other period; though it is not uncommon in adults, and especially, I think, in females. This is a discharge of a very thick mucus, which appears in great quantities, and sometimes accompanied with a little blood.

Neither of these discharges, however, do any harm, if the bowels be kept a little more than usually open, by some soft purgative, and some light cordial interposed, or the test. ostreor. ppt. if found necessary, in order to strengthen the bowels.

The cause of this appearance seems to be of the same kind with that in adults, and from mere irritation falling on the glands of the bowels, and keeping up an increased secretion of their natural mucus: and it is well known, that the time of teething is that in which the bowels are peculiarly liable to irritation.

To the various observations that have been made, I shall briefly add, that there is a disordered state of bowels, which frequently occurs, and is disposed to continue a long time, during which, infants, though not often precisely ill, do not thrive, nor look well. The stools are said to be always bad, being sometimes of a green colour, at others, of a pasty consistence; sometimes very numerous, and at others, infants are for several days very costive.

In this, as well as other bowel affections before described, when laxative, alkaline and absorbent medicines have been found to procure no permanent good effect, calomel often proves a sovereign remedy; and may be given in the dose of half a grain, or more, to infants in the month, for two, three, or four successive nights. In general nothing purgative should be administered the following mornings, but the mercury be left to its proper action. It is certain that this mineral has a marked operation on the liver, obviating a morbid action, and acting as a stimulant, when the functions of the liver are inert; and is an equally well known deobstruent for all the glandular system, and will be found a very safe and

efficacious medicine; infants being known to bear mercury much better even than many adults.

When purgings have continued a long time without any amendment, a peculiar tightness of the skin will sometimes take place in the last stage of the disease, affording always an unfavourable prognostic; and of which notice has been taken under the article of Skin-bound.*

* In treating all cases of purging in infants, our attention should be especially directed to two objects: first, the feel and appearance of the abdomen; secondly, the character and kind of the evacuations. Upon feeling the abdomen (which should be done when the child is in an easy posture and not crying), if it be found full, hard, or irregular in its shape, a purgative will almost certainly be required, notwithstanding the frequent evacuation of fecal matters. The most effectual purgative in such cases is a grain or two of calomel, either combined with jalap or scammony, or rhubarb, or given by itself and followed in an hour or two by a dose of castor oil, or solution of salts in almond emulsion. This purgative is to be repeated according to circumstances, and in the mean time a cretaceous mixture may be given at intervals, or what is often preferable, a solution of carbonate of soda or potassa, in mucilage or emulsion.

If the evacuations be hard, lumpy, scyballous, or pasty, or of a green, or leaden, or blackish colour, the same plan is required; and the aperients must be continued daily, or as often as may be found necessary, till the evacuations become of a better consistence and better colour.

When the use of the more active purgatives shall have relieved the complaint, the cure must be perfected by giving a small portion of ipecacuanha, a grain or two of rhubarb, and a few grains of chalk, with the addition of a little aromatic, twice or thrice a day.

But when the abdomen is not full, hard, or irregular in shape and feel, but flabby and collapsed; and when the stools are thin and watery, pale coloured, or white and frothy like yeast,

## *Lienteria, or Watery Gripes.*

I come, lastly, to treat of the Lientery, or true Watery Gripes, so called, which is esteemed the most dangerous of all purgings, and is often fatal; but if properly treated, children may recover from this as well as from excessive purgings of any other kind, unless it happen after some other illness, or to very small and tender infants during the month, especially when attempted to be brought up by hand. It is not the having a few very thin stools, however, that is an evidence of the true watery gripes, for in almost every purging of a few days continuance, the stools are very thin as well as numerous. But in this case, they are thin very early in the disease; the child looks wretchedly, and every thing it takes runs almost immediately through it, with very little change, as in the lientery of adults. It should likewise be remarked, that these symptoms continue, and are increased as the disease advances. A dis-

the use of calomel and purgatives is to be rejected, and other more appropriate means must be employed. The case now requires the use of cretaceous medicines, kino and catechu; opiates must be occasionally interposed; and an attempt must be made to improve the secretions, by three or four grains of hydrarg. c creta, or a grain of pil. hydrarg. rubbed into a pow der with four or five grains of carbonate of magnesia: sometimes a combination of ipecacuanha, rhubarb, and soda, very effectually answers this purpose. Change of diet, as Dr. Underwood recommends, is indispensable, and change of air is sometimes to be recommended.

S. M.

tinction should be made between purgings in which the stools are very watery, and the true watery gripes. In the first, the stools, though equally or more numerous, are more perfectly fluid than in the true watery gripes, and are tinged only with the bile; the thin stools arising from a violent, but ineffectual effort of nature to get rid of offensive matter; and upon exhibiting a warm purgative, calomel, or castor oil, several very thick, and always clayey stools are brought away.

In the true watery gripes the cure should be begun by administering one or more emetics, especially when the stools are of a dark colour and fetid; as they frequently are in the earlier periods of the complaint. And to this end, a pretty strong one should be prepared, which should be given in divided doses, at about a quarter of an hour's distance, till a proper effect is produced; and some hours afterwards a warm purge with rhubarb should be administered, if the disease be not very far advanced. After the first passages have been cleared, the eighth part of a grain, or less, of ipecacuanha, or a drop or two of wine of antimony, given every three or four hours, with a few grains of the testaceous powders, or the aromatic confection, appear to me amongst the best remedies in the earlier periods of the complaint. Indeed, ipecacuanha in very small doses, especially if duly guarded by some gentle aromatic, is both so useful and safe a remedy, that it should not be hastily laid aside; and when persevered in for some time, will effect wonders, not

only in long purgings, but in other chronical complaints. The like may be said of the vinum antimonii, which in the less aggravated watery gripes, or where a purging is for a long time attended with very bad stools, forbidding the use of restringents; as well as in some little feverish complaints, I have found equally useful, and even sometimes more manageable as an alterative than ipecacuanha, because less disposed to nauseate infants, where an emetic may not be directly intended. There being also cases in which the physician wishes a medicine may operate as a corrector of the secretions in the first passages, or to expel their contents, either upwards or downwards, as may be ultimately most useful; antimonials seem in this view likewise to claim a preference to all other medicines.

In the more advanced stages of the watery gripes, and where the child is not very young, the following old medicine is a very good one. Of Locatelli's balsam, one ounce, and conserve of red roses, two ounces: from the quantity of a horse-bean to that of a nutmeg, may be given three or four times a day, according to the age of the child. Others have advised red bole, and gum tragacanth.—The labdanum and other plasters likewise, as directed for vomitings, or the following, may be applied to the parts above the navel, especially in case of great pain.

℞. Theriac. Venet. ʒj.
Olei expressi Macis dict. ʒij.
Olei N. Mosch. gtt. iij.
Misce, ft. Empl. alut. induc. Or,

℞. Axung. Anserin. ʒij.
Olei expressi Macis dict. ʒj.
—— Menthæ sativæ, ℈j.
—— Bacc. Junip.
—— Chamomæl. āā ℈ss.
Misce ft. Linimentum.

Inungatur eo bis vel ter quotidiè Stomachi et Umbilici Regio.

Warm flannel, with or without heated bran, may be afterwards laid over the whole belly, and renewed frequently.

Should these means fail, I have known the repetition of a vomit give an immediate check to the complaint, especially where the stools continue to be remarkably sour. As long as this is the case, it would be both vain and hazardous to exhibit opiates, or powerful restringents; the acidity must be first carried off by warm purges, and be corrected by absorbents; the latter of which must be given in large and repeated doses, and frequently their powers be augmented by the addition of liquor potassæ subcarbonatis, or tinctura myrrhæ. And an excellent remedy sometimes, as an ant-acid, is the spiritus ammoniæ succinatus. The acidity once removed, a starch clyster may be thrown up, two or three times a day, with, or without a few drops of laudanum, according to the number of the stools, and weakness of the infant. A drop or two of laudanum likewise, may now be given, once or more in the day, (according to the age of the child), either joined with some purgative, or in any of the aforementioned medicines, or in the chalk-julep, made

warm with tincture of cinnamon, or of cardamoms; and in cases of extremity, in the decoction of log-wood, which agrees very well with young children: or a medicine now out of use, I mean the rob of sloes; a few grains of which, with a little grated nutmeg, and a small quantity of rhubarb, p. r. n. I have found immediately successful, after opium, decoct. campechens, and every ordinary restringent have failed of any lasting benefit. In the advanced stage of watery gripes, or in case of great debility, the liberal exhibition of aromatics and opiates is essentially necessary.

Bowel complaints, it is to be remembered, are frequently owing to improper food, which, on this account, should at all times be peculiarly attended to; and when a purging has taken place, ought to be suited to the nature of the stools. In the introductory remarks, ample notice has been taken of children's food; at present I shall only observe, that cow's milk is often found to disagree with them when their bowels are disposed to be too open, at which times a little lean mutton broth, or beef-tea, is abundantly preferable. On the same account, rusks and biscuit-powder are more suitable than bread; but at other times, I believe, either the Uxbridge, or the French roll, which are already half-digested by a previous fermentation, are more easily dissolved in the stomach, if there be not a predominant acid in the first passages. But where there is an habitual disposition to a purging, I know of no diet so proper for infants who do not suck, or who cannot have enough of the breast, as flour slowly

baked for a long time, till it breaks into a soft, greyish-coloured powder,* and afterwards mixed with boiled cow's milk, the scum being first taken off; the flour and milk should then be boiled a little time together, till the whole appears like a thin custard. This is a very light and soft food, and sufficiently restringent; and I have often known more good from it, than from all the absorbent medicines ever devised, and have received more thanks for the prescription, as it proves a permanent remedy. The powder of arrow root, also, boiled in water, and then mixed with milk, is an admirable remedy when it can be procured genuine. When the watery gripes, or indeed any violent purging, attacks very young children at the breast, no other food than breast milk ought to be administered; but if the acidity and purging continue many days, and medicines do not take a proper effect, it may be proper to change the wet-nurse.

If infants ill of watery gripes are brought up by hand, the strictest attention must be paid to their food, which must be changed from one kind to another, and especially trial be made of broths, as long as the food shall be disposed to turn very acid on the stomach. In one case, I think, I saved a child by Bates's julepum vitæ, lowered with water, when nothing else would stay on the

* To this end, the flour should be put into a small jar, properly covered; and taken out of the oven several times, and stirred up from the bottom and sides of the jar, that it may not run into hard lumps, but the whole be equally baked.

stomach. This served both for food and medicine; for the former of which it was still further diluted.

When children who are weaned, are attacked with repeated purgings, and even broth is found to run through them, I have observed no food so generally useful as a bit of the white of chicken, not over-boiled, and afterwards lightly bruised in a mortar with the chicken liquor, and a very little bread, into a kind of light jelly, or panada. But this should not be given oftener than twice, or at most, three times a day.

In all bowel complaints, it has been already remarked, that infants are disposed to eruptions on the skin; by which they are so frequently benefited, that if any kind of rash appears during long and severe purgings, a recovery may almost with certainty be prognosticated.—The like good effects have been noticed from a purging taking place in some obstinate cutaneous eruptions.

## *Incontinence of Stools.*

The long continuance of the last mentioned complaint, as well as others which may debilitate the habit, may prove an occasion of that now under consideration. Children who are accustomed at all times to have a very open belly being especially liable to lose the faculty of properly retaining their stools, and need a servant continually to attend them, even at two or three years of age.

No very appropriate remedy, I believe, is likely to be necessary. I have never ordered any thing more than dashing the parts, daily, with cold water, or at the most administering aqua calcis, or other absorbent; the complaint always wearing off as such children grow up, though oftentimes not entirely for several years.

*Worms.*

Worms may, probably, exist in almost any part of the body, as well as in the stomach and bowels. They have, accordingly, been found in the pericardium, bladder, the nose, and sinuses of the head, and even in the lungs, liver, and other solid parts.* But as we neither know how they are produced, nor how to dislodge them from these recesses, which they also more rarely occupy in young children, it is quite sufficient to notice the fact; our inquiries being properly confined to worms in the first passages.

It is on this account that the complaint is noticed in this place, especially as worms are said to have been voided by infants of only a few

* Baglivy reports, that worms are found in the heart; Ruysch in the lungs, the spleen, the kidneys, in the gonorrhœal discharge, and even in the marrow of the bones; Schenkius in the urinary bladder; Bianchi in the uterus and in ulcers; Hippocrates in the vagina; and they are said to be frequently found under the skin of the Negroes in our West India islands.

weeks old. It is even reported * that Van Dœveren has discovered them in the still-born fœtus. This indeed is much doubted by others, it being a very old observation, that worms are never voided by infants who are nourished only at the breast; and if so, it is not likely they can be generated before birth. Mr. De Lille, however, disputes this, asserting that worms were expelled from his own daughter, when only eleven weeks old, and living entirely at the breast.

However this may be, it is evident that worms are much oftener suspected to be the cause of children's complaints than positively ascertained: and of this, practitioners who deal in secret medicines have, in every age, made their advantage; it being certain, that a mere foulness of the bowels will produce most of the evils attributed to worms. Neither are all children equally affected by them where they are actually met with: some infant children (as well as quadrupeds) continuing very healthy, though they are seldom free from them, and others parting with great numbers, unexpectedly, without any previous indisposition: whilst some children are very ill who have apparently very few. The pains and other complaints in such case, arise from some other source, of which I have seen an instance in a girl of twelve years of age, long

* Philosophical Transactions.—The same author reports that a peasant, after taking an emetic, brought up forty Dutch ells of tape worm, and yet left some part remaining, having, through his agony, bitten the worm off.

subject to excruciating pains of the stomach, for which she took various worm medicines, and actually parted with several large lumbrici, but without the least relief to her pain, which afterwards immediately yielded to antispasmodic remedies.

I, nevertheless, cannot agree with Dr. Butter, that worms in the human intestines are altogether innoxious, much less, as he seems to think, useful, and intended as "nature's remedy for destroying the superabounding morbid humours, and for stimulating the first passages by their crawling motions, and thereby assisting the peristaltic motion of the guts to carry off what remains of the offending load."* For I think, children who are most troubled with worms are generally of a costive habit.

Worms become hurtful chiefly from their numbers. First, when they obstruct the bowels, or compress the adjacent parts by their bulk. Secondly, by sucking up the chyle designed for the nourishment of the child. Thirdly, by irritation. Fourthly, by actually destroying the parts; though this is certainly a very rare occurrence, and a far less frequent source of injury than those before-mentioned. Worms have, however, been said to eat their way through the intestines; and Lister relates,† that some resembling the teretes,

* Butter on Remittent Fever. Page 36, et seq

† Philosoph. Trans. See also Heister. Their appearance on a sore may, however, be otherwise accounted for, than by supposing them to have made their way from beneath the ulcer.

but of a whiter colour, have been seen coming from an abscess on the ankle. They are likewise said to have occasioned sudden suffocation, by rising up into the throat and lodging there.*

They have been usually accounted to be of four kinds; or, to speak more correctly, according to Drs. Baillie and R. Hooper, the native human intestinal worms are divisible into two orders, round and flat; the former comprehending, 1. the *Ascaris Lumbricoides*, or *Teres* (the long round worm, resembling the earth-worm); 2. *Ascaris Vermicularis* (the maw, or thread worm); 3. *Trichuris Vulgaris* (the long thread worm).

The second order embraces, 1. *Tænia osculis marginalibus* (the tape, or long joint worm, *solium*). It is the separate joints of this species which constitutes the *tænia curbitina*, or *gourd worm*, from its resemblance to the seeds of the gourd, or water melon. 2. *Tænia osculis superficialibus* (the broad tape worm). This species seldom separates into joints. It is very seldom met with in this country, but is endemic in Switzerland and Russia, and very common in Germany and other parts of Europe. Linnæus enumerates another species, which, he says, has two oscula, one on each side, and which he terms *tænia vulgaris*, but which is thought by some to be merely a variety of the other.

The tœnia, it is well known, is often many yards long, is the most hurtful of all, and most difficult of cure, because it will remain long in the

* Mr. Le Febure de Villebrune.

bowels even after it is dead, and is then seldom brought away but in pieces, and that by very powerful medicines; though I think I have seen dead portions of this worm come away where no kind of purgative has been administered. But as this kind of worm is certainly not common in children, though it may sometimes have been met with; and as it generally occasions a variety of symptoms resembling other complaints, for which many different medicines may be required, little more than the mention of it may suffice.*

The symptoms of worms are various, and many of them very equivocal: I shall name only the more constant, and less uncertain ones. Such are fetid breath, especially in the morning; bad gums; itching of the nose, and of the anus, especially from the ascarides; a very irregular appetite, always in extremes, whether of hunger or of loathing; a large hard belly; pains at the stomach; sometimes vomiting, oftener costiveness, or irregular purging, with slimy stools;† irregular cholics; thirst; dulness; peculiarly

* It is so uncommon to find more than one of this kind, that it has acquired the name of the solitary worm, yet it is said there are a few instances in which several of them have been met with; but, perhaps, attention enough may not have been given in the examination of them, it being well known that this worm will live a long time after it has been broken into several parts. See Letter of Dr. Nitret to De Haen, Act. Med. xij. 219. The head, and probably that alone, has the property of forming the joints, so that, if that be left after the rest of the worm has been voided, fresh ones will be produced.

† The peristaltic motion of the intestines being increased, the secretion of the mucus must consequently be in larger quantity.

unhealthy and bloated countenance, with a dark, hollow circle round the eyes; startings in the sleep, and grinding of the teeth. To these symptoms are often added, slow fever, with a small and irregular pulse, pale, or whitish urine, a short and dry cough, (which is an almost constant symptom where the complaint is of long standing, and has injured the health) sometimes even convulsions, tetanus, epilepsies, and partial palsies of the lower extremities. In the case of convulsions, if there be a small pulse, attended with a hiccough, it is an almost certain sign that the convulsions are occasioned by worms. The like may be said of pain at the stomach, if it be very violent, sudden, attended with great anxiety, and a hardness and soreness of the parts above the navel. But more especially, according to Home, an œdematous swelling of the upper lip, and of the nostrils, is a certain token of worms.

The cause of this troublesome complaint, is not, perhaps, certainly known; but the great moisture of young persons is thought to be an occasion of their being more infested with them than older people; and children, whose digestion is weak, are more liable to them than others. Hence, debility seems as much a cause, as it is an effect of worms. Since the doctrine of equivocal generation has been justly exploded, it has, however, been generally imagined, that worms are engendered from the eggs of insects, which float in the air, or are swallowed with some part of our food, such as summer fruits, vegetables, cheese, and some kinds of flesh meats. But, perhaps, this is

not altogether so certain as it may seem at first sight, unless we are to imagine that these supposed eggs produce very different insects, from being taken into the stomach and bowels, than they would if deposited elsewhere; since it is generally thought, that insects of this kind, especially the tape worm, are not met with any where else; * neither will it account for their existence in the unborn fœtus, if that be really a fact. It is however, more than probable, that they were destined by nature to be generated, and to live in the bodies of other animals, as observed by Dr. Black † and Rosen.

But whatever be the cause, the general intention of cure is obvious enough, which is to bring them away in the most easy and expeditious manner, whether alive or dead; the difficulty

* Although this seems to be the fact, there are not a few learned men of a different opinion. Many travellers, and others, better acquainted with natural history than I am, have reported, that the very same kind of worms may be met with amongst vegetables, in the earth, and both in standing and running waters. That the tape worm, particularly, has been seen in the waters above Constantinople, where the complaint is very common; and that natives of northern climates, who have resided for any length of time in Turkey, are very frequently afflicted with the tœnia, as it is supposed, in consequence of drinking of the foul standing waters of that hot climate. Linnæus also, and others, have thought the teretes, or lumbrici, to be the same with the common earth-worm; but Tyson has, by dissections, demonstrated the contrary.—*Philosoph. Trans.*

† Treatise on the Generation of Intestinal Worms, and on the Means of destroying them.

See also, Dissert. of J. Mathieu Gesner, Mem. Gotting. An. 1751.

chiefly consisting in dislodging them from their firm attachment to the sides of the bowels.

In this view, systematic writers state the indications to be, first, to destroy the nidus, and secondly, to kill and expel the worms. The first may be effected by alcalies, as potassæ subcarbon. sapo venet. bitter aromatics, and mercury; or by resolvents, as the gums assafœtida, galbanum, and such like. Secondly, worms are killed by oils in clysters, especially with the addition of the infusion of the semina santonici; by honey, and by indigestible substances, as the testaceous powders, steel, and tin; and by poisons, as preparations of mercury, which at the same time expel them. To these ends, indeed, a variety of medicines, pretty much of the same kind, has been devised, and has served the cause of empiricism in every age; most of which consist either of the bitter purges, or mercurials.

Worms existing in the bowels can, indeed, only be carried away by purging; and very active purges are indicated when the time of life and the constitution do not forbid. But when these are tender, gentle purges given daily for some time, by the constancy of their operation produce, without harm, an effect, equally, or perhaps more beneficial and lasting, than the active purges. These are often joined, or administered alternately with bitters; and hence have arisen the family receipts, as worm-seed, tansy, and such like, given in treacle or honey; or joined with rhubarb, senna, or other gentle laxative. With many and especially French writers, the male

fern, alone, is reckoned a specific. Olive oil, likewise, has been said to be a good remedy, as being destructive to worms; but castor oil is preferable, which, by its purgative quality, also carries them off by stool. Dr. Parr, in his Medical Dictionary, recommends the helleborus fetidus, as a specific.

Agreeably to the above view of gradually ridding the habit of these vermin, children of a delicate frame, and such as have not been long infested with them, may begin by taking a small dose of infus. sennæ every other morning; but should this prove insufficient, a few grains of pulv. è scammon. cum calomel, may be given the over-night, once or twice a week, according to the age and strength of the child; and some tonic medicine be interposed. If purging much should, on any account, be found improper, the following is very safe and often effectual.

℞. Limatur Stanni ʒij. Hydrargyr. ʒiij.

Misce, fiat amalgama.

Eight or ten grains of this powder, with three or four grains of rhubarb, and as much unwashed calx of antimony, may be taken every morning in a little honey, for a week together; after which, a clyster of succotorine aloes, dissolved in warm milk, should be thrown up over night, and a proper dose of rhubarb, or senna tea, be taken the next morning; which course may be repeated, as the obstinacy of the complaint, or the strength of the child shall require.—Volatile alkalies also, in some debilitated habits, will prove serviceable, and valerian, especially if it be occasionally joined

with jalap. But one of the most powerful means, long in use with country practitioners, and strongly recommended by the late Mr. Chamberlaine, is the dolichos pruriens, variously prepared; but the most simple form, that of giving it mixed up with treacle, is, perhaps, the best of all. It should be taken night and morning for three or four days, and then be purged off with senna-tea, or jalap; and this course be repeated, as occasion may require.

Amongst other means, especially for such as may be at a distance from medical assistance, is a mixture of pewter filings and treacle, of which children of four or five years old may take several tea-spoonfuls in a day, which they will readily do, for the sake of the treacle. At the same time, from five to ten grains of jalap, with as much of the hydrargyrus cum sulphure, should be given twice every week, to purge off the dead worms. Dr. Rush of Philadelphia strongly recommends the rust of iron, from five grains to half a drachm, or infants from one year old to five, exhibiting a purge every fourth or fifth day, to carry the worms down, as they die. To answer the last purpose, the following plaster is sometimes sufficient;

℞. Aloes succotorin.

Pulv. flor. Chamæm. āā ʒj.

Tereb. venet. Q. S. ut ft. Emplastrum (cum margine emplast. adhæsivi) apud regionem umbilici admovendum; sed ante applicationem, imponatur loco umbilici morsum gossipii. Or equal parts of bullock's gall, and powdered aloes, may be mixed up with any unctuous substance, and

the parts below the navel be anointed with it, two or three times a week: or succotorine aloes and powder of dried rue, made into a plaster with Venice treacle, and applied round the navel, first covering that part with a little cotton.—I mention these things with a view to the country poor, whom the benevolence of practitioners may incline them to assist, and who may, by these easy means, do it at little expense to themselves.

If the complaint, however, has been of long standing, and the child not very young, mercurial purges are a more expeditious, and a safe remedy; though the hydrargyrus cum sulphure taken for a length of time, and occasionally purging with senna, has sometimes succeeded, even where there have been the severest convulsions. For which likewise, or obstinate contractions of the limbs, the warm bath is often essentially necessary.

Throughout the cure, and indeed afterwards, the diet should be strictly attended to, and all fat and greasy aliments abstained from. The child should live upon milk, broths, and meats of easy digestion, with toasted bread, and honey instead of butter, which is exceedingly pernicious. To prevent a return of the complaint in older children, or grown people, chalybeate waters and bitters may be made use of.

As it is not my intention to enter formally into the distinct treatment often necessary for the tœnia (which, indeed, I have sometimes seen brought away by very gentle means;) I shall do no more than refer to Shmucker's medicine, the celebrated remedy of Madame Nouffer,

said to be made use of with great success in France and Geneva; as I have also known it to be, two or three times, in this country. It can in no wise, however, be proper for young children, though it may, possibly, be safely had recourse to for robust youths, growing up to manhood. It is intended to operate very powerfully on the bowels for many hours, the patient being supported the while by repeated large draughts of broth, or green tea.

The preparation of the preceding day, and some other precise directions, are equally needless in this place, and perhaps the previous exhibition of two or three drachms of the Radix Filicis masculini, is of as little importance,—For a full account of the process, the reader is referred to Madame Nouffer's Treatise, published by Dr. Simmons, anno 1787.

The purge is as follows:

℞. Mercur. dulc. optimè sublimat.
Resin Scammonii elect, ā. gr. x.
Gambogiæ gr. vj. vel vij.
Conserv. Cynosb. Q. S. ut ft. bolus.

The Cevedella, or Indian Caustic Barley, is recommended by Shmucker in the fifth volume of the Journal de Petersburgh,* as an almost infallible remedy for the tœnia. He directs a drachm of

* Mr. Loefler, the author of the Journal, assures us, that it may be taken thus with perfect safety; and annexes cases of its success in expelling worms of different kinds. A very powerful remedy, much used in the West Indies, particularly for the lumbrici, is the Spigelia Anthelmia, a species of Indian pink; but it has not been much used in this country.

the seeds, in fine powder, to be given every morning, fasting, mixed with honey; and to exhibit on the fifth morning a drastic purgative.

Mathews, late apothecary at Berlin, received an annual premium from the King of Prussia, (1801) for his arcanum for the tape-worm, viz.

R. Limat. Stanni. angl. pur. ʒi. pulv. rad. filicis maris dr. vj. pulv. semin. Cynæ ʒss. pulv. rad. jalappæ resinosæ, salis polychresti, āā. ʒi. misce, ft. cum mellis commun. sufficiente quantitate electuarium.

R. Pulv. rad. jalappæ resinos. salis polychr. āā. ℈iij. scammonii aleppensis, ℈j. Gummi guttæ gr. x. misce ft. cum melle communi, electuarium.

He directs a spare diet of only broths and vegetables before the exhibition of the medicine, of which a tea-spoonful is to be taken every two hours, for two or three days, till the worm is felt moving in the bowels: the patient is then to take of the purgative electuary likewise a tea-spoonful, every two hours, till the worm passes off. If it should not, castor oil is to be taken with it, or to be administered in clysters.—These remedies should be proportioned to the age and constitution, and under the eye of a physician. The goodness of the fern is an important matter, viz. the root of the polypodium filix mas, which, when reduced to powder, is of a reddish colour. —(Saltzburg Medical Chirurgical Gazette, in German, No. 39.*)

* Medical and Physical Journal, No. 26, for April 1801.

The late Dr. James Sims succeeded with the ol. tereb. of which the patient for another complaint had taken two drachms as a dose: but possibly that disorder might concur with the medicine in expelling the worm.*

## *Convulsions.*

Convulsions may be induced by the last mentioned, and by several of the preceding complaints. They are of two kinds; the symptomatic, and the idiopathic; though the distinction may not, perhaps, be perfectly philosophical, or accurate. It is for want of some such discrimination, however, that writers have had occasion to observe, that children are much oftener supposed to die of convulsions than they really do: for though a convulsion frequently closes the scene, it has generally risen from the great irritability of their nerves, and violence of the disease under which they have laboured. On the other hand, should it be granted, that the convulsions of children are generally symptomatic, infants may, nevertheless,

* The oleum terebinthinæ has, on many occasions, very effectually expelled the tape worm; and in some other cases of worms has been useful. For the tape worm it should be taken into the stomach undiluted, in doses for adults of six or eight fluid drams. For ascarides it may be given in clysters.

S. M.

be said to die of them more frequently than certain authors have allowed; for where a disease is disposed to produce some violent convulsion, that, though a mere symptom, may carry off the patient: and as it may sometimes be prevented or removed, by its proper remedies, (the disease which occasioned it being at the same time properly treated,) infants may often be recovered, who would otherwise expire in a convulsion fit.

Such original cause may be a rash, improperly repelled; but the source of fits is much oftener seated in the gums, in the time of teething; or in the first passages, where some undigested matter, or merely pent-up wind, irritates the coats of the intestines, and produces irregular motions throughout the whole nervous system. Zimmerman* relates an instance of this kind, of a child who, during the first months of its life, had frequent attacks of violent convulsions, which disappeared entirely upon the prohibition of meal pap. Indeed, too much caution can scarcely be given on this head, thick victuals being a very frequent occasion of convulsions in young children. Many infants can bear no kind of thickening in their food; any sort of bread, rusk, &c. disordering their bowels, by occasioning their contents to turn pasty, and cleave to the coats of the intestines, whereby a due absorption of the nutritious part of the aliment is prevented, so that children, in the daily habit of taking sufficient

* Acta Societatis Zyrick, vol. 2.

food, are nevertheless emaciated.* Weak and tender as they are, they in this state require repeated purges, especially of castor oil, with some light cordial on the intermediate days, and a total abstinence from farinaceous food. For such children, veal tea, mixed with milk, is amongst the most innocent and nutritious. Any offensive load, whether from too great a quantity, or bad quality of the food, by occasioning a faulty secretion, must act like a poison; and that the convulsions are owing to this cause, may often be known by the complaints that have preceded them, such as loathings, costiveness, purging, pale countenance, large belly, and disturbed sleep. If the child is two or three years old, any load at the stomach may be more readily discovered; the tongue will be foul, the skin hot, and the pulse quick and weak.

Any matter capable of irritating the nervous system, will induce symptomatic convulsions in some infants, whilst others will withstand a great deal. For such habits as the former, the cold bath will sometimes be found a good preventive. Every young infant is, however, more

* It is a very common practice to give arrow root, biscuit powder, or other farinaceous substances, mixed only with water, and sweetened with sugar, as the usual food of infants, and a more improper practice can hardly exist. If the food thus made be very thin, it is not sufficiently nutritive for a healthy infant: if it be made thick, it almost constantly disorders the digestive organs, and occasions disorder in the bowels. The cautious addition of milk, or weak broth, to such farinaceous diet, renders it generally much more wholesome. S. M.

or less, predisposed to this complaint; and the disposition continues throughout childhood, in proportion to the tender age, and delicacy of the habit. The younger and more irritable, therefore, an infant may be, it will be so much the more liable to the symptomatic convulsion, especially from any considerable disturbance in the first passages, as was mentioned before; particularly the bad quality, or over-thickness of the breast-milk, or other food; and from frights of the wet-nurse. Of this I remember a remarkable instance in a patient of my own, in whose house a visitor suddenly dropped down dead. The mother of the child, which was six months old, was exceedingly alarmed; but her attention being for a moment called off by its crying, she incautiously put it to her breast. It was not an hour afterwards that the infant was seized with a fit, and lay either convulsed or comatose, without so much as taking the breast, for the space of six and thirty hours: though it was at length happily recovered.

Among the various causes of convulsions, (though equally an occasion of many other complaints) may be mentioned that of foul air, and want of cleanliness in the dress, and other accommodations of infants: against which, the lower class of people cannot be cautioned too often, or too earnestly. Such a source of convulsions has been peculiarly exemplified in a disorder whose attack being within the first nine days after birth, has been denominated the nine-days disease. Readers desirous of a full account of it, are re-

ferred to a paper of Dr. Clarke, of Dublin, published in the Transactions of the Royal Irish Academy, for the year 1789, by which it appears that Dr. Clarke considered it as altogether an endemic in the Dublin Lying-in Hospital, where it raged for many years, and carried off some thousand children. But after a while the Doctor was led to think the disorder might probably be entirely owing to bad air, and want of cleanliness, he was therefore at great pains to remedy these local defects; and thereby prevented these very frequent attacks of a disease, which, under the former circumstances, none of the physicians had been able to cure, in a single instance. Of the like kind, possibly, was the following somewhat curious case.

The infant was seized with fits when scarcely a fortnight old, and had many severe ones for three days; when, becoming more frequent, I was desired to see it. The child was suckled by its mother; but she being very feeble, and having a little fever at the time, her milk was diminished; which occasioned the child to be fed with bread victuals, especially in the night. This I directed to be changed for cow's milk and gruel: and in a day or two a wet nurse was taken to assist the mother in suckling; who, in consequence of getting rest, was soon able to nourish her infant entirely.

The child's stools being thick and pasty, castor oil, and afterwards calomel, were given repeatedly, and the fits became less frequent. In a few days, however, they again became numerous, and

afterwards increased to twenty and thirty in twenty-four hours; and some of them very violent. When the infant was five weeks old, the fits became almost constant; so that, except an hour or two at a time that the child was sleeping, it was seldom five minutes out of a fit, some of which were long, and from which the infant recovered in a kind of struggle, as if it were suffocating: but the greater number of the fits were short and slight.

Almost every medicine that I have ever thought useful in fits, was carefully administered for full five weeks that I attended statedly once or oftener every day: particularly oil of amber, musk, and laudanum, were given very freely; and seemed at first to be useful, except that the latter no otherwise abated the fits, than by procuring sleep, from which, however, the child often awoke in a convulsion. Leeches at this time were applied to the temples, and a blister in the direction of the longitudinal sinus.

Every means appearing to be in vain, all medicine was given up during the last week of my attendance, except when necessary to obviate costiveness; but the fits continued exactly the same, and the infant, in a very emaciated state, was expected to expire from one hour to another.

The curious part of this case is, that when the child was eight weeks old, it was taken two or three miles into the country, at a time that its fits were almost constant. It left town in the evening, and had many fits the ensuing night; but the next day had only two, and from this time they

ceased entirely, without recurring to the use of any medicine.

This sudden change, and speedy entire recovery, can only be attributed, I imagine, to a change of air; which is the more probable, because the infant was removed from a bad one, the child's parents keeping a liquor-house, the lower parts of which had always a very strong and disagreeable smell of ardent spirit. The mother, however, had borne other children in the same house, none of whom had any kind of fit. May it not seem probable, that though such an unwholesome air might not be sufficient to induce convulsions in a healthy child; yet the habit being once formed, such an atmosphere might keep it up in a debilitated infant? *

Another peculiarity may be noticed in this place, that in some instances of the severest convulsions, one side of the body has been much more affected than the other; and from which some affection of the head is justly suspected, whether primarily or otherwise; therefore bleeding with leeches, and afterwards the application

* In another part of Dr. Underwood's Treatise, the following paragraph respecting this child was inserted: "After this child's health was fully restored, and it was thriving well, it was suddenly seized with a kind of spasm on the chest, and died in two or three seconds of time, in the bar-room of the liquor shop in which its parents resided." And Dr. Underwood, in commenting upon it, considered that this case illustrates an observation of Moschion, who directs, that children shall not be exposed to strong odours of any kind, believing them to be always injurious to infants. S. M.

of a blister to the head on the side most affected, has appeared to be useful.

The cure of every kind of convulsion will consist, principally, in removing the exciting causes, which must, therefore, be inquired into. If from improper food and indigestion, a gentle emetic should be given. If the irritation be in the bowels, whatever will carry down their acrid contents will cure the convulsions, if administered in time; and we ought generally to begin with a clyster. If the stools appear very foul after common purges, (in which case there will frequently be some difficulty of breathing,) a few grains of the pulv. è scammon. cum calomel, may be given with great propriety. But if the disposition to convulsions continues, after the bowels have been properly cleansed, and no new irritation of them may be apprehended, anti-spasmodics should be administered; *such as tinctura fuliginis, castor, spir.

* I speak from my own experience of the efficacy of such remedies, and it may not be amiss to observe, that Harris, who is extremely cautious of giving heating medicines to infants, speaks favourably of some of these.—" Usus horum (says he) haud prosùs improbandus est, vel in tenellis; nempe quia acidum absorbendi facultate excellunt. Verum summâ cautione," &c.——Great caution is certainly necessary in regard to every medicine prescribed for infants, and especially for those of a heating quality; nevertheless, it may be repeated, that in proportion as the disorders of infants become more attended to, I doubt not, it will appear that, in this country at least, cordial and volatile medicines are frequently both more expedient and useful, than many people have imagined.†

† This opinion of the advantage to be expected from cordial and volatile medicines, seems to be advanced with less limitation than is to be wished. In

cornu cervi, ol. succini rectif. a drop or two of tinct. opii, or hyosciami, or of ol. rutæ; which, though an obsolete medicine, is a very excellent one; as likewise, in some instances, is the aq. kali, as advised by Dr. Hargens of Kiel: but to begin with such remedies, as is sometimes done, is as hazardous as empyrical. The continuance of the convulsions here treated of, frequently depends on the debilitated state, or tender age of the infant. The oil seems to act by invigorating and restoring a due tone to the alimentary canal, the grand spring of good health. A remedy less common than those above-mentioned, but in some instances given with the best effect, is the zinci sulphas. This administered in a proper dose usually acts as an emetic, and if it should, must be continued afterwards in smaller doses. Dr. Cooke very strongly recommends a mixture with spermaceti and ol. anisi, and perhaps such a medicine, from its sheathing and warm carminative qualities, may be as proper as many others; though the style of the author is not likely to recommend his prescriptions very strongly in the present day.* Rubbing the spine, the ribs, palms

* After having looked into almost every work that has fallen in my way, on the subject of infantile diseases, I did not expect to meet with any thing of so late a date as 1769, that could reflect any such disgrace on the practice of physic, as the very anile performance of this writer.

some of the diseases of infants, especially such as are dependent upon what is called a leucophlegmatic temperament, cordials and volatiles may be required; but in the great majority of infants' diseases, cordials, particularly at the commencement of the complaint, would often prove very injurious.

S. M.

of the hands, and soles of the feet, with oleum succini, or the aqua ammoniæ, has likewise had a good effect; as well as frictions over the whole body; which, from the consent of parts, seems to afford more benefit than might be imagined.—A very common cause of recurring convulsions, has been said to be worms; and where no other probable one may appear, ought to be suspected: the cure will then depend on the proper treatment of that complaint, the symptoms of which have been already sufficiently pointed out.

Should the convulsions arise from the disappearance of a rash, or of a discharge behind the ears, the warm bath, blisters,* gentle purges, or a few drops of the spiritus ammoniæ comp. joined with sal. succini, will be proper remedies. But when the cause is unknown, as the approach of small-pox, measles, or other eruptive complaints, bathing the feet in warm water, and throwing up a clyster, are the safest means. If from teething, after gentle evacuations, and other means directed under that head, blisters, oleum rutæ, laudanum,

* Blisters may be dressed with the common white cerate, rubbed down till it becomes smooth, and spread upon a double linen cloth, instead of the hard plasters commonly made use of, which are very harsh to the tender excoriated surface.—Blisters will sometimes inflame, or be for many weeks indisposed to heal up, in children as well as in adults; in either of these cases, covering the part with a collard or other soft cabbage leaf, (with the hard fibres on the back part cut off, and gently bruised with a kitchen rolling-pin) will often remove the inflammation sooner than any other application. Dusting the surface afterwards with very finely levigated powder of lapis calaminaris will frequently dispose the ill-conditioned ulcer to heal.

or the spiritus ætheris vitriolici comp. and especially lancing the gums, are the grand remedies. And in a view to the latter, it may not be improper in this place, to repeat some of the directions for doing this most salutary operation* more effectually than it usually is, especially in the case of convulsions. It is pretty well known, indeed, that it is not sufficient to cut down boldly to the tooth, and liberate it in every part; nor merely to free all such teeth as are manifestly making their way; but that others also must not be overlooked, which, though less evidently, have oftentimes a share in the mischief. But that which I would here also insist upon, is, to repeat the operation frequently, till either the teeth make their way, or the convulsions disappear. And as no harm can arise from the repetition, I wish to enforce the idea very strongly, in every instance, where teething is regarded as the cause of convulsions: a perfect cure of very obstinate fits being sometimes effected by lancing the gums for five or six days successively. The obvious reason of this direction, is, that the divided parts often tumify, or heal up again, and give rise to sufficient irritation, in certain habits, to keep up convulsions, which on the other hand, yield upon securing the nervous parts from fresh irritation occasioned by the continued protrusion of the teeth. In this view it will sometimes be proper to lance the gum across, as for the double teeth, suggested by Mr. Ware in the case of ophthalmy occasioned by difficult dentition.

* See the Chapter on Teething.

When repeated convulsions, connected with some disorder in the first passages, and recurring for several months, withstand all the above means of cure, and are suspected to arise from some fault in the brain, they will sometimes disappear of themselves as the infant gets older. At other times, the appearance of some other complaint has put an end to the convulsions; and, not unfrequently, changing the wet-nurse; and sometimes even weaning the children, when six or eight months old, has evidently removed the complaint.

If convulsions come on without any of the preceding symptoms, they have been generally concluded to be a primary disease, and to proceed immediately from the brain. Some derivation from the head is therefore to be attempted, by bleeding with the lancet, if the child seems able to bear it; or by leeches behind the ears, on the temples, or inside of the arms; by blisters; purging; bathing the feet in warm water; friction of the legs, and rubbing the soles of the feet with aqua ammoniæ. If children of two or three years old are subject to slight and frequent fits, issues or setons should be made between the shoulders, or in the neck, and be kept open for a length of time: and in weakly children chalybeate waters may be useful

The idiopathic convulsion, if not removed in a few days, is that from which future bad consequences may sometimes be expected, being followed by a temporary loss either of the sight, or hearing, and sometimes of the intellects. In

this case the child has an unmeaning countenance, and a constant stare and motion of the eyes. If water in the head be not particularly suspected, and the common nervous medicines, with purges and blisters, have had no good effect, bleeding* with leeches, and repeated emetics should be had recourse to; and if the bowels continue in a good state, the aqua kali ppt. as a diuretic, may be made trial of.

Such are the usual remedies to which recourse has been had for the idiopathic convulsion; but of late years I have been led to make trial of musk; and from no small success, think I am warranted in strongly recommending it to the notice of physicians. And I am the rather led to this, because I conceive it to have been long out of repute as a remedy for children, and probably one that has never had a proper trial in their nervous affections; as in that case, we should expect it would have been noticed more particularly by the older writers.†

* Bleeding should rather precede than follow these remedies, since there is a much greater probability of relief from blood-letting in the early, than in the after stages of this complaint. Drawing blood by cupping glasses is generally preferable to the application of leeches. S. M.

† It is not my intention, however, to assert that musk has, at no time, been frequently administered in these cases; though it is probable, not very lately. I am not ignorant that many valuable medicines have long been neglected, in favour of others of the same class, and been taken up again at a future age. Practitioners, nevertheless, ought to state what has been their own experience of any medicine, in preference to others, after a fair trial of several, in particular complaints. Dr. W.

In some of the worst cases, however, of long-continued convulsions and fits, apparently truly epileptic, not to be attributed to the usual causes of infantile irritation; as well as where all the customary remedies have been previously and unsuccessfully tried, a free exhibition of musk has restored children to health. And this not only where the long continuance of the fits has led good physicians to pronounce them idopathic; but where the convulsions have also induced total blindness, or otherwise deranged the faculties, for several months. At least, I may assert that an immediate abatement of the fits has followed the exhibition of this medicine, and, in the end, the removal of all its ill consequences.

But when the idopathic convulsion attacks very young children, it generally terminates very soon, sometimes, indeed, instantly; and in many is fatal before any means can be made use of; especially in the case of hydrocephalus. I have, however, often imagined, that we are frequently mistaken in regard to such hasty deaths, and that when convulsions prove so suddenly fatal, they are more commonly symptomatic, and are occasioned much oftener than is suspected by overfeeding. I have known some of the largest and finest infants I have ever seen, die suddenly in the month, immediately after the nurse had boasted of their having eaten *three boats full of victuals!!!*

Heberden, however, though he acknowledges this drug to be frequently useful, conceives I have extolled it too much; but if I have spoken from personal experience, it is hoped I may be justified in stating it.

In this view of the disease, a few words more may not be wholly unnecessary, especially as they will hold out much comfort in regard to this alarming complaint; by which, I am, however, assured, many infants have perished merely from its not being properly distinguished. For though, indeed, all convulsion fits are in their appearance exceedingly alarming, yet under proper treatment they are much less frequently fatal than is commonly imagined, however often they may recur;* neither is the frequency of their returns during infancy, nor the long continuance of such a disposition, an indication of future evils, if the fits themselves be of the kind here supposed.† But though experience warrants my speaking with confidence on this head, with a view to prevent any unnecessary distress, yet would I by no means put the practitioner off his guard; since the recovery, in many cases, depends so entirely upon an expeditious use of the remedy, that even the time lost in sending abroad for a remedy may be fatal to the infant.

Fits of this kind are, indeed, pretty generally known to arise from irritating matter confined in

* The account in the yearly bills of mortality is especially erroneous in regard to this complaint, and has, perhaps, added to the alarm which the appearance of a convulsion universally occasions.

† The above observation is, I believe, strictly true in regard to such kind of fits; and though in some others, as hinted before, the intellects have appeared afterwards to be impaired, yet are the instances so very few, that there is, upon the whole, little room for alarm in the apprehension of such consequences.

the first passages, as has been already explained; but I believe it is not so generally understood, how often such matters are lodged in the stomach, (perhaps the pylorus itself) or *very low down* in the rectum. Instances of the latter are not wanting, wherein the hardened fæces have lain so low, as to dilate the sphincter ani sufficiently to expose them to view, and yet the infant been dead before a clyster could be procured from a neighbouring apothecary's; whereas such fits cease immediately after a plentiful evacuation from the bowels, artificially induced; so also I have seen an infant in the month, lying torpid for an hour together, in a kind of fit, and apparently in the very article of death, brought out of it entirely, after a large and spontaneous discharge of thick fæces. In like manner sudden death has taken place when the load has been in the stomach; whilst other children have been saved by spontaneously throwing it up. Whether, in the former case, the noxious irritation be in the rectum, which may possibly be doubted, or, from the obstruction there, acrid matter be confined higher up, is not of any particular importance; the confined fæces below, and their timely removal, being, alike, the certain occasion, and remedy of the evil.

After what has been said, it would be scarcely necessary to point out the remedies in a formal way, but for the sake of directing the most expeditious manner of applying them. In the first instance, the obvious means are a soap clyster, with two or more tea-spoonfuls of salt,

(such articles being always at hand) and afterwards administering one or other of the purges formerly directed; which it may often be necessary to repeat for some days, perhaps with an interval between. But when an infant falls suddenly into a convulsion very soon after sucking or feeding, especially if on any thing actually improper, and the bowels have been for some days in an orderly state, it may reasonably be presumed that the irritation is in the stomach, especially if there be an unusual paleness of the countenance, indicating sickness; or, on the contrary, any considerable blackness, with symptoms of suffocation; which I think do not come so soon when the obstruction is in the bowels. And it should here be remarked, that it is not necessary, that the load in the stomach should be considerable in quantity in order to induce such sudden and alarming convulsions; it is sufficient that the stomach be really oppressed by it to a certain degree; nor does it always appear to arise so much from an oppressive abundance, as from a small piece of undigested food, irritating, and perhaps confined, in the pylorus.

In the case here described, it would be improper to think of a formal emetic, at least without making trial of some more expeditious means, such as irritating the pharynx with the finger, or a feather, or forcing in the smoke of tobacco, if that be at hand; (the latter of which should, however, be cautiously done;) either of which often instantly produces vomiting, and puts an end to the fit. To this end, the child should be sup-

ported by a hand, placed under its stomach and belly, whilst the feather or other means are made use of; in which position the infant will be made to vomit more readily, and with less straining, than in any other.—It is hoped that the importance of the subject, as well as the very frequent success attending the plans last recommended, under the most alarming appearances, may be thought an apology for the length of this chapter, as well as the sort of repetitions made use of.

It is further to be noted, that symptomatic convulsions are sometimes the effect of a salutary effort of nature, to produce a crisis in some disease the child labours under: in which case great caution should be used not to be over officious: bathing the feet in warm water, however, as mentioned before, will be perfectly safe, and generally useful.—Having spoken of opiates, I shall just observe, that though they are often very serviceable, when judiciously prescribed, they become very hurtful if improperly administered. They will, however, always be safe, where convulsions continue after the first exciting cause has been removed; or where the convulsions are so violent as to become an obstacle to administering proper remedies; or when the original complaint is of a spasmodic nature; and, perhaps, particularly where the hands are constantly clinched, and the thumbs drawn down; in which case, (after properly clearing the primæ vitæ) infants will often be benefited by large and repeated doses. When arising from debility and languor, the tinct. valer. volat. administered in some generous white-wine,

has been found a successful remedy. Amongst the latter remedies, fixed alkalies, particularly the carbonates of soda and potassa, have been recommended, and sometimes the volatile alkali, and it should seem with success.

When convulsions occur many times in a day, it is of importance to attend to the distance of the paroxysms; from which a much better indication may be had of their immediate danger, than from the forcible contraction of the muscles during the fit. For, where the intervals are short, though the fit itself be not long, nor violent, the disease is generally more dangerous than where severe paroxysms are attended with long intervals.

## *Paralysis, or Palsy.*

Paralysis is a more common disorder in infants and young children, than writers seem to have imagined: it is confined to no age, (having been seen as early as the third day after birth,) and attacks children in very different degrees, in the manner it does adult persons. It, accordingly, sometimes seizes the upper, and sometimes the lower, extremities; in some instances, it takes away the entire use of the limbs it has attacked, and in others, only weakens them. Sometimes the speech is very much affected, and at others not at all; the intellect is also greatly impaired in some instances, and in others is only torpid; for though children may be dull and heavy, like other

paralytics, yet when roused, their imagination is found to be fully awake to the common objects around them.

The palsy more commonly appears in the form of hemiplægia; but if it be neither fatal, nor soon cured, it is often found to steal imperceptibly upon the other side of the body. In one instance, I was witness to the paralytic affection quitting one side, to seize the other, only two days before the child died.

In any case, the treatment of palsy is much the same in young subjects as in adults; and being usually attended with costiveness, calls for brisk purges in the first instance, and a repetition of opening medicines throughout the course of the complaint. And, indeed, if cathartics and blisters do not soon afford relief, the disorder usually becomes chronical, and the child sinks gradually in the course of a few months, or drags on a miserable life for ten or twelve years, with more or less debility of the arms or legs; but very rarely arrives at manhood. Indeed, the causes of palsy, particularly in young people, who are still growing, are so numerous, and are often so entirely out of the reach of art, as well from their nature as their seat, being frequently in the nerves themselves, or the brain, that such an event cannot be wondered at.

But where no morbid change of parts has taken place, perhaps infants and young children are oftener perfectly cured than those more advanced in years, by the mere exhibition of two or three brisk purges, whereof calomel often forms a

necessary part, as the palsy frequently originates from foul matters in the first passages. After purging, blisters should be applied, and if no fever attends, nervous medicines be administered, such as valerian, castor, ammonia præparata, and the spiritus ætheris vitriolici compositus. In some instances, the bark and steel have proved useful; or frictions with flannel and aromatics, or ether, and the use of the waters at Bath; and as frequently as any other mean, electricity, especially, if instead of giving shocks, the electric aura only be applied, or sparks drawn from the body, seated in the insulating chair. In regard to electricity, it has been thought, that it is much more likely to succeed, if had recourse to previous to the application of blisters. If the head should be much affected, a small blister, or leeches applied to the temples, may be proper in certain habits.

When the palsy becomes chronical, more general remedies will be called for, according to the particular symptoms that may occur; but more commonly, remedies of the warmer class.

The palsy is sometimes occasioned or succeeded by water in the head; and in the former case, the sutures of the skull being generally still open, and allowing of distention, the symptoms of compressed brain will not appear so soon as they otherwise would.

In the suspicion of hydrocephalus, mercury, and diuretic medicines may be made use of; though it is to be feared, with but little prospect of success, when the original disease has proceeded thus far.

I have noticed a few instances of a partial paralysis of one, or all the extremities; but this has always given way very soon. Besides teething infants, whom it has been said to attack, I have seen it in others who are older, and the finest children, and is then generally attended with a a foul state of the bowels. In any case, the only remedies I have found necessary, have been calomel, or some other purgative; sometimes an emetic, aromatics and bitters, and volatile embrocation to the limbs. Electricity has been advised; and if the complaint should not otherwise yield, may as properly be had recourse to in this, as the former instances. If these means should fail, the whole course of the spine should be carefully examined; and if any curvature be discovered, recourse must be had to one or other of the means recommended for the paralysis of the lower extremities; and it may be remarked here, that the seat of the disease, having been high up in the neck, close to the head, has sometimes been overlooked.

## *Skin-Bound.*

This being a spasmodic affection, and sometimes attended with the tetanus, may be here noticed, as introductory to that convulsion. It is a disorder but little known either to ancient or modern writers, and has been less understood; being only twice publicly noticed, that I know of, until a few years ago. The one, at the beginning of

the last century, in a still-born infant, in the hospital at Stockholm, and the other about forty years ago, in a Neapolitan girl of seventeen years of age, in the Royal Hospital at Naples; the successful treatment of whom, I think, may throw some light on this disease, hitherto so little known. The former is accurately described by Uzenbezius, and recorded in Schurigii Embryologia, *(de fœtu frigido et rigido*)* but without adverting at all to its treatment. The case, as I since find, is transcribed into the Ephemerid. Academ. Naturæ Curiosor. Cent. ix.

The above is related in a manner importing it to be an uncommon occurrence, and the disease at that time little, if at all known; and though recorded in two distinct works, (the latter of which is rather consulted than regularly perused) the case seems to have been generally overlooked, and consequently the true nature of the disease remained nearly in its original obscurity. It was, indeed, not till a twelvemonth after my short account of it appeared, that this disorder began to engage the attention of the French physicians, in consequence of Monsieur Andrij being called upon to take the charge of the Hospice des Enfans Trouvès, at Paris. The disease, indeed, had been often seen both in that hospital and the Hôtel Dieu, but having always proved fatal, little attention had been for a long time paid to it, till

* The midwife is reported to have said, that this infant, though born alive, felt as intensely cold and rigid when it came into the world, as a piece of ice. How this might be, I leave to the Academy of the curious to determine.

Dr. Andrij was elected physician to the first-mentioned charity; since which time, no pains seem to have been spared in the investigation of it: and the subject having since been taken up by the Royal Society of Medicine, it is hoped additional light will be thrown upon it.

That the present account of the disease may be clearly stated, I shall first consider it as it has appeared in this country, in the manner I had long ago intended, and had actually drawn up, before I was favoured with some further description of it by Dr. Andrij.

It has, indeed, been much less common in this kingdom than on the continent, but is equally an hospital disease, and seldom met with but accompanied with some bowel complaint, and still more rarely appearing at the birth. It was first spoken of in public, I believe, by my friend Dr. Denman, when a teacher of midwifery, and physician to the Middlesex Hospital; whose unwearied attention to it there, though not with all the desired effect, does him more honour than could have been derived from the most successful treatment of a disease less fatal than this has proved, wherever it has appeared.

The British Lying-in Hospital has been very little infested with it: possibly, by being solely appropriated to the reception of pregnant women, which the Middlesex* is not, the air may, on that account, be more pure and salutary.

* Since this was written, the reception of lying in women into the Middlesex Hospital has been altogether discontinued. S. M.

"The following symptoms (Dr. Denman observes) have been considered as pathognomonic, or characteristic of the disease:

1st. The skin is always of a yellowish white colour, giving the idea of soft wax.

2d. The feel of the skin and flesh is hard and resisting, but not edematous.*

3d. The cellular membrane is fixed in such a manner, that the skin will not slide over the subjacent muscles; not even on the back of the hands, where it is usually very loose and pliable.

4th. This stricture often extends over the whole body; but the skin is peculiarly rigid in the parts about the face, and on the extremities.

5th. The child is always cold.

6th. The infant makes a peculiar kind of moaning noise, which is often very feeble, and never cries like other children.

7th. Whatever number of days such children may survive, they always have the appearance of being dying."

This disorder commences at no regular period, unless where it appears as an original disease, and in that case more commonly within the first ten days after birth: a few children, it has been said, have been born with it, and such have never survived many days. Whenever it takes place, it attacks several infants within a short time; and chiefly those who may be in the last stage of ob-

* To me the appearance and feel of the skin have exactly resembled that of a person who has died during a very hard frost.

stinate bowel complaints, in which the stools are of a waxey or clayey consistence.

I have seen the rigidity extending beyond the cellular membrane, so as to affect the muscles, but only those of the lower jaw, which became perfectly rigid; but this spasm, or tetanus, does not seem to be a frequent symptom, nor do convulsions extend to the extremities, as they are found to do in France; nor have I discovered any extravasation in the cellular membrane after death, reported to be constantly met with in that country. Moreover, in no instance, that I have heard of, has the disease been attended with the erysipelatous affections uniformly noticed there.

The cause of this dreadful complaint, when either congenite, or evidently supervenient to disorders of the first passages, seems to me to be a spasm depending very much upon a certain morbid state of those parts, and with which the skin is well known to have a peculiar sympathy. But when, though an original disease, it does not take place till some days after birth, which, I believe, is rarely the case except in large hospitals, and other crowded apartments, the irritating cause, in such instances, is probably seated in the sebaceous glands; and the disease seems to be an endemic of certain seasons, arising from that unwholesome air to which such places are peculiarly liable.

The means of cure in this country, (where, it has been said, the disorder is more simple) have been different from those that have lately been

found successful in France; but instances of recovery have been very few in either. When the disorder was first noticed, its treatment was confined to a strict attention to the state of the bowels, and rendering the several medicines very warm by means of the compound spirit of ammonia, which was administered every four or six hours; and was the only plan attended with any success. Together with this, I after some time directed the frequent use of a warm bath, and chafing the whole body afterwards with warm flannel; means which have since appeared to have been attended with the first instances of success in France, as will be noticed below.

As the disease raging so much in France differs in many respects from ours, it is very doubtful how far the plan of cure adopted there may be applicable in this country, and my own experience has hitherto not gone beyond the means I have mentioned; but I would venture to suggest, that, in many cases, trial might be safely and properly made, not only of carminative clysters, but also of a grain of calomel, previous to the infant being put in a vapour bath; and after a sufficient number of stools shall have been procured by these means, exhibiting other volatile and cordial remedies, besides the spirit of ammonia; as well as antispasmodics of different kinds.

After the description given of this disorder as it appears in London, little more will be necessary, I apprehend, than to select the circumstances in which that in France is found to differ.

It has already been said, that it is more frequently attended with tetanus, and never occurs without those appearances mentioned under the article Erysipelas Infantile, especially the redness and hardness about the pubes, accompanied further with tumour, and redness of the soles of the feet. But these parts, it seems, though of a purple red, are intensely cold; very rarely suppurate, but sometimes mortify.* In one instance, however, the infant was not cold,† but, on the contrary, exceedingly hot. The legs, thighs, and soles of the feet were red and hard; but no mention being made of a *general* tightness of the skin, it is probable this child was affected only with the infantile erysipelas which appears amongst us.

Besides the above variations, the infants are said to swallow with extreme pain; the extremities, especially the legs, are much enlarged, and attended with a serous effusion in the cellular membrane, which we have not hitherto noticed; and the disorder is said to rage most in the hotter months. One instance, however, of difficulty of swallowing, fell under my notice; the child,

* This is said to be the case in four or five children out of twenty, all of whom are found to die in a few hours after the gangrene has taken place; and become so putrid, that by the next day the skin separates from every part of the body, so as to adhere to the hands of those who have occasion to touch them.

† One instance of this kind also occurred at the British Lying-in Hospital; and in this case there was likewise tumour, hardness, and redness about the pubes, and different parts of the extremities.

at least, refused the breast, and swallowed unwillingly whatever was offered it; but this infant scarcely survived the attack fifteen hours.—In France, it is further observed, that the infants die about the third or fourth day, or at furthest, on the seventh from the birth. It is probable, there is another and very material variation, in respect to the degree of stricture and immobility of the skin, which is not clearly expressed to be either so considerable or extensive, as in the disease I have been describing; but is more confined to those parts which become red and tumid. But in the instance recorded by Schurigius it was clearly otherwise, the infant being said to feel, from head to foot, like a piece of flesh dried in the smoke. This child survived a complete day, during which time it took no sort of nourishment, and never cried, nor made any kind of noise.

Upon examining a great number of dead bodies at the Enfans Trouvés, the serous extravasation is constantly met with; is of a deep yellow colour and fluid, but coagulates with heat; the fat is peculiarly solid; the glands and lymphatics, especially those of the mesentery, are found stuffed, and the liver uncommonly large, with a great quantity of deep-coloured bile, in the gall-bladder; and the lungs are said to be loaded with blood, as well as to contain an unusual quantity of air.

The supposed cause of this disease amongst them seems to me but ill accounted for; the complaint being attributed to the improper diet of the mother or her infant; or to cold it has

taken at the birth: whereas the coldness and rigidity of the skin seem to be but mere symptoms, and not the disease; especially as their children, like ours, are but rarely attacked from the birth. The disease appears to be a true endemic, arising from foul air, especially as it is found only to attack the poor, and particularly to infest the two large hospitals that are crowded above all others, and receive the lowest and most wretched part of them; of whose new-born children, it is supposed, one out of twenty is visited with this disease.

It has been hinted, that for a long while, little attention was paid to this complaint, on account of its constant fatality, six hundred infants sinking under it every year, in a single hospital; about four hundred of which are born in the Hôtel-Dieu.

But since Dr. Andrij's election to the Hospice des Enfans Trouvés, various means have been attempted both by himself and his colleague, Mr. Auvety; and amongst other means, the warm bath, which appears to have saved the first child that was known to recover. Trial has since been made of blisters to the extremities, which succeeded also in the very first instance, as well as since in several others: so that, in the last year, they are reported to have saved five infants out of every hundred, more than in the preceding one.

Monsieur Souville, surgeon to the Military Hospital at Calais, has also given some account of this disease in the Journal de Medicine, under the name of Ædématie Concrète, and observes, that it is a very common disorder in the provinces

as well as in Paris. Under his direction, likewise, a warm, or rather vapour bath, succeeded in the only instance wherein he had made trial of it.

And this part of the treatment agrees with the account of the Neapolitan girl to which I have alluded, as well as with the result of our further experience at the British Lying-in Hospital; where the warm bath, in one instance, however, was thought to hasten the death of the infant.

The former was read before the Royal Society, May 16th, 1754. The disease was in this young woman exceedingly severe, the skin being so very rigid over the whole body, from head to foot, that she could scarcely move her eyelids, or open her mouth; nor could she move any of her limbs without pain, as well as difficulty, though the rigidity was evidently in the skin and adipose membrane, and not in the muscles.

It may be sufficient to say, that the patient recovered, but not under a twelvemonth. The means had recourse to were the warm, and vapour bath, mercury, sarsaparilla, and friction of the skin.

The warm-bath gave her so great pain (as it was supposed, from the weight of the fluid) that after a few trials, she fell into convulsions, through her dread of it, as they were about to put her into it. But the warm vapour very soon afforded relief by relaxing the skin, yet very little, or no perspiration was produced; nor had she ever had the least from the commencement of the disease; but it was after the vapour bath considerably promoted by the internal exhibition of twelve

grains of quicksilver every day, with a decoction of sarsaparilla, assisted by constant warm air, and frictions of the limbs.

How far any part, or the whole of this treatment may be successful in infants, to whom the complaint seems to be confined in this country, experience only can prove; but it is presumed, that the means are worthy of trial.

## *Tetanus, or Locked-Jaw.*

The Tetanus* of infants is an equally fatal complaint, and in this country nearly as little known as the foregoing. It is either idiopathic or symptomatic; which distinction is of more importance in hot climates, where the latter is always found to be incurable. In some instances, it has been confined to the jaw only, as in Jamaica; in others, it has been attended with contraction and rigidity of other muscles of the face, and a peculiar fixedness of its features. Sometimes the rigidity has extended to the neck; and in one instance so completely over the whole body, that the limbs of the infant could not be bent so as to place it advantageously in a vessel, somewhat too small, appropriated to a warm bath.

* This is the species which nosologists have termed, Trismus maxillæ inferioris rigiditas spastica. Species prima. Trismus nascentium infantes intra duas primas a nativitate septimanas corripiens. Vide Cullen. G. LXIX.

In such instances of Tetanus as I have met with, the attack has not been earlier than the sixth, nor later than the ninth day from the birth,* and as far as I could learn, the infants had not been costive, (which Dr. Evans reports to be usually the case in Jamaica,) nor apparently unhealthy: some, I remember, were remarkably strong and lusty children. It seems somewhat to differ, therefore, from the disease termed Jaw-fallen, in the West Indies; and in one instance appeared to have some resemblance to the catalepsy. The rigidity has stolen on in a more gradual way in some instances than in others, but has always been very great as far as it extended, from the moment it has been discovered; so that in instances where the mouth has continued sufficiently open to admit my finger, I could not thereby depress the jaw. In some, the eyes have been bloated, and the whole countenance much swollen.

The cause of this complaint has been differently conceived of. Dr. Evans, who has been very conversant with it, attributes it to costiveness, and thinks he has greatly prevented its frequency amongst the negro infants, by purging them from the birth. Dr. Bartram, of Philadelphia,† attributes this fatal disease to a want of swathing, or

* In the West Indies also never later than the ninth day.—(Dr. James Clark.) In France, however, it is said to attack much older children, though rarely after two years of age.—(Memoire de la Societè Royale de Medicine, Ann. 1787 & 8.)

† See the Transactions of the College of Physicians at Philadelphia.

proper bandage to new-born infants, and to the application of scorched linen to the navel; but his reasoning, to say the least of it, appears to be very inconclusive. It has also been attributed to the cord being divided by instruments not sufficiently sharp. But the cause has at length been clearly ascertained, and happily its prevention, by Dr. James Clark,* who, perceiving, that those houses were free from this disease, in which there were no fires, very soon demonstrated it to be owing to the smoke from burning wood; the negro-houses having no chimneys to carry it off.

It does not in this country seem to arise from constipation, or neglect of purging off the meconium, and much less for want of swathing; but is owing (as I have always stated, and has since been demonstrated, as above remarked) to a certain state of the air; and the more so, as the disease appeared only once in the British Lying-in Hospital during a great number of years, and then attacked several infants in a short time.—It has appeared again, however, in six instances since the above account of it was given in former editions. In older children, as in adults, it may arise from various sources of irritation, and particularly from worms; especially, it is said, from a certain species of tœnia.

The remedies attempted at the hospital were the warm bath; fomentations to the rigid parts; frictions with oil and camphire, and Bates's anodyne balsam; blisters behind the ears, and to the

* See his Treatise on the Yellow Fever, &c. 1797.

nape of the neck; and assafœtida, opium, calomel, the bark, and aromatic confection, have been given internally. It remains, however, to make trial of more cordial and tonic remedies, as recommended by physicians in North America, where the disease is more common than it is here: such are the oleum succini, musk, wine, and the cold bath; though concerning the latter, writers differ, Dr. Clark asserting, that it has in no instance succeeded.

One infant, in whom the complaint was confined to the jaw, and who had less rigidity than any of the others, never looked ill, and had no convulsions in its limbs, died rather sooner than the rest, excepting one, which was a remarkably large and healthy infant: this child, after being five minutes in a tepid bath of salt and water, fell into a more profuse sweat than I had ever noticed in any young infant, and died in a few hours afterwards, and only twenty-four from the attack. I have known only one child survive the third day, and that was not seized till the ninth from its birth, and at the end of the third week seemed to be recovering; but it had never been able to take the breast after the attack, and died when six weeks old, though, possibly, not altogether from this complaint.

## *Epileptic-Fits.*

This and some of the following complaints, as well as the two or three immediately preceding, which relate, some to the more early, and the others to later periods of childhood, are noticed successively in this place, on account of their falling under the general class of convulsions; and it is presumed less improperly, on the whole, than ranking them according to their importance, or the different periods of time in which they might take place. The state of dentition, as so materially connected with nervous affections, will then be considered, which will lead to pyrexiæ, in the different forms they assume in children.

In regard to Epilepsy, very few words, however, may suffice, as it is either pretty easily cured, or usually continues through life: and is too well known to require a particular description. An account of the various precurrent symptoms would be equally useless.—It may just be noticed, that the patient falls suddenly to the ground, and sometimes without any perceptible warning, or at all sufficient to secure him from injury; and is usually much convulsed, especially on coming out of the fit, but frequently retains his senses the whole time.*

* I have never known an instance of epilepsy in which the patient retained his senses during the fit; such an occurrence must therefore, I think, be very unfrequent. S. M.

The means of cure must be adapted to the different causes of the complaint. It sometimes takes its rise merely from foul bowels; and certainly more commonly attacks children of a costive habit of body: it should then be treated agreeably to the directions already given in such cases, and especially with active and mercurial purges; after which, the cortex peruv. sulphas zinci, chalybeates, and other tonic remedies, may be serviceable; and especially sea bathing. In other instances, especially in more advanced life, and towards the time of puberty, the epilepsy seems to be owing rather to a more sensibly nervous irritation. In such cases, blisters to the back of the neck may be useful; and I have experienced much benefit from large doses of the powder of valerian, and from opium; and in one instance, from an infusion of savine, fennel seeds, and juniper berries; but I could never entirely conquer the complaint by these means, when become chronical: but the oleum succini has, in several instances, perfected a cure in young subjects; and where that has failed, I have succeeded with musk.

In the worst cases I ever met with, in which the fits were very long and violent, and sometimes to the number of twenty or thirty in a day, and the disorder of many years standing, electricity has very soon rendered them weaker, reduced their number to three or four in a day, and gradually to one in six weeks; but has not entirely removed them. In such obstinate cases, it is generally supposed, that the brain is affected by some local or permanent cause, and a perfect

cure is consequently despaired of: though I have known the fits abate greatly after having continued for twenty years, and the subject of them afterwards become the mother of several children. But parturition, as well as whatever else may tend to debilitate the system, I have always found increase the number of the fits for a certain time.

When this disease has attacked children of five or six years of age, and where no treatment has been serviceable, the complaint has very frequently disappeared suddenly about the time of puberty, and sometimes a year or two sooner. Where it does not, it will probably continue through life, and now and then prove suddenly fatal.

Dr. John Wilson, of Spalding, has lately strongly recommended the internal use of the argentum nitratum, in doses of gr. ijss. three times a day. And in the Medical and Chirurgical Journal, edited by Professor Hufeland, is an account of a cure effected in a case of three years standing, by the cuprum ammoniatum, given in the dose of half a grain a day, and increased to five grains daily.

When the patient can foretel the approach of an attack, it has been recommended to exhibit an emetic of blue vitriol, as soon as the patient's feelings announce the approaching paroxysm. The curative powers of the two former of these remedies, however, have been disputed by Dr. J. Magennis, of Plymouth.*

* See Medical, and Physical Journal, vol. iv. No. 21.

In the late Dr. Clarke's last publication on hydrocephalus, inflammations of the brain, and epilepsy, are some good practical observations that ought not to be withheld from the readers of this work. The intervals of the paroxysms, the Doctor observes, may be increased, at least, by a spare diet, and avoiding all animal food, and fermented liquors. He also very properly recommends the sleeping with the head very much elevated; early rising; the hair being cut short, and the head being kept cold, and the rest of the body very warm, carefully avoiding its exposure to cold; and a constant free course of the bowels; also setons and issues; the daily use of a tepid bath, from 80 to 94 degrees, at first for five minutes, and gradually to an hour at a time, if it should not relax. He advises ant-acids, where acidity prevails, and often bitters, but forbids steel. Emetics of zinc sulph. with ipecacuanha, he thinks often very useful. In plethoric patients with torpor, cupping or leeches, and V. S. of the jugular veins—he is averse from cold bathings.

Upon examining the brain after death, I have sometimes found water in the ventricles, and at others, a small point of bone, as sharp as a needle, standing out from the internal part of the os frontis, or from the cella turcica, (of which Boerhaave and others have recorded several instances) and which was, doubtless, the true cause of the disease.

## *Chorea Sancti Viti.*

I shall be very brief, also, on this untoward disorder, which is equally well known: and though not often fatal, is like the former, I believe, rarely cured but in young subjects.

Worms, and other foulness of the bowels in children, are frequent causes of this strange convulsion: in which different parts, and especially the extremities, are put into continual motion, giving the patient a very awkward appearance, particularly in his walk.

If the first passages are the seat of irritation, the complaint must be treated in the manner noticed under the preceding article: and indeed, in most cases, the cure should be begun by administering aloetic, or mercurial purges. But should the disorder appear to be owing rather to relaxation, as it sometimes is, the cortex peruvianus, chalybeates, and other tonics; especially the vitriolum album, and sea bathing, are indicated, and are very frequently successful. I have also known it immediately yield to electricity: but in this case, it has been attended with other symptoms of palsy, which have come on suddenly. Electricity, also, proved useful in a very extraordinary instance; but the complaint returning, yielded afterwards to a perpetual blister on the os sacrum, directed by Dr. Delarive, of the Public Dispensary. The pilulæ cupri were ad-

ministered at the same time, in the dose of gr. ss; but no benefit was perceived till the blister was applied. Dry-cupping has also been thought useful.

Dr. Hamilton, in his treatise on the disorders of infants, observes, that his father, as well as Dr. Parr, of Exeter, adopted the idea of irritation of the stomach and bowels long continued, producing this disorder in its chronic form; and that Dr. Parr has succeeded in fifty-nine out of sixty cases in the cure of it, by giving repeated and powerful purgatives.

## *Aphonia Spasmodica Intermittens, or Temporary Loss of Speech.*

This, though an uncommon complaint, sometimes occurs in children between the fourth and seventh years of age. It is a transient loss of speech, and is a harmless affection; for though it may continue for a length of time, I believe it never degenerates into a permanent disease. It is rather a difficulty in articulating, than a perfect loss of speech; lasts only for a few minutes, or at most a quarter of an hour; and recurs frequently in the course of a day. It is thought to be somewhat of the nature of the chorea sancti viti, and to be occasioned by worms, or other irritation in the bowels; and sometimes by teething.

If neither the irruption of teeth, nor the exhibition of mercurial purges, and other remedies

for worms, should produce a speedy good effect, any advantage from other medicines is more doubtful; but the long use of the cold bath, or perhaps time only, whereby a child may acquire more strength, may be expected to remove the complaint. It may be proper, however, to make a trial of local applications of a stimulating kind, during the paroxysm, or fit; of which remedies, the most innocent is a lump of sugar wetted with lavender drops; and amongst the stronger, a decoction of the pellitory of Spain, as a lotion to the mouth. Should these remedies do nothing, and the complaint anywise increase, it should seem that electricity may be had recourse to with safety and propriety; but the disorder is too rarely met with to have furnished the opportunity of saying much from experience.*

## *Incubus, or Night-Mare.*

It will be sufficient barely to notice this affection, children either out-growing the complaint altogether, or any occasional return of it, when older, being esteemed rather as constituting an unpleasant moment, than a disease requiring medical treatment.

* The most severe case of aphonia in a child, which has occurred within my experience, was cured by the daily use of calomel and jalap, with a little pulv. aromatic. This procured two or three stools daily, and the course was continued for at least three weeks. S. M.

The incubus, probably, arises from a spasmodic constriction of the diaphragm and muscles of the chest, taking place during sleep, and occasions a sense and dread of suffocation, and of some huge weight lying across the breast. When children, who happen to sleep with a bed-fellow, awake under the paroxysm, they are wont to say that their companion has lain with all his weight for a long time across them.

The cause of this complaint seems to be flatulency in the stomach, and indigestion, and it chiefly attacks children or young people of a delicate habit, and such as eat too freely of fruits, and especially such as are unripe, or who are in the habit of eating much supper, a short time before going to rest.

The paroxysms are of different duration, some children lying a much longer time in this unpleasant state than others; but in all, some degree of palpitation of the heart, lightness of the head, tremor, anxiety, or lassitude, remains for some time afterwards.

The curative indications are to rouse and fortify. During the fit, volatiles and fetids may be applied to the nostrils; and, as soon as may be, some antispasmodic should be administered internally. Afterwards, clysters, bitter purges, or emetics should be exhibited, as the state of the first passages may indicate, and the cordial volatile medicines be continued. To these should be added proper stomachics, assisted by a nutritious diet of easy digestion, and cold-bathing, if not otherwise improper.

## *Singultus, or Hiccough.*

This has been ranked among children's diseases, but it is, by no means, a complaint of consequence, as it sometimes is in adults, though it is, indeed, a true convulsion; and may, therefore, be noticed in this place. It occurs very frequently in infancy, but seldom requires much attention; as it more commonly comes on only after over-feeding, or in consequence of the over-thickness or sweetness of the food, and is one of their most harmless consequences; it offers another argument, however, for their prohibition. But when it depends on an acid state of the juices of the stomach, or occurs in long bowel complaints, the testaceous powders should be administered very freely. Should it, however, continue for a length of time, the emplast. ladani may be applied to the pit of the stomach.

The hiccough is an affection very incident also to more advanced childhood: but is equally harmless as in infants. It is well known, that it may be generally removed for the present, by any little circumstance that may serve powerfully to divert the child's attention at the moment, in a way of surprise, or otherwise. And it may not be amiss to attempt it whenever the hiccough may return, in order to obviate the influence of habit, by which this affection may be increased.

Caution, however, should be had not to make use of such violent means as might occasion any considerable alarm; which in children of an irritable habit, who are the more common subjects of the hiccough, might induce some greater evil than the one intended to be removed. A less known, and pretty certain remedy, is a small quantity of any powerful acid; lemon juice generally answers very well; but a tea-spooonful of vinegar seldom or never fails in the accidental hiccough of youth, or of very old people.

## *Sternutatio, or Sneezing.*

This has likewise been mentioned by some writers as a complaint of young children, for which Rhazes prescribes refrigerants and anodynes; but it is certainly not a common one, and, indeed, I have never met with it in the form of a disease. Should it so occur, however, some of the antispasmodics, such as musk, castor, or camphor, may probably be exhibited to advantage.

It may be occasioned by looking too long against any strong light, as the fire, and especially the sun, or other very luminous body. It is a well-known symptom of the measles, and of many common colds, but in neither, I believe, requires any particular attention. It is mentioned here, only because I would not pass over a complaint that has at any time been ranked

among the disorders of children. But knowing nothing further of it myself, and having no idea of its being a complaint of much consequence in this country, I have not chosen, under such circumstances, to be a mere copyer from others. If violent, however, it may be further worthy of attention : when, in conjunction with other causes, it may lead to the rupture of some small vessels of the nose : which will be noticed in its place.

## *Dentition.*

The complaints arising during dentition are next to be considered : many of the foregoing, it has been noticed, being blended with it, the first passages and the nervous system being always more or less affected. The process of dentition is likewise not unfrequently an occasion of many complaints afterwards to be mentioned, such as cough, fever, the rickets, and even pulmonary consumption and marasmus; under each of which heads, therefore, occasional references will be made to what will be advanced under this.

The time of teething is a most important period of the infant state, and subjects it to manifold complaints and dangers. Some writers, however, and particularly Dr. Cadogan,* and Dr.

* See his Essay on Nursing, &c., and Armstrong on the Diseases of Infants.

Armstrong, seem to think otherwise; and that teething is scarcely to be ranked amongst the diseases of infants. They have imagined that children, if otherwise healthy, would cut their teeth with no more danger than adults, who often cut the dentes sapientiæ, so called, without any difficulty, and always without hazard; they likewise observe, that many children get their teeth easily. But this argument must suppose the healthiest, and best-nurtured children to be, in all respects, in the same circumstances with adults; which is by no means the case; as they are liable to fever, dangerous purgings, and even convulsions, from causes that would in no wise affect the latter; nor can they stand under some of those complaints so long as adults, nor endure the necessary remedies. For the same reason, the measles and small-pox carry off numbers of infants, when attacked by them a little more severely than common, whilst young, and healthy adult subjects, often struggle through the most dangerous and complicated kinds, when properly treated. Not to mention that very few infants who are unhappily affected with lues venerea, recover under any treatment, whilst adults are cured in the most advanced stages of the complaint. I have, therefore, no doubt, that the time of teething ought to be ranked amongst the most hazardous to infants, and that the greatest attention ought to be paid to it; though, it is probable on the other hand, that Dr. Arbuthnot over-rates its fatality, when he says that one child in ten may be supposed to sink under it; at least, I believe

this is not the case where the symptoms are timely attended to.

Some late writers, and particularly Mr. Le Febure De Villebrune, have conceived this to be a mere dispute about words; but the difference, indeed, extends much further. For though I would, by no means, assert dentition itself to be a disease, and have made use of any such like expression merely in a popular way, yet am I confident it induces disease in very many infants of every habit of body, and more especially, however strange it may seem, in the apparently healthy and robust. Indeed weak, and even rickety children commonly cut their teeth easily, though often very late; or if they should be harassed by a purging, and other complaints, they, nevertheless, escape with their lives, while very lusty, strong children are frequently carried off suddenly at this period, unless the teeth happen to find a very easy passage through the gums. The system, during dentition, being disposed to inflammation, such children much oftener fall into fever than the tender and delicate; like athletic adults, who are more disposed to inflammatory complaints, than those who are of a colder, but less healthy temperament: and it is by acute fever, or convulsions, that infants are carried off, who are well known to survive a thousand lingering and vexatious complaints, if their viscera are sound. It may, however, be observed, that convulsions more rarely take place where a fever attends.

There are also other circumstances that affect the process of dentition, among which the three

noticed by Hippocrates, I believe, are well founded: "That infants cut their teeth more readily in winter than in summer; that such as are rather inclined to be lean, cut them more easily than those that are very fat; and children who are loose in their belly the most safely of all." Rhazes* and Primeros are of a different opinion in regard to the fittest season: but of the truth of the last of these observations there can be no doubt.

This period usually commences between the fifth and tenth months, and the process of the first teething commonly continues to the sixteenth at the least, and sometimes much longer. It almost invariably begins with the incisores of the lower jaw. Usually two of these are cut, and then the corresponding ones in the upper jaw. After two teeth in each jaw have appeared, it is, in some instances, a considerable time before the contiguous ones come out; but sometimes, though not often, six or eight are cut in a hasty succession. The incisores are succeeded by the four molares, then the canini, and the last of all of an infant's first teeth, their antagonists, or the eye-teeth, making in all sixteen. This, it is well known, is the ordinary number of children's first teeth, as they are called; but some infants cut four double teeth in each jaw, instead of only two, making the whole number twenty; though this is by no means so frequent an occurrence as has been asserted. I

* Apud Sennert. de Dentit. in Prognost. Sect. 5. Sennertus, however, endeavours to reconcile the two opinions, sect. 5, of the above work.

have, however, known a more rare irregularity, that of a child cutting twenty-four teeth.

The above wonted order in cutting the four incisores, appears to be owing to those of the lower jaw being less deep in the alveolar process, as well as thinner and sharper at their points, and therefore likely to force their way before those in the upper jaw; accordingly, at least one of the incisores in the former is usually the first cut. The one opposed thereto in the upper jaw sometimes appearing next, rather than the contiguous one in the lower, seems to be occasioned by the friction of the prominent tooth, against that part of the upper jaw at which its antagonist is to appear. This attrition, repeated every time the jaw closes, derives a greater portion of fluids to that part, increasing its natural action, and thereby forwarding the growth of the tooth; while, by the forcible and frequent pressure of the gums and periosteum against it, as soon as it has made its way through the bone, its irruption is further assisted. If the succession be otherwise, and a second tooth in the lower jaw be cut before one appears in the upper, as, for the reason first given, is more commonly the case, it is not unfrequently before many days; and the two corresponding teeth, in that case, either follow in two or three weeks, in consequence of attrition, or else do not appear for some months; but whatever the period may be, they generally come forward before any more teeth are cut in the under jaw. It is usually some

weeks before the other two front-teeth in the lower jaw are cut; and in a week or two afterwards, if there be no constitutional impediment, the corresponding ones in the upper jaw are commonly pushed forward, and for the reasons given for the early appearance of the antagonists to the two first-cut teeth.

In children who are strong and healthy, this process goes on pretty much as above described, and the teeth are cut both easily and soon; but in unhealthy and weakly infants, the process is both slow and uncertain. Accordingly, children sometimes cut their teeth irregularly, or cross, as it is called, both by the teeth appearing first in the upper jaw, and also at a distance, instead of being contiguous to each other: this is accounted, and with some reason, an indication of difficult, or painful dentition. It may also be remarked, that the ease or difficulty of dentition may be guessed at, by the circumstances under which the two first teeth shall happen to be cut; the succeeding ones frequently making their way in a correspondent manner. To all these general positions there are, however, various exceptions.

Teething is usually preceded and accompanied with various symptoms: the child drivels; the gums swell, spread, and become hot; there is often a circumscribed redness in the cheeks, and eruptions on the skin, especially on the face and scalp; a looseness, gripings; green or pale stools, or of a leaden-blue colour, sometimes mucous, often thick and pastey; watchings, startings in the sleep, and spasms of particular parts; a dimi-

nution, or increased secretion of the urine, sometimes of a milky colour, at others, staining the cloths in patches, as if it deposited a brown powder; a discharge of matter, with pain in making water, (imitating exactly a virulent gonorrhœa) which often mitigates the fever: in almost all cases, the child shrieks often, and thrusts its fingers into its mouth. The difficulty in micturition, however, is sometimes very troublesome, and the pain apparently very great, attended with long and vehement shrieks, for some time before the urine has passed.

Demulcent remedies, such as are recommended in the chapter on *Ischuria*, can scarcely be given, to infants of only four or five months old, in sufficient quantities to be of much service, and are indeed but little required, if the infant be suckled; but if nourished by the spoon, they may be made trial of, as they sometimes succeed. But should they fail in any case, recourse should be had to the means prescribed in the chapter on *Dysuria*.

A symptom less common than any of the foregoing, and appearing only in certain habits, is a swelling of the tops of the feet and hands: it is seldom, however, of much importance, and goes away upon the appearance of the teeth. I have never met with it but in infants who cut them painfully; and being seldom accompanied with a purging, it is likely may (in its stead) prevent that fever which is otherwise so apt to attend. In some instances, however, this symptom has been accompanied with considerable fever, but in such, children have either been costive, or the

stools been fetid and clayey, and the swelling of the extremities very considerable. In such cases, purging with calomel will be proper; and it may sometimes be necessary to give a few drops of tinct. scillæ. Nevertheless, if there be no internal disease, this affection proceeds no further; but whenever it may, it must be treated as the anasarca, which will be noticed in its place.—I have likewise, in a few instances, met with a transient palsy of the arms or legs, which in one instance recurred as often as teeth were making their way. The above-mentioned symptoms are often followed by a cough, difficult breathing, fits, fever, scrofula, and marasmus; and sometimes by hydrocephalus. A symptom of less consequence, though alarming to parents, is the tumifying of one or more of the glands of the neck; but this is rarely followed by suppuration—a bread and milk poultice, or an embrocation of volatile liniment, is all that is usually required.

Strong and healthy children cut their teeth earlier than the weak and tender: I have, indeed, known a weak and rickety child, without a tooth at twenty-two months old,* though it lived to grow up; but at the age of five years became scrofulous. The robust, however, are more subject to fever, and for the reasons already assigned. The fact, indeed, is, that the extremes of high health, and of debility, are both dangerous; the one being exposed to acute fever, or convulsions, the other to a slow hectic and marasmus. Therefore, air, exercise, food of easy digestion, in

* Primeros speaks of it being as late as the third, or even fourth year.

small quantities, and taken frequently; an open belly, and every thing that has a tendency to promote general health, and to guard against fever, will greatly contribute to the safety of dentition, and to children passing quickly through this hazardous period.

Difficult teething is to be treated nearly as other acute diseases with local inflammation. If the body be at all bound, some opening medicine should be administered, and it has been observed, that even a considerable degree of looseness is useful. Diluting drinks are likewise very necessary, especially if the child does not suck. If much fever attends, the loss of a little blood will be necessary; though children do not endure bleeding so well as they do other evacuations. If the propriety of bleeding with the lancet be doubted, a leech or two, as Harris advises, may be applied behind the ears, and is generally serviceable. Clysters are also very useful, especially if there be retention of urine, which will likewise call for the use of the warm bath. Gentle diaphoretics are also serviceable, particularly vinum antimonii, or the liq. antimon. tartarisat., which, besides opening the belly, often operate in this way: a blister should likewise be applied between the shoulders, especially if there be any disposition to fits. And, indeed, if stools do not afford some considerable relief, there should generally be some discharge from the skin; since a purging, and eruptions on the skin, when spontaneous, are the grand means of easy dentition. A little discharge should, therefore, be kept up behind the ears, by rubbing the parts with Spa-

nish flies, applying a thread as before directed, or putting on a small blister; which may be kept open. A Burgundy-pitch plaster laid on the back will sometimes suffice, which should be renewed every ten or twelve days, till the symptoms disappear, or the teeth come into sight. Even before this period, slight scarifications of the gums are very useful, by taking off the tension; or if the teeth are at all to be felt, lancing them.

I shall close what I have to offer on the general plan of treatment, by observing, that the indications certainly are to assist the irruption of the teeth, and to moderate the inflammatory and other symptoms; which must be treated according to their kind: all parts of the body readily consenting with the gums at the time of teething, but the nerves, the bowels, and lungs, more particularly and importantly than the rest. It has been observed, that a purging is beneficial, and it is, indeed, surprising how considerable a diarrhœa children will stand on this occasion, and how very bad the stools will often be for many weeks together, and a child happily struggle through; though at another time, an equal degree of purging, with such bad stools, and constant fever, would prove infallibly fatal. The diarrhœa is therefore, not only to be cautiously treated according to the directions already given under the article of purging, but is generally rather to be encouraged than suppressed. Very pale stools are not uncommon at this time, and are sometimes in vast quantity: I have known

an infant have fifty in one night, at least by the account of a careful and discreet nursery-maid; and from the quantity of fæces that I saw the next morning, I had no reason to dispute it.

For the fever of dentition, besides bleeding, the absorbent powders are eminently useful, and are, in various respects, calculated to afford relief. To these, sometimes a grain or two of Dr. James's powder may be added at bed-time. Nitre is very often useful, joined with the testaceous powders, or the pulvis è contrayerva comp. as there may happen to be more or less fever. Sydenham directs the compound spirit of ammonia in a spoonful of water every four hours, for four or five times, and I have thought it very serviceable after proper evacuations. Nor is a drop or two of laudanum to be feared, if the bowels have been previously opened, the pain be very great, and the breathing not difficult.

A free discharge from the bowels, however, must above all be preserved, when children cut their teeth with fever; and the testaceous powder therefore not be administered too frequently. The state of their gums must also be carefully attended to, or their fevers will be mistaken, and attributed to cold, or other causes, when the source of irritation is wholly in the gums.

The lungs is one of those parts on which the irritation from teething is apt to fall, and when fixed there, the symptoms bear an alarming aspect. A precise acquaintance with their true cause is therefore of the greatest importance; or for the want of it, an unsuccessful plan of cure

will be adopted. I speak this from much experience, having known good physicians overlook the true cause of the inflammatory symptoms; especially when children have cut the usual number of first-teeth. This, it should be remembered, is sixteen; but some children cut four of the molares in each jaw, instead of only two, making the whole number twenty, One instance of this number was very curious, the child having only three dentes incisores in the upper jaw; but, at two years of age, cut a third grinder tooth, on the side of the under jaw, thus making up twenty teeth.

After this period of the usual first-teething, I have met with the most alarming peripneumonic symptoms; soreness of the chest, cough, and great difficulty of breathing, with loss of appetite, continual fever, and the appearance of general decay. In this state, purging the bowels, and properly lancing all the suspected teeth, has given immediate relief; and by keeping up the purging for three or four days, every threatening symptom has so thoroughly subsided, that in a fortnight's time, a child expected from day to day to die of inflammation, or fall into marasmus, has been restored to its former health and spirits.

A principal indication is to assist the irruption of the teeth. This may be done by cooling, sedative, and demulcent applications made to the gums; by rubbing them with some hard polished body, such as the coral; or by dividing them with the lancet: which last is the only mean to be depended upon. Rubbing the gums, however,

I apprehend, not only somewhat appeases pain, as adults sometimes experience in the common tooth-ach, but it also forwards the growth of the teeth, by drawing more nourishment to them; as well as assists their irruption, by pressing the gum and periosteum firmly against their points. Suitable applications on this occasion may be, either mel. com. or syr. papaver. albi: or the honey may be lightly acidulated with acid vitriolic. dilut. Besides the coral, a crust of bread, or a piece of liquorice-root, may be often carried to the mouth, and may sometimes be preferable, as they will yield a little to the pressure of the gums.

These means, nevertheless, and especially the coral, have been objected to by some modern refiners; but the objections are certainly groundless, as in giving this direction we are only following nature. For the young of all animals who suck, as soon as the teeth begin to shoot, are always strongly inclined to gnaw such things as afford a little resistance. This may be every day observed in domestic animals; to prevent which in puppies, recourse is had to a ridiculous operation of worming, as it is called, which rendering the mouth sore, may prevent them for a time from gnawing every thing that comes in their way: and if their gums become easy, or teeth are cut the mean while, they have no longer any desire for it, but what arises from the playfulness of youth.

When it is found necessary to lance the gums, (which is ever, at least, a safe operation,) it should

always be done effectually, with a proper gum-lancet; that both the gum, and the strong membrane that covers the teeth, may be sufficiently divided. The lancet should always be carried quite down to them, and even drawn across the double teeth. It is certain that this little operation gives scarcely any pain, and the relief is at the same time often so considerable that the child immediately manifests it, by smiling, and by squeezing the jaws and grinding them together forcibly; which proves that the gums are not very sensible.

The most painful part of dentition, and that in which children are most exposed to convulsions, is usually from the teeth cutting through the periosteum. This, I apprehend, in difficult dentition is often not cut through, but is forced up before the teeth, when they are even in sight under the thin gum; hence it is, that cutting through the gum is so very often useful, and takes off fever and convulsions, which severe symptoms could not arise merely from teeth piercing the gum, which is not a very sensible part. At other times the pain and fever seem to arise from almost the very first shooting of the teeth within the jaw, and then they will very often not appear for some weeks after the gums have been lanced; and parents are therefore apt to conclude, the lancing has been unnecessary, if not improper. I am, however, convinced from experience, that this little operation, though not in the general esteem it ought to be, and by the French physicians

perfectly dreaded,* is often inexpressibly useful, and appears to have saved many lives, after the most dangerous symptoms had taken place, and every other means of cure had been made use of. The mere bleeding from the gums is capable of affording some relief, as it is frequently found to do in adult persons distressed with the tooth-ach. And I cannot here forbear expressing my surprise at the fears some people entertain of lancing the gums, and their delaying it so long, if not altogether rejecting it, though no evil can possibly arise from the operation. On the other hand its advantages are so great, that whenever convulsions take place about the usual period of dentition, recourse ought always to be had to it, after an unsuccessful use of other means, though by an examination of the gums there may be no certain evidence of the convulsions being owing to such a cause; the irritation from teething sometimes taking place in a very early stage of the process. At any rate, the operation can do no harm, even at any period; and should the shooting of teeth be only an aggravation to the true cause of the disease, lancing the gums must be attended with advantage. But should teething be the proper and sole cause, it is evident how fruitless any other mean of relief must frequently be: for should convulsions, for instance, take place from a thorn run into the finger, or toe, the proper indication of cure, by

* See Lieutaud.

an immediate extraction of the thorn, and the futility of other means must be equally obvious.

The operation may also be safely repeated, the scars doing no kind of harm. This, however contrary to popular prejudice, may be readily proved, not only from the fact of infants cutting their first teeth very easily some weeks after being lanced, but also from the circumstances under which the second teeth are often cut. At this period, children, from their more advanced age, and decreased irritability, are less subject to fever, and evidently appear to suffer far less pain, than in the first teething, though the second teeth often have to make their way through much more considerable scars than have been made by a lancet, from the gums having been lanced prematurely. This fact is likewise established from the many instances in which dentists have thought it expedient to draw out the first teeth long before the second are prepared to take their place.† The objection to lancing the gums, from any apprehension arising from the scars, is, therefore, altogether ill-founded; and, indeed, it will be frequently necessary to lance the gums several times, especially on account of the extraordinary difficulty with which some infants cut their double

† This practice is, by no means, adduced in a way of approbation, but merely for the sake of the inference drawn from the fact; the writer being persuaded, that the succeeding teeth are thereby frequently ill-placed, by one tooth appearing long before others, and growing so large as not to allow proper space for the rest.

teeth, which are furnished with two or more knobs, or points. Purging, fever, and even convulsions, will sometimes arise from only one point of a large tooth offending the periosteum that covers it; and being nearer the surface than the other points, the lancet may sometimes not completely divide the membrane that lies over the rest; and this part not being injured by the tooth, the symptoms subside on having divided that portion of the membrane that was inflamed. But in a little time, another point of the same tooth is found to irritate the periosteum, and calls for the like assistance of the lancet, which again removes all the complaints. This, at least, I have conceived to be the process, when I have found lancing a large tooth immediately remove every terrible symptom, though the fever and other complaints have returned, and the whole of the tooth not appeared till the operation has been three or four times repeated. I have seen the like good effect from it, when children have been cutting a number of teeth in succession, and have bred them all without convulsions. Nothing having relieved or prevented these terrible symptoms but lancing the gums, which has removed them every time it has been done, one or more teeth appearing a day or two after each operation.*

In such cases, it will often be proper to draw the lancet along a great part of one, or even both the jaws, instead of over only one or two teeth, as

* Precisely similar remarks have been made by Mr. Hunter. See his Practical Treatise on the Diseases of the Teeth, p. 121.

is commonly done; as well as sometimes to lance the incisores by a crucial incision, as is commonly done for the molares. Some writers, however, and Dr. Millar, particularly, have advised not to cut quite down to the teeth, but only to scarify the gums, unless the teeth are very near. He suspects that the instrument often injures them, and produces caries, which he thinks will be communicated to the succeeding set of teeth; but this is a mistaken theory,* owing to inattention to the true state of the teeth, which are perfect bone, and covered with a strong enamel, long before they get through the gums. The manner of the second teething of children likewise forbids such a fear; for though the first set (which are designed by nature to be only of short duration) should actually be injured by the lancet, the succeeding ones are not at all likely to be affected by the carious state of the former. For the first teeth of infants constantly become carious at the roots, and are loosened and expelled by that means, when left to nature alone; and though, in many instances, the upper parts of the new teeth are for some time nearly in contact with the carious bottoms of the first set, they never suffer from this circumstance. I have dwelt the longer on this head, because writers are not agreed on this subject, and it is a matter oftentimes of no small importance. I have, however, written from

* Such instances manifest the great impropriety of establishing practice from theory, instead of deducing theories from facts.

experience; and am perfectly satisfied of the propriety and safety of what I have ventured to recommend.

Children sometimes have ulcerated gums in teething, and more frequently where they have not been lanced; these ulcers are easily cured by keeping the body open, and touching them with astringent applications. As much white vitriol, or roch allum, as will give a moderate roughness to a little honey, is usually sufficient for this purpose. But should this fail in any case, it must be treated as directed under the head of Canker.

The diet of infants at this period remains to be noticed; and it should be a pretty general rule during the time of teething, to abate a little of the usual quantity of the food, and to increase the quantity of drink, unless the child is very weakly, or every thing is going on perfectly well; or if the child be at the breast, a similar regard ought to be paid to the diet of the nurse.

## *Fever.*

Having considered the more early disorders of children, and especially such as are sometimes connected with pyrexiæ, it will now be proper to treat more distinctly on the species of fever induced by them, or otherwise incident to childhood. In a view to the latter, however, it may be observed, that though some writers have sup-

posed infants to be as liable to fevers as adults, and from the same causes, I have by no means found it so; having observed for many years, as well in the hospital as in private practice, that infants do not readily take common fevers, though exposed for a long time to that contagion which has appeared to affect adults* all around them. Their fevers are also of a short duration if properly treated, unless the few that arise from some more permanent irritating cause.

Young children, however, are disposed to certain febrile complaints, and to some peculiar to themselves; which I shall bestow some pains in specifying, as well as pointing out the treatment most adapted to each.

The more frequent causes of fever, are teething, foul bowels, worms, glandular diseases, some eruptive complaints, or exposure to cold.

To begin with the last-mentioned cause, as one often suspected: if the cold be severe, it will be easily distinguishable, as the febrile heat will always be attended with a cough, and hoarseness, and some difficulty of breathing, and often with

* Every physician attending lying-in hospitals, must not only have known many infants suckled, without injury, through the whole stage of bad fevers from which mothers have recovered, but also, in other instances, sucking greedily within an hour or two of their mother's death.*

* There seems something so barbarous and inhuman, as well as absurd, in putting children to their mother's breasts, within an hour or two of the poor woman's death, that it may be hoped the practice is quite discontinued in every lying-in hospital. Long before the last fatal stage of bad fevers has arrived, every drop of milk must have left the breast; and to put the unfortunate child to *suck greedily* under such circumstances cannot be too much reprobated. S. M.

running at the nose and eyes, which is noticed in no other fever, at its commencement, except it be the measles; which will be attended likewise with violent sneezing, and a peculiar appearance of the eyes, not often met with in a common cold.

The treatment of this fever in children is usually as manifest as its cause. Should the heat be considerable, the cough violent, and the difficulty of breathing very great, a blister* will always be safe and expedient, and may be applied at the pit of the stomach instead of the back: as being both less painful under any motion of the body, and more readily got at to be dressed, or for the application of fresh cloths, where the discharge happens to be considerable. But if the fever and difficulty of breathing should not be very much abated by the blister, children though within the twelvemonth, will bear, and even be greatly benefited by, the loss of a little

* I cannot omit this opportunity of expressing my opinion, that the common practice of applying a blister to the chest, as a *first* remedy, in cases of active inflammation, is very injudicious and detrimental. Blisters, as my experience teaches, possess very little, if any power of subduing active inflammation. The proper time for applying blisters, is after the more pressing symptoms have been counteracted by the loss of blood, by purgatives, antimonials, nitre, &c. The application of a blister in the first instance produces great irritation, frequently masks the symptoms, and occasions delay in the use of other remedies, at a time, too, when delay can never be safely admitted; for every possible means should be promptly adopted to mitigate symptoms, which in a very few hours may become irresistible. S. M.

blood :* and if not by the lancet, at least by the application of two or three leeches, especially if the head be affected ; and I mention this again, because it has been thought so highly improper for infants. But I can venture to say, they will be much less reduced by it, than by the continuance of the fever, which the loss of a little blood will, in many cases, shorten by two or three days ; it is also sometimes absolutely necessary, as in peripneumonic cases, in which it may even

* In mittendo sanguine, non tam annos medicus numerare, quam vires ægrotantis estimare debet —*Celsus, lib.* ii. *cap.* 10, *p.* 78.

Galen, indeed, forbad bleeding till after fourteen years of age, but since the time of Celsus, that absurd idea has been exploded. Rhazes permitted cupping after three or four months ; Avicenna at a year old. Some allowed of bleeding in the feet or legs, though not in the upper parts; but this useful operation is now justly unconfined, and extended, occasionally, to every period of life.*

* As it is always difficult, and sometimes impossible, in very young subjects, to draw blood by opening a vein with a lancet, it is usual to employ either leeches or cupping glasses for this purpose.

Leeches are commonly preferred, being thought a less severe remedy than cupping, though in fact, they frequently prove more severe and troublesome. The chief objections to the use of leeches are—1st. The difficulty of applying them. 2ndly. The length of time which is consumed while they are drawing, and afterwards while a sufficient quantity of blood is flowing from the orifices ; a length of time during which the active employment of other indispensable remedies is prevented. 3rdly. The great uncertainty as to the quantity of blood obtained, this being sometimes so inconsiderable as not at all to answer the purpose ; at other times so great and uncontrolable, as to exhaust and debilitate the patient excessively. Instances are not rare, in which, from the neglect of putting a timely stop to the flow of blood, infants have been actually destroyed by the gradual, but overwhelming loss.

Whenever a good cupper is to be met with, this mode of procuring blood is greatly to be preferred. He can apply his cups upon any part that may be required, and will draw blood from infants, even during the month, with great

be repeated with safety and advantage.* Indeed, in some instances, the only means of saving an infant's life, is taking away at once a sufficient quantity of blood, at the commencement of the peripneumonic symptoms. And this becomes the more expedient, from the consideration that not only inflammation, but true tubercles of the lungs are formed at a very early age. Oily medicines, likewise, made into a neat emulsion, are often useful, especially if the child be not suckled; but they should be preceded by an emetic of wine of antimony, as there is usually much phlegm on the stomach; children never coughing it up. In many cases it is also necessary to repeat the emetic, as often as the phlegm in the throat is collected in such a quantity as seems to impede respiration. But if the cough be dry or convulsive, Bates's

* Multa in præcipiti periculo rectè fiunt, aliâs omittenda.—*Celsus, lib.* iii. *cap.* 18, *p.* 150.

address and expedition. He will take away the exact quantity prescribed, even to a quarter of an ounce. The operation is quickly over, and of course the advantage of taking away the necessary quantity at once is obtained. There is no delay in employing other appropriate remedies, nor is there the fear that, through the practitioner's absence, the child will sink under the profuse discharge of blood, which has sometimes oozed, unobserved or unattended to, from the bites of leeches.

In determining the quantity of blood to be taken away, so much depends upon the peculiar case to be treated, as well as upon the constitutional and relative strength of the child, that no precise rule can possibly be laid down. The attending practitioner must exercise his best judgment in directing the proper quantity, and he will often find it expedient personally to superintend the operation of cupping, in order to insure the complete effect which he expects from the loss of blood. It may, however, be useful to remark, that during the first six weeks of life, from five drachms to an ounce of blood will commonly relieve the inflammatory symptoms; from six weeks to three or four months, one ounce, or an ounce and a half will answer the purpose; and in this proportion bleedings may be adopted at subsequent periods of infantile life. S. M.

spirit. sal ammoniaci succinat. may be safely and usefully administered, if there be not much fever. The body at the same time should be kept perfectly open, and this purpose is usually well answered by smaller doses of wine of antimony, or of Dr. James's powder ; but if they should fail to procure stools, as they sometimes will, where there is much fever they rather do harm than good, unless a little manna or rhubarb be joined with them. Should the head be much affected, putting the feet into warm water, or applying a milt* to them just taken from the animal, are admirable remedies ; and I think have sometimes saved a life after all hopes had been given up. Or a little fresh leaven, or dough, as advised by Mr. Le Febure de Villebrune, may be spread thinly over the soles of the feet. If the fever be accompanied with much cough, and attended with difficulty of breathing, which comes on by fits, both may be greatly relieved by the compound spirit of vitriolic ether, given three or four times a day.

Though the severer treatment above-mentioned is indispensable when the cough, difficulty of breathing, and degree of fever are considerable, it is proper here to remark, that I have known children of two or three years old seized with a sudden difficulty of breathing, in coughs arising

* From this still popular remedy, I have never seen the slightest good effect ; and am not a little surprised, that in a work which so often sneers at *anile* remedies, so strong a recommendation of this should appear. S. M.

from common colds, where the fever has not been proportionate to the other symptoms. In such cases the difficulty of breathing may arise from bile on the stomach; and it may therefore be prudent, previously to bleeding and a blister, to give a small dose of James's powder, which will pretty certainly act as a vomit, if our suspicion has been just; and will remove that threatening symptom very soon.

It is scarcely necessary to remind the reader, that preparations of antimony are very powerful medicines, and not to be prescribed indiscriminately, as they sometimes are, by those who are, in no wise, competent judges,* and against which practitioners will do well in offering a caution in the nursery. But where such medicines are found to agree, and keep the belly open, children frequently stand in need of no other: though where the fever has been very considerable, I have given nitre to advantage to infants of only a few months old. In the little fevers arising from taking cold, to which some children are very liable, I often join it with Dr. James's powder, and a few grains of the compound powder of contrayerva, lowered with testacea; which I find to be a medicine exceedingly useful, when given in time.

If the fever be not owing to taking cold, to worms, teething, or some eruptive complaint, it will generally be found to arise from some foul-

* A nurse very lately proposed giving half a grain of tartarised antimony, to an infant of a few days old.

ness in the first passages; in which case opening the belly, and afterwards giving an emetic, and the testaceous powders, usually remove it. On this account, great attention ought to be paid to the state of the bowels, and not only in regard to the number of stools, but their kind. This should be a maxim with all those who have the superintendence of children, especially infants, under whatever complaint they may labour; as a principal indication must be taken from the state of their bowels. In the present instance, if a laxative and emetic have not removed the fever, opening medicines must be continued a while longer, especially castor-oil; but if the stools are very fetid, the pulvis e scammonio cum calomel, or small doses of calomel alone, are the fittest purge. I have known not only convulsions, dilated pupils, and drowsiness, but also paralytic affections, attended with great pain and continual fever, induced merely by a foul state of the bowels; where, after the complaint had been unsuccessfully treated as a fever of another kind, all the symptoms have been removed at once by an active purge. At other times, infants of only three or four months old will often have very considerable fever and fits, with so costive a state of the bowels, as to require strong purgative medicines to be repeated for several successive days, with clysters and the warm-bath, before the obstruction can be removed, or the fever will at all abate; and I doubt not it may be matter of surprise to those who may not frequently have met with such cases, to find how great a quantity of

purging medicines have been taken by a tender infant, before one proper stool could be procured,* and how certainly a relapse will take place, if the opening plan be not persevered in, in the manner recommended. In less urgent cases, and especially in very young subjects, much gentler means will usually succeed; and after the belly has been once or more well opened, many common fevers will nearly subside; after which it will frequently be proper to return to the testaceous powders, in one form or other. These will compose an admirable medicine for very young children, as well under slight fevers, as for almost all their complaints not attended with costiveness. This the judicious Harris was so sensible of, that he thinks them alone sufficient to effect almost every thing during the *infant* state, and has done unspeakable service by abolishing that *indiscriminate* recourse to cordial, and other heating and rough medicines, such as mercury, aurum fulminans, theriaca, &c. together with various anile and superstitious remedies, which the ancient writers frequently recommended on occasions peculiarly improper. And though absorbents will not do every thing he has imagined, yet are there very few medicines of such general use. But should the fever withstand these common remedies, or be found to increase, it will be necessary to give some of those before recommended; or, what is often very useful, little draughts of succus limon. and carb. potassæ, in which the latter is left a little predominant; or a

* See page 113.

few drops of the spirit. ammoniæ comp. four or five times a day, as recommended for the fever of dentition.

In many fevers of infants, where the cause has not been so obvious as it commonly is, I have experienced very good effects from persevering in the use of small doses of the vinum antimonii, given in a saline draught; this medicine sometimes acting as an emetic or purge, and at others as a stimulant and diaphoretic, possesses peculiar advantages.

There is a fever to which children, long after the time of teething are liable, that is of no marked type; which, though it turns out to be owing to foulness of the primæ viæ, arises more from the acrid secretions from the liver, or other glands, than from a collection of fæces, or a costive habit: and is more remarkable for the great pain in the bowels than for any other symptom.

It commences like other fevers in children, and is of uncertain duration. The pulse is oftentimes exceedingly quick; the breathing bad; the tongue dry and brown, with a cough more or less violent throughout the complaint. On this account, it is in the beginning often suspected to be owing to taking cold; but the cause, I believe, is always in the first passages.

Though procuring stools freely for several days is found to abate the fever, yet the child is at no time entirely free from it; though it frequently remits; which may assist us to distinguish this fever from others.

The stools, which at first are very fetid, in a

little time become very numerous, mixed with a great quantity of slimy matter, and are attended, or followed, by very great pain. This has sometimes discouraged practitioners from further purging; but where no other source of fever is discovered, and cooling and antimonial medicines are found to afford no essential relief, the exhibition of repeated purges has proved the surest remedy.

To this end, two or three grains of calomel, taken every night, and infus. sennæ the next morning, has seemed to have the best effect, in the earliest stage of the disorder; but after the severe pain and slimy stools have taken place, castor-oil may be substituted, and given only every second or third day; composing the bowels, and taking off the spasmodic pains, by repeated doses of laudanum, on the intermediate days, and especially on the nights after the operation of purgatives.

This plan should be continued until the fever entirely subsides, (which will sometimes run out to two or even three weeks,) and the appetite for food returns. Previously to which, some light bitter, given in a saline draught, or lac amygd. or pulv. è tragacanth. comp. in the intervals of purging, will tend to comfort the bowels, and hasten the natural inclination for food, from which there is often a long aversion.

There is a fever which may be just hinted at in this place, which will be more particularly noticed in the chapter on hydrocephalus, for which also repeated purging is the remedy.—The symp-

toms strongly resemble those of water in the head, but the stools are of a very uncommon appearance, resembling meconium; which, however, resist common purges, but are brought away in great quantities, and for a considerable time, by calomel; the fever and stupor abating in proportion as this kind of stool is brought away.

I have sometimes met with a fever, more remarkable for its being attended with inflamed and sometimes painful tumours, than for any other symptom peculiar to it. These are seated chiefly on the legs, and particularly along the spine of the tibiæ; and rise in a day or two to the size of a nutmeg. They are marked with all the appearance of abscesses, feeling as if they contained matter, and, on this account, they put on a formidable aspect to such as may not often have seen the disease; but what is remarkable, they never, I believe, come to suppuration, unless irritated by the clothes or other means, but disappear again in a few days, though the fever sometimes continues. The like appearances have been met with in adults, especially females, though perhaps more commonly in children from three to ten years of age; but are not peculiar to scrofulous habits, though the tumours have very much of a scrofulous appearance and feel. As far as my experience has gone, (for I believe it is not a very common complaint,) they are conjoined more frequently with that fever which attends a foul state of the bowels, than with any other; which therefore requires repeated purging, especially with calomel; and on this account, the pulvis è

scammon. cum calomel, becomes a convenient preparation. Saline draughts, with the spir. ætheris sulphurici comp. may be given on the intermediate days, and in the end the bark is commonly useful.

These appearances have sometimes been preceded by scarlet spots, or patches, resembling the pætechiæ observed in malignant fevers, as was noticed under the article of rashes.

On the decline of some fevers, especially those arising from foul bowels, it is not uncommon to see an eruption on the skin, resembling that called the red-gum, in the month; and sometimes even the thrush will make its appearance, though the infant may have had that complaint before; which are marks of the great disturbance the first passages have suffered, and of the consent they have with the skin: the former is a favourable indication, but the observation is far from holding good in regard to the thrush.

At the decline also of certain anomalous fevers, that have lasted ten or twelve days, (and sometimes after the febris scarlatina,) great pain of the neck has taken place, attended with a little tumour of the part, and great rigidity of the muscles, drawing the head forcibly to one side. A general debility and want of appetite has continued, though the bark has been administered, and seemed no wise to disagree. In this state, fomentations and poultices applied to the neck, together with some volatile embrocation, has soon removed the contraction and pain; after which children have recovered, as on a sudden,

their appetite and spirits. During very cold weather, however, I have known a slighter degree of pain and stiffness of the neck, with a little fever, return a week or two afterwards; possibly from taking cold, and as I have thought, from improper food. The antimonial powder, with saline draughts, and a repetition of the topical applications, have in such cases had an immediate good effect.

Fevers in children of three or four years old, particularly in certain seasons, are found tedious of cure by any of the above means, and, like those of adults, require the bark, (especially under the recurrence of the thrush,) which should be administered in a light decoction, three or four times a day, in such doses as the symptoms may require.

## *Remittent Fever.*

Notwithstanding what has been observed respecting the remittent fever, as described by Drs. Armstrong and Butter, there is certainly a fever of that type that deserves a cursory consideration in respect to a peculiar symptom, which, I believe, always attends it; though the fever itself certainly arises merely from an affection of the primæ viæ.

Indeed, it is well known to practitioners much conversant with the disorders of children, that

various febrile affections, differing in degree, and the time of their continuance, originate from the state of their first passages; but as the treatment is similar in them all, varying chiefly in regard to the strength, or other circumstance, of the purging medicines exhibited, it would be equally unnecessary and perplexing to multiply names, where no essential distinction subsists.

The present chapter therefore is added only to denote a fever of this kind, which constantly remits and increases again, sometimes for three or four weeks, or sometimes much longer, and is attended with the remarkable symptom of picking at various parts of the body until they are made to bleed, and even become sore, particularly the fingers, nose, the lips, or the tongue. But this fever being equally remarkable for being always, I believe, void of danger, it is necessary only to remark, that it seldom attacks children under four years of age, nor upwards of ten; and that, although it has been distinguished into the acute, slow, and low infantile-remittent, it requires much less variety of treatment than such distinctions seem to import. The proper, and always successful plan, being confined to the repeated exhibition of some gentle purgative medicine, or light cordials, when accompanied with much languor, as is not unfrequently the case.*

* The *Infantile Fever*, the *Infantile Remittent*, the *Bilious Remittent of Infants*, and as it is sometimes, but improperly, called, the *Worm Fever*, generally arises from Indigestion, occasioned by food of an improper quality, or too abundant in quantity. It is very frequently produced in children during

## *Typhus, or Low Fever.*

A fever of much importance, however, is mentioned by Dr. Hamilton, and is a true low-fever, or Typhus. It is very accurately described by him, and particularly as commencing generally

the holidays from school, by the various kinds of pastry in which they are then indulged, with perhaps a glass of wine or punch, or a drop of brandy or other spirit. It is a disease so far from being "void of danger," that it frequently excites the greatest apprehensions, and sometimes it proves fatal, or lays the foundation for other disorders, that are ultimately to terminate fatally. This complaint is apt to creep on very slowly and insidiously; the child is generally in a drooping state, some time before its illness calls for very decided attention. Not uncommonly, slight relief is obtained by the occasional purgatives, which are sometimes given, but they are seldom continued with sufficient perseverance to effect a cure. At length the loss of appetite, the fever, the thirst, the restlessness, the starting in the sleep; the pallid countenance, and the tumid belly of the child, attract more direct attention; medical aid is sought for, and the physician finds his patient with a dry hot skin; generally drowsy and unwilling to exert himself; his tongue coated entirely over with a firm white fur; his nose pinched in, a blueish tinge about his mouth and eyes; pulse quick, and the belly tumid, hard, and irregular in shape and feel.

In the treatment of this complaint, it is of great importance to keep up a regular, daily, but not profuse, purgation, by the use of calomel, jalap, scammony, rhubarb, sulphate of potass. senna, and castor oil, varied or combined according to circumstances.—Calomel, or some other mercurial preparation, being one of the indispensable articles. Some practitioners seem to rely upon purgatives alone; but the saline mixture, nitre, and antimonials, assist so much in abating the disease, that they ought not to be omitted: and in cases of great irritability, small doses of the milder narcotics are to be employed;

rather with marks of languor and fatigue, than with any distinct rigour. The stomach is frequently sick, which is soon succeeded by heat, pain in the head, and great thirst and restlessness. On the second day there is an evident remission, which is at the first very regular, and continues, though in a less degree, till the termination of the fever, which will run on to three weeks, and sometimes five; and yet, as far as my experience has gone, the little patient recover, if duly supported! and, I think, I once saved the life of a child of seven years old, by sitting at the bedside, with my hand on the pulse, and as often as

nor ought the advantages to be overlooked, which may be gained by pediluvia, fomentations to the abdomen, and ablutions with tepid water. As the disease advances, bitters, ammonia, bark, the mineral acids, &c. may be required.

It is seldom necessary to take away blood, when this disease pursues its regular and simple course; but it sometimes becomes complicated with affections of the head and chest, which may make both blood-letting and blisters essential remedies.

This disease, and the three fevers next in order enumerated, seem to be so nearly allied, that they may be considered as one and the same complaint, at different periods, and under somewhat different modifications. The remittent is the more simple form of fever, originating in a deranged state of the stomach and bowels. The Typhus, or low fever, next mentioned, is a more aggravated form of the Remittent, with increased debility. The Mesenteric Fever is the same complaint, with so much further derangement, as for the mesenteric glands to be enlarged, obstructed, and diseased: and the Marasmus is the most aggravated form of all, much less likely to be cured; but out of which, under very careful and unremitting attention, continued for many months, some infants have happily escaped.

S. M.

that sunk, (as it often did so much as not even to be felt,) supplying the child with burnt brandy and other cordials; though at times it was doubted whether it was able to swallow. The attempts were at such times, of course, made with great caution, by administering only a tea-spoonful at a time, which was sometimes retained awhile in the mouth, and at others swallowed with avidity; the pulse always rising in consequence.

It will be obvious, that if called in pretty early in the disease, a powerful emetic should be administered, and perhaps ipecacuanha is one of the most certain, and best; and some purgative medicine administered soon afterwards. Washing the body, and the head, if the pain be extreme, with cold vinegar and water; whilst diluting subacid liquors should be taken freely, as long as the thirst is intense; and whenever an evident remission takes place, recourse should be had to cordials, and sometimes the bark. On the other hand, if the pain in the head should increase, or the nose be disposed to bleed, the early application of leeches is indicated, previous to the recourse to cordials, or application of external cold. The bowels should, in every case, be kept open, and when the stools are green, or very fetid, active purges should be administered: the air of the apartment should be cool, and a window frequently be opened in that, or an adjoining room, according to the season of the year, and other circumstances. When the vital powers sensibly fail, besides the free exhibition of cordials, blisters or sinapisms should be applied to

the feet, and be left on long enough to become rubefacients; and be repeated again as the degree of debility may require.

## *Mesenteric Fever.*

Another cause of fever is obstructed glands, especially the mesenteric; and is often a forerunner of the true hectic fever, or fatal marasmus. It, indeed, frequently arises from scrofula, which then discovers itself by other marks; and will require its peculiar treatment. But there is an early stage of glandular obstruction in the mesentery, and of the fever here alluded to, that is often falsely attributed to worms; but will not yield to mere purgative medicines, as that disorder usually does. It attacks children from the age of three or four years, the fever remitting, and sometimes intermitting, irregularly; is attended with loss of appetite, swelled belly, and pain in the bowels; the latter sometimes taking place, more or less every day, or is generally more violent if the child be a day or two free from it.

After opening the bowels, half a grain or a grain of calomel may be given to advantage, two or three times a week, and on the intermediate days small doses of the natron ppt. either alone, or neutralized with the juice of lemons, or in some instances partially so. If the belly be very costive, as it often is, an infusion of spong. ust. and senna is more effectual than any thing; and

is an excellent remedy for many little fevers, in older children, when the primæ viæ are particularly concerned. When the glandular fever, just now mentioned, has abated, some light bitter, as of chamomile flowers, is useful to brace the stomach and bowels; and to prevent a relapse, it will often be found necessary to administer some chalybeate, of which the tinctura ferri ammoniatis is one of the fittest for children; if it should offend the stomach, a few drops of the tincture of cardamoms, or other stomachic, should be joined with it.

But as the mesenteric fever, from its great fatality and frequency, has lately very much engaged the attention of writers, it may be proper to consider it a little more distinctly in some of its principal stages; in each of which its nature and treatment sometimes materially differ. For before the mesenteric glands become much enlarged, or the fever continual; whilst the appetite continues, and the first digestion is but little impaired, and no purging has taken place; the opening mixture of sponge and senna, with a few doses of calomel, and afterwards bitters and chalybeates, are the only remedies very likely to be called for, and almost always succeed, if duly persevered in. In this state, the disorder may still be considered as in its first stage, and of which an unusual costiveness, the hardness and recurring pains in the belly, and a remitting fever, are the principal symptoms. The limits of this work, however, will not allow of a particular detail of the many others that attend this fever

through its various stages; and it is presumed they are so well known, as to render it unnecessary. But in general it may be said, that indigestion, costiveness or purging, irregular appetite, flushed cheeks, or a total loss of colour, impaired strength and spirits, remitting fever, and a hard and tumid belly, with emaciated limbs, are amongst the more constant symptoms, attending at one period or other of the disease.

This being a glandular complaint, not only are the glands of the mesentery affected, but I have found those of other parts, and especially of the lungs, in a very morbid state, before any of those symptoms of inflammation have been noticed, which are constantly met with, in similar cases, in older subjects.*

This fever will sometimes take place in infants at the breast, and children are liable to it till they become eight or ten years old, (and in scrofulous

* In examining the viscera of more than one infant of only a few months old, I have found tubercles, and even purulent matter in the lungs, which have not been preceded by any manifest symptoms of such mischief, and even where there has been no cough nor difficulty of breathing, until a few days before death, and then only so slight as to be scarcely noticed. In one instance I found, in some part of the lungs, tubercles as large as nutmegs, and in others, clusters of smaller ones, (and particularly about the superior and back part of the mediastinum) some of which were hard, and others full of matter. Such appearances seem, therefore, to be common in all glandular diseases, to rickets, and similar disorders arising from cachochymy; Glisson has remarked, that he seldom examined the bodies of infants, dying of rickets, without meeting with such appearances in the lungs.

habits much longer) it being often a consequence of the protraction of almost any of the preceding complaints, especially those of the first passages and dentition, as well as of the measles, and a few others; of which that from teething will be separately considered. Among the poor, it is too frequently owing to a coarse and unwholesome diet, and the want of proper exercise and rubbing: indigestion at the stomach, and a consequent vitiated chyle, with infarction, or obstructions in some of the internal glands, or lymphatics, being among the primary remote causes of the disease.

As prophylactics, therefore, good air, exercise, gentle frictions, an easy dress, frequent washings of the body of young children with soap and warm water,* the cold bath in older children; and especially a light and nutritious diet, with such mild aromatics as may assist digestion, (before the commencement of fever) are some of the principal and most efficacious means. In regard to friction, it may be remarked that it is as proper as a means of cure as a prophylactic; and should be regularly had recourse to, at least night and morning.

But when this disease is completely formed, it calls for the most powerful remedies; and such have happily succeeded in several instances, wherein formerly little hope had been entertained.

As I have passed over many less important

* This idea is as ancient as the time of Hippocrates, who strongly advises it.—*De Salubri Diæta.* § ix.

symptoms, occurring in the different stages of this long disease, especially such as arise from some peculiarity of habit, I shall, for the like reason, confine these observations to the more general plan of treatment, without particularly noticing a variety of occasional remedies, which such symptoms may, at different periods, require.

In a general way, the principal indications are to remove the obstructions in the lymphatic system, and effect a resolution of the indurated glands of the mesentery; to carry off this viscid matter; and lastly, to strengthen the system, and establish a good digestion, as well by means of proper diet as by medicine. To accomplish these intentions, attenuants and deobstruents, purges, emetics, and tonics, must be had recourse to, in an obvious order.

Amongst the first, and as general deobstruents, are mercurial and antimonial remedies, neutral salts, soap, steel, and the cicuta; to which, with propriety, I think, may be added electricity.

In regard to the efficacy of mercury and steel in this disease, a vast crowd of testimonies appears among writers* in almost every part of Europe. And a very rational idea has been suggested on this head by Mr. Royer, that of administering mercury clyster-wise; inasmuch as the resolution of local and partial obstructions, does not so much require an exertion of the collected force of the system, as deriving all the in-

* White, Hartmann, Worholf, Theden, Burchard, Baumè, Baumes, Roseen, Fouquet, &c.

fluence of proper remedies to the seat of the disease: an idea of late years pretty generally received, and, in some instances, successfully adapted to the cure of scrofula, as well as some other chronical disorders.

Calomel is, perhaps, one of the fittest remedies of this class, and when administered by the mouth, may be combined with, or followed by, some purgative medicine, and given for several weeks, till there shall be some favourable change in the feel and size of the belly; though it will, indeed, be sometimes proper both to exhibit this powerful deobstruent in large doses, and to continue it for a much longer time, and afterwards in very small doses, which I frequently direct in the following form:

℞. Calomelan: gr. 1.

Sachari albi ʒi. caute misceantur et divid. in Chartulas duodecim, è quibus sumat unam manè meridiè et horà somni quotidiè.

The lightest preparations of steel are usually preferable, such as its tinctures, or the salt, or merely some chalybeate water, which will act both as aperitives and tonics. Amongst antimonials, the kermes mineral * is found by experience to be more generally useful than any other preparation.

The evacuants proper in this disease are emetics and purges, to which may be added diaphoretics. The two former are more essentially necessary, but must be adapted, and carefully

* (Sulphur Aurat. Antimonii.)

dosed, agreeably to the state of the bowels of the patient. As a purge, rhubarb and tartarised kali are generally the safest and most effectual, and may be persevered in for the greatest length of time; or the composition which, in regard to many cases, has been deservedly extolled by Sir William Fordyce, rhubarb and polychrest * salt; which, whenever mercury may not be preferred, should be exhibited daily for several weeks, and will sometimes restore the patient without recourse to any other means, when the disorder is not of long standing, being at once both a purge and an efficacious deobstruent.

As a diaphoretic, sarsaparilla, or a more compound decoction of the woods, may be taken together with any of the above-mentioned remedies.

The last means recommended are tonics, which can very rarely be dispensed with; since, al-

* The following is the formula published by Sir William Fordyce in his Treatise on Fevers, 1773. R. Sal. polychrest ℈ss. pulv. rad. rhab. gr. iij. iv. v. vi. vel vii. M. pro una dosi omni mane sumend. per 14 dies, vel donec cesserit febris hectica aut tumor abdominis.

Calomel, or hydrarg. c creta, or pil. hydrarg. may with great propriety be added to the above composition, if the physician think such an addition advisable. The good effects of rhubarb and potassæ sulphas, with or without a small quantity of calomel, or other preparation of mercury, and generally, perhaps, with the addition of a little spice, or half a drop of essential oil of anise, or carraway, or mint, are, in many cases of tumid abdomen, extremely great, if persevered in daily for three or four weeks. The dose should be managed so as not to produce profuse purging, but one or two copious stools every day. S. M.

# TREATISE

ON THE

# DISEASES OF CHILDREN.

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though the obstructions should actually be removed, the emaciated state to which the patient is generally reduced, peculiarly calls for bracing remedies, especially with a view to strengthen the stomach and alimentary canal, and promoting a good digestion; the only means of obtaining a bland and nutritious chyle, by which the body may be conserved in good health. To this end, the bark, steel, the cold bath, (which, however, and especially the latter, should not be ventured upon till the obstructions are removed) light bitters, and aromatics, are the principal remedies; to one or more of which, recourse may be had, as the degree of remaining fever, and the state of the bowels, or the debility of the patient, may point out. To these may be joined daily frictions, especially of the belly, limbs, and spine; or the common soap plaster, or one composed of ointment of marsh-mallows, gum ammoniac, and oil of chamomile, may be applied over the whole belly; or the body be covered all over with sea-salt, reduced to a very fine powder.

It has been already hinted, that the diet ought to be of the lightest and most nutritious kind, and carefully adapted to the age and other circumstances of the child; who, if at a due age, ought in many instances to partake of light white meats, as well as vegetables and plain jellies, but always avoiding fat and greasy aliments, pastry, and whatever may not be duly, as well as quickly digested, or will not form a bland and nutritious chyle, however readily they may get out of the stomach.

Though it has been said, that merely purging with calomel or rhubarb for a length of time, will in some instances succeed, and in others, some of the above remedies may be more adapted to the patient than the rest; yet more commonly, as before noticed, each of them will be useful at one period or other of the complaint, and sometimes the union of several; but above all, purging is always the most essential to the cure of this dangerous disease. And though it is oftentimes attended with costiveness, and a voracious appetite, it is, at others, accompanied with a loathing of all food, and frequent stools, which do not reduce the belly, but too often deter practitioners from the use of active, or repeated purges; without which, however, experience proves there can be no prospect of success, after the belly has once become enlarged. And I wish here to add, as the result of experience, that I have been equally surprised at the great quantity of purgative medicines, especially calomel, and at the success attending the protracted use of them, in cases wherein I had myself at first depaired of being of any use. I shall close these observations with offering the following form, which, in a general way, I have found very suitable. It should be continued for a length of time, taking care that the bowels be kept properly open.

R. Calomelan. gr. j. ad ij.
Pulv. Ipecac. gr. ss. ad gr. j.
Zingiber. gr. vj.
Misce, ft. Pilulæ iv. cum quantitat sufficient. vel Conf. aromaticæ, vel Conf. opiatæ, ut

alvi status postulet. E quibus sumatur j singulis aut alternis noctibus, vel omni nocte manèque. Post aliquod tempus addentur pulv. rad columbæ grana octo vel decem.—Together with this pill, the cicuta will sometimes be very serviceable.

Since I quitted general practice in London, the solutio arsenica has been used with considerable success in this disease: but, certainly, to children should be administered only in the smallest doses.

### *Hectic Fever, and Marasmus.*

Not a few, both of the preceding and following complaints, are sometimes found to induce a confirmed hectic fever, and marasmus, called by some writers atrophia lactantium, though it often comes on too late properly to admit of the name. I have nothing new, indeed, to offer on this disease when it is far advanced, unless it be by way of encouragement to hope for a better issue in the hectic fever, under certain circumstances, than we are wont to expect.

This fever, as it is apt to arise from other complaints, is very often owing to their having been imprudently treated, or imperfectly cured, especially by suppressing some eruption or discharge from the skin, or incautiously stopping a purging during the time of teething. In such cases, and, indeed, whenever the hectic fever is of some standing, the mesenteric glands become indurated, greatly increased in size, and often

suppurate; the belly getting large, though the limbs and other parts become emaciated, which state has been considered in the former chapter, and has been shewn to be curable, or otherwise, according to the degree of induration, and the length of time it has existed. But there is sometimes a threatening appearance of hectic fever, where, nevertheless, nature effects a salutary and wonderful change, and will restore the emaciated infant as from the very jaws of death. And this, indeed, is often the work only of nature, art doing no more than superintending, and preventing her being counteracted by the use of improper medicines or diet.

Nature alone will, indeed, oftentimes effect wonders for infants, and far beyond any thing to be expected in adults, if she be not officiously counteracted. And the reason is obvious; it being well observed by a late equally good writer and physician,* that "there is, in truth, a greater luxuriancy of life and health in infancy, than in any other period in life. Infants, it is acknowledged, are more delicately sensible to injury than those advanced in life; but to compensate this, their fibres and vessels are more capable of distension, their whole system is more flexible, their fluids are less acrid, and less disposed to putrescence; they bear all evacuations more easily, except that of blood; and, which is an important circumstance in their favour, they

* Dr. Gregory—Comparative View of the State and Faculties of Man with those of the Animal World. 1785.

never suffer from the terrors of a distracted imagination. Their spirits are lively and equal; they quickly forget their past sufferings, and never anticipate the future. In consequence of these advantages, children recover from diseases under such unfavourable symptoms as are never survived by adults. If they waste more quickly under sickness, their recovery from it is quick in proportion, and generally more complete than in older people: as diseases seldom leave those baneful effects on their constitutions, so frequent in adults. In short, a physician ought scarce ever to despair of a child's life, while it continues to breathe." In further support of this sentiment, it may be observed, that their complaints are not often attended with acute fever, like those of adults; which, however salutary in some instances, is, from mismanagement or otherwise, more commonly disposed to break up the system, than to rectify the machine.

The above-mentioned salutary turns in the true hectic fever, as far as I have observed, are chiefly in that species of it arising from worms, or teething; and in which I have known recoveries after hope had long been given up, and all attempts been laid aside. There is, indeed, an atrophy in infants for want of the breast, or from the unsuitableness of it, (which is the true atrophia lactantium) or of whatever else may be the child's ordinary food, as I have instanced in another place; but this is not usually attended with fever, and is to be cured merely by making that change, which the nature of the different occasions points out.

Harris recounts some remarkable recoveries in what he calls the atrophia verminosa, and attributes the cure to the free use of the hydrargyrus cum sulphure, carefully prepared, but I have seen none so marvellous as in the atrophia dententium. In this I have known children, after being reduced by purging, and other complaints, lying for three months together in the cradle, scarcely fit to be moved, with continual fever, flushed cheeks, emaciated countenance and limbs, a large belly, incessant cough, and almost without taking any nourishment, recover, as it were in a few days, upon rapidly cutting half a dozen teeth.

After what I have said on the true hectic fever, it will not be expected that I should offer much on the head of medicines; I shall, therefore, only observe, that the chief object in this advanced stage of the disease is an attention to the state of the bowels. This will be found to vary frequently; sometimes calling for restringents, and at others, opening remedies. In a view to the former, Sydenham's rhubarb-beer * is a very good medicine. Also, purging with mercury, if that has not already been done, should even now be attempted, since children in this state will often

* Take of choice rhubarb sliced, two drachms; let it be put into a glass bottle, well stopped, with a quart of small beer, or any other liquor the child may make use of. This medicated beer is to be his ordinary drink. When this quantity is drank, a second, and a third quart of beer may be poured on, as before; after which the rhubarb will commonly have lost its virtue. Should the beer first poured on be too much impregnated with rhubarb, and purge too much, another pint may be added presently after the first is drank up.

bear stronger doses of purging medicines, and more frequently repeated, than under any other circumstances; to these may be added, the artificial Seltzer, or soda water. Attention, likewise, should be paid to the diet, which ought chiefly to be of milk, rice, semolina, and such like, with light puddings; but, above all, children should enjoy plenty of fresh air, and take as much exercise as their degree of debility may admit of.

In Dr. Armstrong's second edition, is a pretty long chapter on the hectic fever of teething children, wherein several medicines are prescribed, which the Doctor apprehends may be very serviceable early in the disease. He speaks of it as a very common complaint, beginning like other fevers, and gradually becoming remitting; then a slow continual fever, and terminating in a fatal hectic. Dr. Butter likewise expresses himself much in the like manner, in an accurate account he has given of a fever that frequently made its appearance, as it should seem, in Derbyshire, which he terms the infantile remittent fever, of which further notice will be taken in its place.

It is very probable, that a fever of the description given by Dr. Armstrong, may be common among paupers, relieved at dispensaries, and may deserve such a name; but, I believe, it will be rarely met with in higher ranks of life, and if so, perhaps, that ought to have been intimated in a popular work. It seems to me, (and both Dr. Butter and Dr. Armstrong, indeed, say as much) to arise from improper food and nursing, joined with crudities and a costive state of the bowels,

and has nothing uncommon in it. When advice is sought for in proper time, it, accordingly, appears to be nothing more than the fever I have described, arising from a foul state of the bowels, aggravated by neglect; and is easily cured by such medicines as are best calculated to clear the first passages. Should this, however, not be attended to, it may degenerate into a continual fever, but it is not even then peculiar to the age Dr. Armstrong has specified, nor, by any means, the common hectic fever of dentition. At this period, indeed, children call for more exercise, air, and general attention, than common people can procure for them; it is, therefore, not to be wondered at, if neglected and costive, they should at this time fall into slow fevers, whether aggravated, or not, by the shooting of their teeth.

## *Febris Scarlatina—with or without Ulceration of the Throat.*

Whenever the scarlet fever becomes epidemic among adults, children rarely fail being attacked by it, in great numbers, and frequently sink under it. It is, indeed, rather a child's disease, and very contagious amongst them, but is not often* communicated from them to adults. It has

* This observation appears to be incorrect; very many instances of the communication of Scarlet Fever from infants to adults having happened: every necessary precaution, therefore, ought to be taken to prevent the spreading of the infection. S. M.

engaged the pen of the most able physicians, and is therefore well understood in this day, and needs only, on this occasion, to be adverted to as one very incident to children, and its most approved method of treatment briefly pointed out.

The scarlet fever, with ulcerated throat, has, perhaps, been distinguished in too refined a manner, by some writers, into the scarlet fever, with malignant ulcerated throat, and the malignant sore throat, with efflorescence, or redness on the skin. But such distinction, it is apprehended, is needless, since the experienced practitioner will always be guided by the degree of tendency in the system either to an inflammatory or putrid diathesis; and the less experienced will only be perplexed by multiplied distinctions.

One observation, indeed, may be offered on this head, which is, the propriety of distinguishing the mild scarlet fever (in which the throat is much inflamed, and slightly affected with superficial and white foulness, rather than slough,) from the more malignant kind, in which the tonsils are less swelled and florid, and exhibit the precise complaint by some practitioners termed the angina maligna, with efflorescence on the skin. An error in this respect, has certainly led less experienced practitioners to administer both bark and wine too early and liberally in the mild scarlet fever, which has thereby degenerated into a low remittent, bordering on hectic; and unless the treatment has been changed in a little time, has endangered the life of the patient.

The mildest species of scarlatina anginosa should also be carefully distinguished from the true inflammatory affection of the tonsils, which it will sometimes resemble in its first stages: but the genuine marks of the two diseases, and the cast of the epidemics reigning at that time, will direct the attentive practitioner, who will, in less certain cases, take a middle course in his method of treatment, till the characteristic symptoms of either shall become more evident.

There is, however, a scarlet fever that is not attended with any affection of the throat, and was long ago described by Sydenham,* though not much insisted upon by later writers, which is attended with a harder pulse, and other symptoms of an inflammatory disposition, but nevertheless, in every instance that I have met with, calls for the same general treatment, only more cautiously adapting the necessary cordials and tonics to the degree of fever, especially in the commencement of the complaint.

The febris scarlatina of every species begins with the common symptoms of fever, often with languor and disposition to fainting, sickness, a quick pulse, and pain in the head. The eyes are inflamed, and where the throat is affected, there is frequently a stiffness of the muscles of the neck very early in the disease, which is soon followed by some difficulty in swallowing. The affection of the neck should be carefully inquired into, especially in younger children; the soreness of

* See also Withering and Cullen.

the throat being sometimes not complained of in the most severe attacks of the disease, until but little prospect remains of any mode of treatment being attended with success; a circumstance I was early in practice much astonished at, by finding children swallowing with apparent ease, and denying having any soreness of the throat, when I have found the tonsils both tumid and covered with specks. The fever generally increases in the evening, and is often accompanied with transient fits of delirium; but some remission takes place towards morning, with sweating; and on the second or third day, the efflorescence appears on the skin, and generally first on the face, neck, and breast.

At this time the parts tumify, especially the hands and feet; and the patient complains much of pain in the head; is comatose, or very restless, and is at times delirious: the tongue is in the beginning very white and dry, afterwards becomes foul, and then of a florid red. About the fifth day, there is usually a remission of fever, and the eruption then beginning to scale off, disappears about the seventh. If the disease has been violent, the patient is about seven days more in a low state; and it is oftentimes a fortnight longer before he recovers his strength and spirits, and in some cases, is distressed with foul abscesses on the outside of the neck. In other instances, after the efflorescence has dried off kindly, an appearance resembling the true gangrene has sometimes seized the whole palatum molle, and the fever has been rekindled: but the

parts recover their natural appearance after a few days, without any eschar being thrown off.

The limits of this work allow me only to observe, that the method of cure being directed to the two indications of the general diathesis, and the affection of the throat, the nature and extent of these must ever be kept in view, and the system be duly supported. Should the body be costive at the time of the attack, an opening medicine should be given previous to the administering of bark or cordials. The throat should be often gargled, or rather syringed, with mucilaginous infusions or decoctions, rendered more or less stimulant; such as the decoct. hord. with mel. rosæ, warmed with spir. ammon. comp. tinct. myrrhæ, decoct. rad. serpent. or other such like preparations: though the quality of the gargle is, perhaps, of far less importance, than its being frequently made use of, which is absolutely necessary, especially in young children, in order to keep the mouth tolerably clean; otherwise the difficulty of deglutition will be greatly increased, as well as the morbid mucus be conveyed into the stomach. On this account, also, the patient ought to wash his mouth previously to taking his medicines or drink.—In many cases, where the parts are in constant pain, syringing the throat frequently with warm water, is found to administer immediate relief.

This fever, especially when epidemic, being almost constantly of a low type, the physician must not trust to saline draughts, or other medicines of that class, without the addition of the

conf. aromatica, radix serpent. or the bark, in one form or other. A moderate quantity of wine likewise, according to the age and other circumstances of the patient, should be given with the food, which should consist of whey, caudle, and such like thin and nutritious aliments, with plenty of barley-water, or gruel, with a view to promote a moderate perspiration.

Should the affection of the throat, therefore, be evidently inflammatory, or should a case occur where the fever may seem to be of that kind, (which may be better ascertained by the hardness of the pulse than any other symptom,) it will very rarely bear bleeding, even in the beginning of the disease; as symptoms of debility generally attend in some period of the scarlet fever, and will allow only of that middle course of treatment, hinted above.

In a general way, a cordial plan is required throughout the disease, and where the throat is much affected, either with sloughs, or total blackness, the bark is indispensably necessary, however thick and florid the rash, or however hot and dry the skin may be; the bark, in moderate doses, as it were, extinguishing the fever in the milder species, above every other remedy, (when evidently called for,) and in the more malignant it supports the system, till the regular stages of the fever are accomplished, and a perfect crisis is formed. Young children take it very well, especially the soft extract, dissolved in a strong decoction. Should it be disposed to purge the child, a little of the spirit cinnamomi, or a

drop or two of the tinctura opii, should be added to it; or if the child, on the other hand, should be two or three days without a stool, a laxative clyster should be injected. Where delirium attends, a few drops of laudanum are often very serviceable. If there is much external swelling about the neck, blisters to the part are frequently very useful.

A very unpleasant turn of the complaint, is a secondary fever, which has already been hinted at, as being sometimes the consequence of administering bark and wine too early, or too liberally, in the milder scarlatina. In such case, upon the disappearance of the rash, the limbs, especially the hands, continue swollen, and a general soreness takes place; the patient loses all appetite and strength, and a tendency to hectic fever supervenes. The bark in this case is no longer useful; but soft demulcent medicines, and light cordials, should be administered, with asses' milk, and a light nourishing diet, (if the pulse be not full;) costiveness should likewise be obviated, and country air had recourse to, if the patient should not soon appear convalescent. If the fever be considerable, purging with calomel, of which I can scarcely speak too highly, is acknowledged also, by most physicians, to have an immediate good effect, and should be repeated as long as the fever continues: a small bleeding also, where the pulse is full, or hard, is sometimes necessary; a critical bleeding from the nose, though in a very small quantity, having sometimes instantly abated the fever, when the state of the child has

appeared very hazardous, and the prostration of strength been considerable.

In some foreign parts, particularly Sweden, convalescents from this fever are many of them seized with a partial, and some, a more general anasarca, which often proves fatal. Whether this be the natural course of the disease, or the consequence of improper treatment, may be doubted, as their best physicians seem to consider it too much of a kind with the measles; and therefore may direct too cooling a regimen, and medicines.*

## *Febris Miliaris, or Miliary Fever.*

I shall be brief on this complaint, which does not seem to be so strictly a disorder of young children as of adults, unless from contagion: though I have seen one or more instances of it, where no other person in the family has been so affected, and without its spreading to any other.

The miliaria, or red eruption, is preceded by the usual symptoms of fever, together with much itching of the skin, and a very profuse perspiration; which, however, procures no remission of

* The consequences of scarlet fever here mentioned are not confined to Sweden. Anasarcous swellings of the extremities, and sudden effusions into the cavities of the chest and abdomen, are by no means uncommon terminations of scarlatina in this country, particularly among the poorer classes of society, where the accommodations and diet of the sick, are not favourable to good recovery. S. M.

the fever, until the eruption takes place, which is at the latest on the third or fourth day. It very much resembles the measles, but is a little elevated above the skin, giving it a very rough feel. It is sometimes intermixed, from the beginning, with very small crystallines, which, on the other hand, often do not appear for a day or two afterwards, and come out in successive crops, especially if the child be kept over hot. Some of the red eruptions are often larger than others, and resemble those in the scarlet fever, with which the miliary rash is also sometimes thought to be mixed, in seasons when eruptive complaints are very rife.

Previous to the eruption, as well as some time afterwards, the patient is usually very thirsty; is hot and cold by fits, and the breathing is short and difficult. The urine is high coloured, there is a slight delirium, and sometimes a sore throat, especially where the eruption is broad and very florid.

Children generally revive as the rash comes out freely; but unless the complaint be very slight, the fever is rekindled, and they acquire no appetite for food until the eruption begins to turn dry.

This fever being of the low kind, is attended with great languor, and calls for support; on which account both the medicines and diet should be of the cordial kind. White-wine whey, and wine in the panada and sago, in proportion to the degree of debility, are generally necessary, even for children of only a year or two old. The sa-

line draught, with confect. aromatica, and mistura camphorata, is a good general medicine; and if the symptoms are more aggravated, the bark, volatile alkali, and the spir. æther. vitriol. compositus: blisters too are often very useful. A stool should be procured once a day, by means of a clyster, or a little rhubarb; and plenty of drink be allowed, which may be slightly acidulated, and at times taken cool. The chamber should be kept airy, but the child screened from the wind, and be confined to the bed, until the rash disappears.

If on the rash dying away, which in the milder species is in three or four days, no fresh eruption should take place, the appetite and spirits soon return; and only a little rhubarb, or other gentle laxative, is required, with the usual cautions in regard to diet, so necessary for every convalescent, and especially children, who have no discretion of their own. But if fresh crops appear, and the fever returns, the former plan must be continued: but if without fever, a few doses of physic, and quitting the warm bed, will probably put an end to the complaint.

## *Cynanche Parotidea, or Mumps.*

This is a tumour of the neck and throat, giving that peculiar cast of countenance from which the complaint has acquired the English name.* It is

[* Mumps; sullenness, silent anger.—*Johnson.*]

usually only a slight disorder in children, but as it advances, the skin becomes inflamed, putting on a light damask-rose colour; but the parts very rarely suppurate, which is the more remarkable, as the disorder seems to be situated in the cellular or adipose membrane. This, however, does sometimes happen, but the abscess usually heals kindly.

It is a complaint rather of young people than of infants; but frequently attacks children of five or six years of age. It is certainly contagious, and is often an epidemic disease. It begins with the common symptoms of fever, which are usually slight, but the tongue is frequently covered with thick fur, or is very white. The patient complains early of a stiffness and pain of the neck, and generally the next day of a soreness of the throat; but this seems oftentimes to be merely symptomatic, the tonsils being rarely inflamed. At this time a fulness of the neck may be discovered, which gradually extends to the throat, and the parts become tender to the touch, and in some instances, the pain is exceedingly great, and recurs suddenly with almost regular intervals. The tumour generally continues to increase for two or three days, and then as gradually subsides.

In general, very little medical treatment is required, it being sufficient to confine the patient to the house; at most, to give night and morning a few grains of the pulv. contrayervæ com. with, or without, a small proportion of nitre, and to procure a stool once in twenty-four hours. But should an unusual degree of fever attend, as is

more common in such as are advancing towards puberty, bleeding will be found necessary in the beginning, and the patient should be kept in bed for the first or second day, and take a saline draught with nitre, once in six or eight hours. On the other hand, should it be attended with any uncommon languor, the conf. aromatica may be given instead of the remedies before mentioned. When the swelling is thoroughly subsided, two or three gentle laxatives may be administered at convenient intervals.

In a few instances, after suppuration has taken place, and the sores are healed up, a hardness of the parotid and maxillary glands remains, which is usually soon dispersed by rubbing a little mercurial ointment, or sometimes by only anointing with the common linimentum ammoniæ. Should it, however, prove tedious, a few doses of calomel, and common laxatives, should be exhibited, at proper intervals.

In adult males, or such as are growing up to manhood, the tumour of the neck has sometimes been found to subside very suddenly, without any abatement of the fever, and then the testicles have been as suddenly inflamed; which is attended with more pain and fever than the swelling of the neck, and is cured more slowly; upon this metastasis, bleeding is always proper, though these parts have never been found to suppurate.*

* A swelling of the testicles, attended with pyrexia, but unaccompanied with any affection of the glands of the face or throat, was epidemic not long since at Wallingford, in Berkshire, as reported by Mr. Golding.

A translation from this part again, is sometimes very suddenly effected, and the irritation then generally falls upon the brain; and the worst consequences are justly to be apprehended. Every thing necessary and proper for the true phrenitis is then speedily to be had recourse to, and the tumefaction invited to the parts it has left; and until that can be effected the patient will be in great danger. Such a metastasis is much more common in North America than in these islands.

## *Hydrocephalus.*

This complaint is distinguished into the external, and internal; in the former, the water lies upon the surface of the brain, over the pia mater, but in the latter it is seated much deeper, within the ventricles. Children are sometimes born with their heads enlarged from hydrocephalus externus, and are then commonly born dead. At other times it makes its appearance soon after birth. I have known three children under this disease, arrive at full ten years of age,* who were then unable to walk, or even sit upright in a chair. From a late instance, however, I have

* See Medical Communications, Vol. 1, in which there is mention of two people then living, one of whom had attained the age of 29, and the other 45 years; the former did not appear to have any enlargement of the head for three weeks after birth.

learned, that when no symptoms of hydrocephalus appear at the birth, although the enlargement should be manifest very soon afterwards, and increase rapidly, the water is sometimes, at least, contained within the ventricles of the brain:* and from the circumstance of no children living long with an internal hydrocephalus, but such whose heads enlarge within a few months after birth, I should suspect the disorder has, in such instances, taken place in the womb. The fœtus, at this time, enjoying only a kind of vegetative life, may come to maturity under such a disease; various instances being met with, in which full grown fœtuses have had neither head, nor heart, nor lungs. Accustomed to the above-mentioned disease, we may presume such infants more likely to live for a certain time with water in the ventricles, than those in whom the disease is supposed to take place suddenly after birth.

In the instance alluded to, the child's head began to be sensibly enlarged when the infant was about four months old, and the child lived to the fifth year, unable to walk, or even to support its head. Upon a careful examination of the parts after death, the water, to the quantity of

* In the Medical Journal, vol. 2, p. 1, an instance is related by Mr. E. Ford, of a child seized with symptoms of water in the head, at the age of nine years, who lived eleven months afterwards; during the last eight of which he was unable to stand upon his feet. After death, the sutures were found to be separated to a considerable degree, the ventricles containing eleven ounces of water; but there was no water exterior to the brain.

three pints, as I am informed by the surgeon, was evidently contained within the ventricles, which were so stretched as to compress the brain in such a manner that it appeared only like a smooth thick membrane within the dura mater; and of all the solid contents of the skull, scarce any thing but the cerebellum remained. Tulpius, Hildanus, Vesalius, and Morgagni, have noticed the like in children from two to five years of age, and it must, therefore, be still more likely to happen where the hydrocephalus internus has taken place in the fœtus in utero, where the brain is much more tender. Dr. Whytt, of Dublin, likewise, mentions no less than three instances of the same kind, in which the brain was so compressed by the great quantity of water within the ventricles, as to put on the appearance of only a small gland.

The external hydrocephalus, at whatever period it may commence, has always been esteemed a fatal, as well as most distressing complaint; but I have been informed, that where the disorder has not been very manifest at the birth, blisters on the head have sensibly diminished the bulk. These should be applied, successively, to different parts, especially along the top of the head, in the course of the longitudinal sinus, so as to keep up a constant discharge; which, may possibly, in some instances, effect a perfect cure: at least, the advantages already observed are sufficient to justify the attempt, in a disorder hitherto esteemed incurable. In a publication by Mr. Hill, we have the account of an effectual cure, under

the employment of oxygen gas, after the head had acquired an enormous size.*

Of the internal watery head, it may be proper to treat more largely. This melancholy disorder seems not to have been distinctly known to the ancients, though there can be little doubt it must often have been met with; but the want of those frequent examinations of dead bodies which the moderns have made, deprived them of opportunities of distinguishing this disease from affections of the head, arising from other causes. Hieronymus Mercurialis,† who wrote in the beginning of the sixteenth century, was perhaps the first who mentions the disease as having its seat in the ventricles. Wepfer also just says, the water has been found within the cavities of the brain.‡ Boerhaave, Petit, and others, have likewise spoken of it; but no author, I believe, described it at all accurately before Dr. Whytt, who wrote expressly on the internal watery head, anno 1768. But it has not been generally noticed, that the water lies sometimes between the pia mater and the brain, as it is found to do in maniacs; and I have met with it both there and in the ventricles, in the same subject, and always in infants under two years old.

The hydrocephalus usually takes place between two and ten years of age; but I have known

* Practical Observations on the Use of Oxygen, or Vital Air, in the Cure of Diseases, &c.

† Opuscula Aurea, Lib. de Morbis Puerorum.

† Histor. Apoplecticorum.

many instances of water in the head being found after death, in children under two years of age. I have noticed this early appearance twice in the same family; the infants also dying suddenly without any previous mark of the disease; but as no dangerous symptoms of any other kind attended, it can scarcely be doubted, that the water found in the ventricles was in these instances the true cause of the sudden death; as I am satisfied it hath sometimes been in others, by producing a fit. This complaint, however, at whatever early period it may commence, is also found sometimes to take place later than the tenth year. It is a like dangerous complaint with the hydrocephalus externus, and the method of treatment not yet well established; and as it can scarcely be ascertained whether any have recovered from it, (the certainty of its existence rarely being known but by examination after death) it is not likely that a very determined and successful treatment will shortly be settled.

It may arise from falls and blows on the head, from scirrhous tumours and excrescences within the skull; a watery state of the blood, or a lingering illness. It may likewise, probably, be owing to pressure on the brain, and fulness of the vascular system from other causes, as conceived by Dr. Quin. I have, at least, met with one case, in which there were all the usual symptoms of water in the ventricles, and the late Dr. Warren, whom I met on the occasion, was fully of that opinion. But upon examining the head thirty-six hours after death, a great number of

sharp points of bone were found, and especially of the spinous process of the os frontis, which was most uncommonly long and sharp. The vessels were all found very turgid with blood, and there were light, flakey appearances on the pia mater, similar to those found on the peritonæum, pleura, and other membranous parts in a state of inflammation. In this case, only half an ounce of water was found in the ventricles. A similar remark is made by Mr. Edward Ford,* who observes, that more remote causes may be an inflammation of the vessels of the pia mater, which may owe its origin to the measles, small pox, scrofula, and other complaints; which may affect the brain in the same manner they do the mesenteric and other glands. As the disease may originate from such different causes, there can be no doubt that it may sometimes be a chronic disease, and its appearances very insidious. It appears, likewise, to be a family complaint in some instances, for I have known six children, born of the same parents, die successively of it at the age of two years, five of whom were afterwards opened. Children with a large head do not seem to be more subject to this disease than other children.

The attack is sometimes very sudden; but the complaint more commonly begins with the appearances of slow fever, especially in older children, with debility of the arms, and pains in the limbs, and frequently in the upper part of the

* London Medical Journal, vol. 2, part 1.

neck. It has also been remarked, that, in the commencement, the child has appeared to be more acute and lively than ever before; but the spirits decline as the disease advances. After a while, the child is suddenly seized with pain in the head, and generally in the fore part, and retches once or more: it becomes heavy and dull; can bear no posture but that of lying horizontally; the pulse becomes irregular, but usually very slow; in the progress of the disease the faculties and senses are impaired, and the eyes offended by the light: the patient sees objects double, and becomes delirious. As the disease advances, the pulse grows frequent, the cheeks become flushed, the pupils of the eyes are dilated, the stools and urine come away involuntarily, and the patient lies sleeping, or is convulsed, and at times in great pain.

In the youngest subjects, I have known it begin with a cough, quick pulse, and difficulty of breathing, attended with circumscribed flushed cheeks, as in teething, recurring on every little exertion; with continual fever and costiveness, and sometimes a discharge from the nose and eyes. Other symptoms, indicative of the disease in very young subjects, are, a hand often put to the head, or lifted upwards, and waving about; vomiting; costiveness; expressions of anxiety, and dislike to be moved: at other times, an unmeaning look, and marks of insensibility; the fingers often clenched, and hands tumid; drowsiness; picking of the nose; and grinding of the teeth during sleep, as in the case of worms: the

eyes are in some cases impatient of light, in others, vision is so imperfect that the child does not regard any objects, however close to them; and before this period, one, or both the eyes, are in many instances turned towards the nose. The pupils are often not dilated till near the close of the disease, and such young patients sometimes hear and comprehend, and take food to the last, and die suddenly upon the decline of the febrile symptoms, when they have been thought to be recovering. These, and other symptoms, however, laid down as indications of water in the brain, are, in some degree, common to other diseases of children, especially the dilatation of the pupil and sleepiness, in fevers arising from foul bowels, which, I am persuaded, are sometimes mistaken for the fever of hydrocephalus. In such cases, some children have been erroneously thought to have recovered from this disease, especially if calomel has been administered, though with another view; while others have perished from improper treatment, and mistaking their complaint. Perhaps, the most decided symptoms early in the disease (at which time it is of the most importance to ascertain it) are, an inclination to lie on the back, and unwillingness to be moved, and an increase of pain in the head upon being raised from a supine to an erect posture, but especially an almost constant drowsiness, and a tendency to fall asleep, after being roused by being lifted up, or otherwise disturbed. Sometimes, however, neither these, nor other de-

cided symptoms are found to take place until the second stage of the disease.

Though it is sometimes a very short disease, and at others of many months standing, it seems always to be divided into three stages;* which are best distinguished by the state of the pulse. In the first, the pulse is always quick, as in other complaints attended with fever: but the true nature of the disease is often overlooked till the next stage, in which the pulse is slow, irregular, and often intermitting; and in the third it becomes again very quick, and usually regular. The urine frequently deposits a sediment of a light consistence, and white colour; and the breath has an offensive and sickly smell, especially in the last stage.

From what has been advanced, it is difficult to say if medicines are so often successful as has sometimes been imagined; for when a patient recovers, it may be suspected he has not had the true disease. I offer this suspicion as well from my own experience, as from the doubts entertained by other writers; having sometimes been persuaded, (and supported in that opinion in consultations) that infants have been ill of water in the head, who have afterwards recovered from the use of medicines adapted to fever from a foul state of the bowels. Two such children, besides the dilated pupil, and other usual symptoms of hydrocephalus, lost the use of their speech, (and one

* See a treatise on this disease by Dr. Charles William Quin.—Anno 1790.

of them, of the sight) for several days; but recovered after a daily discharge of very uncommon stools, resembling the meconium of infants. And it is very remarkable, that only calomel brought these away; the experiment being repeatedly made by omitting it, and giving only the infusion of senna; but upon the calomel being exhibited again, the same stools were always observed, as black and adhesive as meconium,* and in very great quantity, until the children perfectly recovered.

Whatever may be supposed the immediate cause of hydrocephalus, practitioners seem chiefly to have depended on repeated bleedings; purges with jalap, or calomel; blisters to the neck, or head; diuretic medicines, and the external use of mercurial ointment. A large bleeding early in the disease I have thought very beneficial, especially in children of a robust habit. The use of sternutatories, as the compound powder of asarum, or white hellebore, have likewise been recommended by some experienced practitioners; and, possibly, with some little prospect of advantage, some children having recovered in consequence of a discharge of a thin fluid by the nostrils, as Dr. Harvey acquainted me he had seen in two instances. With a view to promoting

* Stools of this *colour* take place in the month, long after the meconium seems to have been duly carried off, when infants are very dangerously ill; though it is at other times a very harmless symptom, as is remarked in the introduction, where notice is taken of suckling, and sore nipples.

absorption, electricity has likewise been recommended; to all which I would add the application of a narrow caustic upon the head, along the whole course of the longitudinal sinus, instead of trusting to a small blister on the crown.

Dr. Garnett has some very good remarks on this disease, which he conceives to arise from an inflammation of the brain, and says the water is not always met with: and that it may not, therefore, be the source of the disease, but rather an effect—that it should be treated as inflammation by cooling remedies, when assistance is called for in the first stage, which is not always the case. He remarks, that he has recovered three children by bleeding, (or by leeches in young subjects) blisters, nitre, calomel, and mercurial ointment, and keeping the bowels open; and by the digitalis. To this I can add my own experience of early bleeding, and the antiphlogistic plan, having proved successful where I had no doubt of the existence of the precise disease. In regard to blisters, there seems to be great propriety in the suggestion of Dr. Clarke, that they should be applied to the legs, in a view to derivation from the head.

Mr. Recards, of Brentford,* speaks highly of calomel, and some drastic purgative; also of squills, (as a diuretic) and the patient being supported by bark—for a child of eight years old, he directs as follows:—

* Medical and Physical Journal.

℞. Pulv. Cortic. Cinchon. flav. ʒi.
Tinct. Gentian. comp. ʒss.
Aq: distil. ℥iiiss. misce.
sumat. Cochl. ij. quartis horis.

Every other morning, the calomel and jalap, or gamboge, or aloes, or even pulv. elaterii gr. ij. if the costiveness be very obstinate.

Though I have made mention of mercury, I cannot say I have seen any decidedly good effects from its use, either as a purge or an alterative, (after the disease has been clearly ascertained) administered either externally or internally, though I have had recourse to it very early, as well as late in the disease, and in consultation with different practitioners. Should the use of it, however, be determined upon, in which ever way it may be advised, it should be assisted by diuretics. Calomel is probably the fittest preparation for internal use; though the quicksilver, together with diuretics, has been thought to be administered with success in the following form, to infants of two or three years of age.

℞. Confect. Aromat. ʒj.
Hydrargyr. purif. ℈j.

Simul terantur donec globuli visum fugerint.

℞. Massæ suprapræscriptæ ℈ss.
Pulver. Scillæ gr. ss.
Aquæ Menth. sativæ ℥ss.
Spir. Æther. nitrosi gtts. x.
Misce,

Fiat haustus, bis terve in die sumendus.

The external application of mercury has, however, been more generally preferred, as acting

more powerfully on the system, and creating less disorder in the bowels. Some physicians have directed it to be used both externally and internally; and it may be so made use of very freely, as a salivation is not very easily raised in young children, especially in this disease.

Though I have said that I cannot boast of success in the recourse I have had to mercury, it is proper, however, to observe, that it has been strongly recommended by Drs. Carmichael Smith, Dobson, John Hunter, Haygarth, Moseley, and Armstrong; but I am informed by other physicians of eminence, that they have not been so successful in the use of it; and some good arguments have lately been advanced against an indiscriminate recourse to it, by Dr. John Warren, who advises trial to be made of emetics.

The digitalis purpurea has lately succeeded in one instance, and that a most unpromising one; the patient, a youth of about fourteen years of age, having been some time greatly convulsed, and able to swallow only with great difficulty. This medicine was given in a strong tincture, half an ounce of the dried leaf being infused in two ounces of brandy, of which from five to twenty drops were taken once in five hours. It acted, as usual, very powerfully as a diuretic, but without producing any unfavourable symptoms, and though it was long ago given unsuccessfully in some instances, by the late Dr. Fothergill, may be worthy of further trial; but should generally be joined with aromatics, or with assafœtida.

As I am always happy in the opportunity of reflecting any light upon obscure diseases, I shall close these means of cure with some observations from Drs. Perceval* and Temple, as well as from Dr. Rush, and since confirmed by Dr. Paterson; but not having had any experience of their efficacy, I offer them only as the sentiments of the several writers.

The latter is decidedly of opinion, that the commencement of this disease is always truly inflammatory, being what he calls a phrenicula, or diminutive species of phrenitis, and that it should be treated boldly as an acute disease: the aqueous effusion, he is persuaded, being the mere effect of inflammation; the tender structure of the brain, during infancy, very probably rendering that viscus more liable to such a consequence than it is at a more advanced age.

Dr. Rush speaks of great success in treating the complaint agreeably to this idea, and advises;

1st. Bleeding, which in some cases he directs to be repeated several times in the first stage of this disease.

The second remedy in this stage is purging, plentifully and repeatedly; to which he was first encouraged from the benefit derived from that remedy in palsies, and other cases of congestion in the brain.

3d. Blisters to the head, neck, and temples, for the relief of the pain in the head; which are, therefore, proper in any stage of the disorder.

* See Medical Facts, Vol. 1.

4th. With the like view, linen cloths, dipped in cold vinegar, or ice-water, and applied to the forehead.

5th. Mercury, particularly calomel, as a purge, in any stage; but mercury, in larger quantities, as a stimulant, as soon as may be, after the inflammatory action of the system is sufficiently subdued by previous evacuations, or otherwise. Bark, wine, and opium, he says, promise success only in the last stage of the disorder, assisted by mercury, where the state of the system may call for them.

If we may place much confidence in these observations of Dr. Rush, whose theory appears to be supported by plausible reasoning, and the history of several successful cases, some further light seems to be thrown upon this dangerous disease; and the indications for the antiphlogistic plan, to which I have long been partial, particularly bleeding, and that often topical, and the proper use of mercury, pointed out with somewhat more precision than hitherto.

The chief doubt remaining is, that his patients may have recovered from some very different complaint, particularly fever from foul bowels; in which both the head and eyes are often greatly affected. And this may be the more apprehended, from many of those who die of hydrocephalus being very tender, and previously sickly children, who can neither endure much evacuation of blood, nor much purging; and in whom, indeed, there are no symptoms of conges-

tion, either of solid fæces, bile, or other alvine stimulant.

The intentions of cure, as laid down by Dr. Perceval, are very similar to the foregoing, being calculated, he says,

To mitigate the pain and spasm;

To promote absorption; and

To increase the serous excretions.

When the pain and spasms are considerable, he advises opiates in large and repeated doses, unless there be coma, and in that case, he substitutes musk combined with sal cornu cervi. He directs repeated blisters to the head, and recommends joining the digitalis with opium and calomel; though he is inclined to think, that the good effects produced by this composition are rather attributable to the combination of the opium and calomel, than to the digitalis. If the mercury be disposed to run off by the intestines, he guards it further by opium.

Dr. Temple * having observed, that the Doronicum germanicum administered in some paralytic affections was disposed to excite the cuticular vessels in the head, in a very extraordinary manner, producing a copious sweating of the part, was led to advise it in hydrocephalus internus; and in one instance with marked success, in consequence of an abundant perspiration from the head. Opium and calomel were, indeed, joined with it; but as it is not known, he says, that such effects have been produced from the com-

* See his Practice of Physic.

bination of mercury and opium, he concludes that the doronicum had a considerable share in them.*

Since the last edition, I am able to speak more decidedly in favour of Dr. Rush, with the very important addition, however, of opium with the calomel, and the use of the digitalis, first recommended, I believe, by Dr. Perceval; by which success may be expected beyond what has been experienced from any other mode of treatment, in cases decidedly hydrocephalic.

As a prophylactic, or preventive, where several children in a family may have suffered by it, some writers have advised a caustic to be applied to the nape of the neck. And other physicians have thought, that the progress of the disease has been stopped, after threatening symptoms had taken place, by covering the whole crown of the head with a blister, and keeping the sore open for a year or more; of the good effects of which, I have seen one instance, in a family where the complaint had been three times fatal.†

* It hence appears that Dr. Temple had not seen Dr. Perceval's remarks on this disease—How very differently do men oftentimes argue from the same fact!

† It may be worth noticing in this place the manner of making a perpetual blister, or what is called a perpetual issue at Edinburgh, which is, by applying a plaster, consisting of equal parts of emplastrum cantharid. and ceræ. This, it is said, does not erase the cuticle, or erode the parts under it, but leaves them entire, and suffers the hair to grow up. As these, in ten or twelve days, push off the plaster, it is necessary to leave it off; and as soon as the skin can bear the razor, to take off the hair, and apply a fresh plaster. This gives less

Since the last edition of this work, I am induced to add, as preferable in some instances to the above severer applications to the head, the plan of covering the whole scalp with an oil-silk cap for a length of time: first shaving the head very close, and repeating the shaving as often as the oil-silk would be raised from the head.

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The foregoing chapter on hydrocephalus appears to contain as much information upon the subject as Dr. Underwood could procure. Since he wrote, several treatises upon this disease have been published, but they all fail to teach us how the disease is to be cured:—"Yeats's Statement of the Early Symptoms which lead to the Disease;" and "Golis's Treatise, translated from the German by Dr. Gooch," may be recommended as among the most instructive.

Like all who have gone before me, I must regret that I can point out no certain means of arresting the progress of this very calamitous complaint. Yet in a few cases of cerebral oppression and oppilation, bearing so much resemblance to the early stages of hydrocephalus, as scarcely allowed me to doubt the identity of the affection, after going through the routine of leeches, calomel, purgings, cold lotions, &c. I have in despair of seeing any thing relieve the patients,

pain, is free from the inconvenience usually attending the blistering plaster, where the cantharides are absorbed, and get into the blood, whereby a strangury is sometimes brought on.

given at times the following remedies, and occasionally with success.

*First.*—In about twelve cases I have given a grain of calomel, and half a grain of digitalis, every four or six hours. The most marked case in which this did good, was in a child, a relation of the late Mr. Chevalier, with whom I was in attendance. The first symptom of the disease was an attack of convulsions. Ptyalism, and a great flow of urine were excited, and the child recovered. But it was some weeks before she regained the use of her tongue, and she dragged one leg after her for some months; when the symptoms began to yield, a blister to the head appeared to be of great service. This little girl is now in all respects well, and her mind as acute as most at her age. In cases of oppressed brain, bearing less decided resemblance to hydrocephalus, I have frequently seen the combination of calomel and digitalis beneficial.

*Secondly.*—In several cases, I have given from a thirtieth to a sixteenth part of a grain of oxymuriate of mercury, every four or six hours. In two cases it stopped the progress of the disease, and the patients recovered. In these it produced copious olive-green coloured stools, and increased the flow of urine. One of these patients had strabismus, and the pulse was irregular, so as sometimes to intermit. Her attack took place during the process of dentition, when four molares were coming forward. The other case, that of a boy, shewed from the first more distinct symptoms of hydrocephalus, and the parents, as I was in-

I have since ascertained that this little Girl is subject to fits, apparently epileptic

W. Allen, the Father of this Boy, called upon me in January 1830, and informed me that this poor little Fellow was afflicted with Epileptic Fits.

formed, had already lost two children from that disease.

*Thirdly.*—In about twelve cases I have given the tinctura lyttæ, in doses of five to ten minims every four hours; and I think that in three cases the disease was decidedly arrested. In one case there was strabismus, and the child had been several times convulsed. The tincture was continued till it produced most severe strangury, from which moment the cerebral symptoms began to give way, and the child recovered. Mr. Hammerton attended this patient with me. The boy, now seven or eight years old, is still unable to use, freely, one of his hands. He is obliged, in order to grasp any thing, to have the fore arm supported on a table, or other flat surface. In the other two cases, severe strangury was the symptom which seemed to occasion relief to the affection of the head. S. M.

## *General Observations on Variola and Morbilli, with Cursory Remarks on Inoculation.*

It will scarcely be expected that I should treat distinctly of the small pox, or the measles in their several varieties; these diseases being in no respect peculiar to childhood, nor of a nature to demand a full investigation in a work of this kind. They are noticed only to point out a few prin-

cipal indications, and to introduce some practical observations in regard to inoculation.*

Though the small pox is a complaint so incident to the early part of life, that comparatively few children living to the age of eight or ten years, are found to escape it; yet it is not so readily communicated, in the state of early infancy, as has been generally imagined, unless by immediate infection.† This is equally true in regard

* I copy the following observations from Dr. Pearson,* that inoculation for the small pox was strangely neglected, till introduced into England from Constantinople; although it had been practised time immemorial in the Barozzo mountains, on the frontiers of Gallicia, in the same rude manner as it is at this day. This intelligence, Dr. Pearson observes, was communicated to him by a Portuguese nobleman, whose opportunities for information and accuracy authorized the Doctor to mention the fact; but an attested account from some of the inhabitants of those mountains is intended for him.—See a book written by Jacobus a Castra de Sacramento, in which Dr. Pearson says he is informed this fact is asserted.

† Some evidence of the propriety of this assertion may be gathered from the consideration of there always existing a far greater number of infants within the month, than of children of any other age; and, for the like reason, a greater number of those under a year old, than of such as are two or three years of age. For it is evident, that every infant dying at the earlier periods, must reduce the number to which those of the more advanced ages might otherwise have amounted; whereas, all the children who arrive to two or three years of age, having been first infants in the month, and of one year old, the number of the latter periods is not diminished by the death of those of a more advanced age. Now, every one knows how very few infants he has heard of having received the small pox,

* Medical Review and Magazine, for August, 1799.

to many other diseases, as I have noticed elsewhere, and the principle may very probably be, that the younger and weaker the subject is, the less of life it possesses, and the less susceptibility it has for these complaints.

The poor furnish frequent instances of the truth of this observation. I have attended where children born in an air, saturated, as it were, with the miasma of this disease, and even lying continually in a cradle in which another child has died a few days before, have, nevertheless, escaped the disease, and sometimes, when they have slept together in the same bed with one loaded with it. Hence it appears, that highly-tainted air, and even personal contact, are often insufficient to communicate the virus. Yet we know that infants are very easily infected, receiving the small-pox by inoculation as readily as

naturally, in the month, or even within the year; though fewer of these are inoculated than of children above a year old. And this exemption from the natural small pox does not seem to arise from their not being exposed to the ordinary means of contagion, especially among the middling and lower ranks of people, who form the bulk of mankind; since the medical men who usually attend such lying-in rooms, are very much in the habit both of visiting patients in the small-pox, and of inoculating, all the year round; and even in the higher ranks of life, if gentlemen in the general practice of physic happen to be consulted, the chance of their visiting at the same time infected patients, is not so small as may be imagined; not to speak of the probability there is, that some one of the numerous visitors, during the month, may, by accident or otherwise, have been in some infected house in the course of the day in which their visits may be made.

adults; though neither are at all times equally susceptible of it.* Perhaps this latter circumstance may not always be sufficiently attended to; the mode of inoculation being often blamed, when its failure may be owing to the indisposed habit of the child. Possibly, on this account, it may not be perfectly safe to urge it, at such a time; at least, instances are not wanting, where (twice introducing the virus having failed) an infant has had the disease very severely, and even fatally, upon its being repeated a third time. In no other view, I imagine, can the repetition be accounted hazardous; and this holds out encouragement to such, as from any uncertainty in regard to infection, may wish to be inoculated once or more. Dr. Richard de Hautefiercy† inoculated a young person every fortnight, for a whole year; the first of these operations communicated the disease, and the subsequent ones in no wise injured his health.

The like observation will apply to the measles: I mean, the indisposition to contagion during infancy. I have known, in more than one instance,

* Dr. Young inoculated several children at the Royal Infirmary at Edinburgh at about a week old; yet in none of them could he perceive the infection to take place. And a respectable physician lately informed me, that he knew a young woman to be inoculated eight times in the course of thirty days, who also at the same time attended several children who had the small pox from inoculation, and yet was not infected herself. She, nevertheless, caught that distemper about seven weeks afterwards, and died of a confluent sort.

† Nic. Rosen Von Rosenstein.

a twin escape the disease, while the other child suffered by it severely, and both were nursed in the same apartment, and suckled by the mother.

But in whatever way either of these diseases may take place, they are to be treated as in adults, with but little other difference than what every practitioner is well acquainted with, that of greater caution and tenderness; as infants cannot bear the powerful antiphlogistic regimen and evacuations, often proper for the other.*

In the mild, distinct small pox, the eruption does not appear till the fourth day, inclusive, from the attack; but in the severe, confluent kind, on the third, and even sometimes early on the second day. In the former, also, the fever and other complaints usually vanish, upon the eruption appearing on the skin, whereas in the confluent, however it may abate for a short time, the fever is rekindled, and increases with the progress of the disease. There are likewise some peculiarities in regard to young children, both in the mode of attack, and in the symptoms attending the latter stage of the disease, which may be slightly noticed in this place. The vomiting, shivering, and pain in the back, and head, being rarely succeeded by a sweat in infants, and is far less common in all young children than adults, under any of their complaints, and is less commonly salutary or critical. In the progress of the disease, there is likewise as frequent a differ-

* Ex toto, non sic pueri, ut viri, curari debent.—*Celsus*, lib. iii. cap. 7, p. 134.

ence, children having usually a purging in the bad confluent sort, in the place of that salivation which usually appears in adults; and demands a judicious management. It may, therefore, be further remarked, as too common an error, possibly, that of procuring stools about the turn of the pock, when infants have this disease pretty full, whether of the distinct, or the confluent kind: children sometimes sinking suddenly after one or more copious stools, who would be in less danger from remaining costive at this period of the disease. These circumstances, as well as their tender age, will call for some little diversity in the treatment; with all which, however, the reader is supposed to be acquainted, who will be careful to make proper discriminations in this complex disease.

In the measles, children ought to be kept in bed, and not only ought the belly to be preserved open throughout the disease, and cooling medicines, and diluting drinks be administered, and amongst others, linseed tea, where the cough is peculiarly troublesome; but unless the children be very young, they will bear, and even require, one or more bleedings, at any period of it, when the symptoms indicate its propriety.* And, in-

* In all cases of local inflammation, or tendency to it, topical bleedings should have the preference, especially if it be not necessary to take away a large quantity of blood, (which it can rarely be in young children) or if the operation be often repeated. In the present instance, therefore, if the child be very young, or very weak, it may be sufficient to draw off a little blood by leeches, from some part about the chest. But

deed, the cure of the secondary fever, and cough, however long they may continue, will turn upon repeated bleedings, laxatives, and a total abstinence from wine, and all animal food. It may be remarked, that instances occur even in the benign measles, of the eruption continuing much longer than four days, before it begins to dry off.

Dr. Hamilton has disputed the propriety of bleeding, and argues strongly for the exhibition of purges, and of wine and bark at this period of the disease. For my own part, I have never lost a patient in this disease, probably from not being consulted in the worst cases, nor have I, for obvious reasons, frequently attended in this or the small pox; and therefore shall by no means oppose my experience to that of Dr. Hamilton, or Dr. Parr, (who has adopted the like sentiment) but rather esteem it my duty to apprise the readers of this work of the different sentiments of practitioners of respectability.

The same writer has mentioned a feverish disorder, resembling at first the measles in every respect, as occasionally met with. Within twenty-four hours after the eruption, the feverish symptoms are highly aggravated, attended with

should it be designed only to lessen the quantity of the blood, they may be more conveniently applied to the leg, or arm, as the child may be less exposed to taking cold during the application; and if the leeches should not draw well, those parts can afterwards be commodiously immersed in warm water, to promote the bleeding; or a bandage may be easily applied to restrain it, if it should prove too profuse.

Cupping, in such cases, is commonly very preferable to leeches. S. M.

delirium, startings, and even convulsions; and on several parts of the skin, particularly on the face, the eruption recedes, leaving large portions of the surface of a pale yellow, with a small white blister, or vesication, in the middle. The eruption disappears in a day or two, and, under proper treatment, the feversoon abates.

The alarming appearance of great determination to the head, in the first case or two of this kind to which I was called, led me to apply leeches to the temple, at the same time that I prescribed the warm bath, a brisk laxative, and a blister to the back. Since that time I have omitted the leeches; and although the utmost danger seemed to threaten in all the cases I have witnessed, the recovery was rapid in every instance.

## *Inoculation.*

I shall drop a few words on this subject, because parents are very apt to fall into great mistakes respecting the age and circumstances most proper for this operation, and sometimes draw medical people into an imprudent compliance.

It has already been remarked, that young infants are not very liable to contagion, which is surely an argument against early infection, if it be attended with any peculiar hazard, as it most certainly is. Whereas, it is too common an opinion that a very young infant, sucking at the breast, is the fittest subject for inoculation. Chil-

dren are then said to be clear from humours, their blood mild and balsamic, their food innocent, and their minds free from all violent passions. But all these advantages may be counterbalanced by the delicacy of their frame, their disposition to spasm, and their inability to struggle with a severe attack of the disease, if it should chance to fall to their share. And such, indeed, are the facts; infants usually have the small pox very lightly, whether taken naturally or from inoculation; though in both there are a few instances of their expiring in a fit at the time of the eruption, the risk being greater also the younger the infant may be; and they seldom get through the disease, if they are full, or it proves of the confluent or malignant kind. And this furnishes a peculiar objection to inoculating infants at the breast, which arises from their frequently lying so much on the arm of the suckling mother, or nurse, especially in the night; the heat exposing them to a much more copious eruption, than children who are weaned. This I have seen clearly exemplified in the instance of a child whose mother could suckle only with the right breast; the consequence was, that the left side of the child was perfectly loaded with the eruption, (though the pock was of the distinct kind) whilst the other had only a moderate sprinkling. The child, however, sunk under the secondary fever at the end of five or six weeks, though turned of two years old; the only child I have known to die of inoculation at so advanced an age. A similar instance is related by Mr.

Moss; who not being able to prevail on a young woman whom he had inoculated, to keep her feet, (which were very cold) out of the warm ashes of a hearth-fire, at the time of the eruption; they were in consequence so loaded with it, as to appear one continued blister: though the disease was very distinct, and went on favourably in other parts.

I am aware that many children are inoculated very young, and even in the month, and generally with very good success: but the frequency of this practice, among eminent surgeons, is owing to the urgent solicitation of parents, and their fear of contagion. I cannot therefore avoid saying, that however few may die under inoculation, under any circumstances, the fact is, that the far greater proportion that I happen to have had an account of, is amongst infants under six months old. A remarkable proof of this disproportion appeared a few years ago, under a general inoculation at Luton, during the progress of a malignant small-pox; which had carried off one half of those who were attacked by it in the natural way. In the midst of this fatality, twelve hundred and fifteen paupers were inoculated, through the humanity of the then Bishop of St. David's,* many of whom refused all preparatory medicines, and were besides addicted to the use of strong liquors: nevertheless, out of the twelve hundred and fifteen only five died, all of whom

* See a Tract on Malignant Fevers, by the late Sir William Fordyce, 1790.

were infants under four months old. Seven hundred adult people of better condition, in the same neighbourhood, were inoculated a short time afterwards, and with the like good success with the former.

From this view of the matter, it is pretty evident, I think, that this operation ought, in general, to be postponed to a later period, which is pointed out by the child having cut all its first teeth; to which may be added, another observation from the well-known fact, that more than fifty children die under the age of two years, of other complaints, to one that dies of the natural small pox. Should it, however, be in the same house, or prevail in the neighbourhood, and the parents find it difficult to remove the child out of the way, it may run a less risk by being immediately inoculated, as that operation is now so well understood, and successfully conducted, than by taking the chance of escaping the infection, or of recovering from the disease, if it should happen to take place. I shall just observe, however, on this head, that the late Professor Monro recommends the use of a bath of water and juniper berries, and fumigating the chamber with the juniper tree, during the course of severe small pox, which is said to have succeeded in eight or nine instances as a preventive.

The inoculation of pregnant women, being, in certain instances, dangerous to the infant, it is presumed, that it cannot be totally foreign from the subject, to annex a caution on that head, it having until of late, been generally imagined that

the child is not infected by the parent passing through the small pox, whether from inoculation or otherwise. It is, indeed, comparatively rare that the unborn fœtus takes the disease, howsoever severely the mother may suffer by it; yet, from a very accurate account published by Dr. Pearson, and some cases by Messrs. Kite and Turnbull, the fact is established as the result of much experience and reflection, where the parent has been infected after the sixth month of gestation. Previous to that period, however, the fœtus, (whatever be the cause) has very seldom been known to take the disease; and later than that, it is presumed, few mothers would be inclined to submit to the operation, unless from some urgent necessity. The parent, it is added, is not in much additional danger from being inoculated in a state of pregnancy, unless the disease should prove considerably more severe than it is ever expected from inoculation: but when communicated to the fœtus, the infant always dies. One instance of infection at an early period of gestation, has lately been adduced by Mr. Rumball, of Abingdon, that does not precisely accord, the fœtus taking the infection when its mother had only completed the fourth month of gestation. She was then seized with the natural small pox of a bad confluent kind, and recovering with difficulty, was delivered, at the end of the seventh month, of an infant who bore strong marks of the disease, was born alive, though it survived only half an hour.

In regard to inoculation of the measles, it may just be noticed, that Dr. Francis Home, of Edin-

burgh, has practised it, in ten or twelve instances, with success; and Dr. Rosenstein seems to intimate that the example has been followed in Sweden.*

## *Vaccine Inoculation.*

The extent to which Vaccine Inoculation has been practised, and the attention which has been paid to its progress and effects, have established a body of evidence upon the subject, which is highly satisfactory. Not only have medical gentlemen of the most respectable talents made it the subject of their attention, but public institutions have been founded and supported by the legislature, which have at once served to ascertain its merits, on the largest scale, and to give it universal spread. The result appears to be, that Vaccination, though not an infallible preservative from the contagion of small-pox, is one in so great a majority of instances, as to render it highly probable, that if it were universally adopted, the small-pox would in a few years become entirely extinct. In the island of Ceylon, near 130,000 persons have been vaccinated, and the happy consequence appears already to have followed; the small-pox not having

* I have allowed Dr. Underwood's observations on Small-pox and Inoculation to remain, though, at the present day, they are not likely to be much acted upon: but facts and practical remarks are always valuable. S. M.

appeared there since February 1808, except in a few individuals who had not been vaccinated, and who caught it from a boat that landed at Jaffapatnum from the Malabar coast. But its spread as an epidemic in that settlement is no longer apprehended.

By a report of the Vaccine Institution in Broad-street, it appears, that only nine cases of failure had occurred in the practice of that charity in 5000 that had been inoculated; and that all the authenticated cases of failure which had taken place amounted only to forty-three, which, among the many thousands who have been vaccinated in this country, is a proportion probably less than that in which small-pox has taken place twice. The latter occurrence has appeared three times in patients who have been under the care of one respectable practitioner at the west end of the town.*

It is probable, that in many cases where vaccination has failed, some error has been committed as to the previous state of the subject, or

* Of the like kind is the following:—Mr. Pallas, in his Voyages dans les Gouvernemens Meridionaux de l'Empire de Russie, en 1793 et 1794, relates the following circumstance which occurred while he was at Sarepta.

Retenu malgrè moi d'une part par la chaleur excessive qu'il fasoit au mois de Juillet, et augmentoit encore a un point insupportable par l'embrasement du step des deux cotès du Volga, dans une circumference bien etendue, je le fus encore par la maladie de la petite vêrole qu' y eut ma fille, bien assurement pour la seconde fois à une epoque ou ce fleau epidemique qui s'etoit declarèe avec violence depuis le commencement de l'hiver à Sarepta, commencoit a diminuer.

the progress of the pustule afterwards. It seems important, therefore, in order to perfect security that the following observations should be strictly attended to.

The child to be inoculated should be at the time free from fever and every eruptive disease. If any irritation from teething arises, the gum should be lanced. The matter employed should be taken from a decidedly characterised cow-pock, which is proceeding regularly through its respective stages; and it will be more certain of producing the disease, if it is taken before the tenth day. "If the infectious matter produce the required effect, in three, four, or five days, there will be seen a red spot like a small gnat bite; in six or seven days, a small vesicle will appear; in nine days, a circular vesicle (improperly called a pustule) will be found as large as a pea, or from about two tenths, to four tenths of an inch diameter, usually surrounded by a red areola. By the eleventh day, the vesicle begins to scab, or grow dry, and turn black in the middle, and the areola becomes more extensive. By the fifteenth day, but often later, the pock becomes a mere scab, circular, prominent, well-defined, of a blackish or mahogany colour, adhering firmly; but the areola disappears. Unless it be separated by violence, the scab does not fall off, in general, sooner than the twentieth day. It then becomes a cicatrix permanent through life."

Little medicine is required during the progress of the disease. The bowels should be kept regular; and if feverish symptoms arise, a saline

draught may be given occasionally. The principal inconvenience which the patient experiences, appears to arise from the soreness of the inoculated part; this will be alleviated when it amounts to any considerable degree, by laying on it a piece of linen dipped in water, which should be frequently renewed till the pain abates.

When the vesicle begins to scab, a dose of any mild purgative may be given, and repeated in two or three days.

If the scab falls off before the part is completely healed, a little spermaceti cerate may be applied, to defend it from the friction of the clothes.

Where any doubt exists whether the vaccine inoculation has been effectual, it should be repeated; for it appears from the report before alluded to, that re-inoculation with vaccine matter, is as good a test of the patient having regularly gone through the cow-pock, as inoculation with small-pox matter: the constitution being rendered insensible to both diseases, after it has gone regularly through either of them.

It does not appear, that vaccine inoculation induces any other disease, as was feared in the beginning of the practice.

In children predisposed to scrofula, that disease occasionally follows, or is called into action by all eruptive complaints, but it more frequently succeeds the small-pox than any other; the cases in which scrofula has followed the cow-pock will bear no comparison in number with the melancholy objects in whom small-pox has pro-

duced it, with its most dreadful symptoms. As it is also evident, in the experience of every practitioner, that scrofulous affections less frequently appear after the inoculated, than the natural small-pox, (and it is presumed, as being a less severe disease, it produces less excitement of the system;) so it is not to be wondered at that they still more seldom occur after vaccination.

It is to be hoped, therefore, that the great mildness of this preservative from so dreadful a disease as the small-pox, will ere long cause it to be universally adopted; and preponderate over the erroneous representations of those, who for want of better information, or from unworthy motives, still continue to oppose it, and to leave the helpless and innocent offspring of the poor exposed to one of the most destructive and injurious maladies to which the human body is liable. But whilst we recollect, that inoculation for the small-pox had to wade through a torrent of the like obloquies, and finally triumphed over them; we have further reason to hope, that the hour of cool reflection is at hand, when the sober good sense for which our nation has long been remarked, will be no longer sullied by a fastidious rejection of a far greater blessing.

I shall close this account, with a few observations on facts. 1st. in regard to the vaccine inoculation failing to take effect, this is no more than has occurred in inoculation for the small-pox in the hands of the most eminent practitioners; the

system not being always disposed to receive that, or other infections, and poisons, and yet shall in a short time afterwards be in a condition to receive it. 2dly. In regard to various eruptions, to scrofula, and other conceived ill consequences of vaccine inoculation, I would remark that they are comparatively very few; that they are more frequent in families not otherwise the most healthy; and are very far less numerous than the complaints that follow either the natural small-pox, or inoculation for that disease. 3dly. That it is notorious that the proper vaccine virus has not always been employed, nor been taken at the proper period of the disease. 4thly. That where children previously properly vaccinated, have afterwards taken the small-pox, it has generally proved very favourable, has not been attended with secondary fever, nor have the pustules either been numerous, or continued so long as in the natural small-pox, or in those from inoculation for that disease; nor has there been more than one instance, I conceive, of a person dying from the small-pox, after having been vaccinated by any medical man long in the habit of vaccinating.*

* Dr. Burns of Glasgow has suggested two means to be resorted to, in order to discover if the system has been affected, so as to have a complete change induced by the vaccination.

1st. If a second inoculation be performed on the fifth or sixth day after the first, a vesicle will arise as usual, but it will be surrounded with an areola, nearly as early as the first one.

2dly. If a second operation be performed, any time after the

But for a more full, and a very candid statement of vaccine inoculation, I beg leave to refer my readers to Dr. Monro's "Observations on different kinds of small-pox, and that which sometimes follows Vaccination." *

## *Varicella, or Chicken-pox.*

Though this disease is usually a very light one, it merits a few words, not only because more incident to children than to adults, but, also, that it is sometimes mistaken for the mild small-pox; which it sometimes exceeds in violence, and is now and then even attended with danger. The danger is, indeed, so uncommon, that the disease has been very seldom noticed by medical writers; and even Dr. Heberden, who was among the first that obliged the public with a distinct account of it, says he never saw any person with so many as three hundred pustules over the whole body. Physicians, indeed, as he observes, are not often

twelfth day after the first inoculation, some degree of inflammation will be induced; but if the system have been affected no regular vesicle will be produced.—But, inoculation for the small-pox, he adds, is the most satisfactory test.

* The following later publications on this very important subject deserve to be consulted,—"Cross's History of the Variolous Epidemic in Norwich" (1820); "Thomson's Account of the Varioloid Epidemic in Edinburgh" (1820); Thomson's Historical Sketch" (1822).

called to visit patients under a complaint usually so trifling; or a gentleman of his long and extensive practice, would have met with instances in which it must have appeared of more consequence, as will presently be noticed.

It is from this disparity, I apprehend, that this disorder is sometimes denominated the swine-pox, which is only a ranker species of the disease, in which the symptoms may run higher, as well as the pustules become much larger and more purulent. In this case, I have known the head and face as much swollen as I have ever seen them in any distinct small-pox, however full, and the pustules containing a yellow matter, with highly inflamed bases, and exceedingly sore; and these have formed a complete mask on the face, after the turn, as is often seen in the small-pox. One such patient whom I was called to visit, a few miles from town, was about sixteen years of age, of a plethoric habit, but very healthy; and what makes it very certain, that this complaint could not be the small-pox,* is, that the young gentleman died of that disorder a twelvemonth afterwards: possibly his death was owing to the disease being neglected in the beginning, under an idea that the former illness had really been the small-pox. The latter mistake arose from an improper answer having been then made to my enquiry as to the day on which the eruption had first

* So many cases of small-pox occurring twice in the same individual, have now been ascertained, that this argument cannot be allowed to be conclusive. S. M.

appeared, (for I was called to make him only one visit, when the pock was on the turn;) a mistake the young gentleman's mother had a perfect recollection of after I was gone, and of which I reminded her upon being called to visit her son in the small-pox, only the day before his death.

This case strongly verifies the remark of Dr. Heberden, that this complaint can in some instances, be distinguished from the small-pox only by its quicker progress towards maturation, and the shorter duration of the pustules; a watery vesicle always appearing on the second or third day from the eruption, and the turn, at the furthest, taking place on the fifth. In young children, a teazing cough sometimes comes on about the time that the eruption is complete, and continues until two or three doses of physic have been taken; which on account of the cough seems to be necessary.

The symptoms preceding the eruption are sometimes so slight, that even where the eruption has proved pretty considerable, the disorder has not been expected so soon; though, from its being in the family, the closest attention has been paid to it.

The treatment of it differs nothing from that of the mild, distinct small-pox; but it rarely calls for much attention, and only when a patient may have it very full; or, as sometimes happens, when a second crop appears after the first has dried off.

## *Ague.*

This is a complaint so well known, that it seems unnecessary here to enter minutely into a description of it. It is sufficient to say, that it consists of repeated cold and hot fits, regularly succeeding each other, with one or more well-days between them; in which interval the sick passes a high-coloured urine, that deposits a red sediment.

It, perhaps, partakes more of a nervous affection than other fevers may do, and is known to be endemic in some flat marshy situations, but is most frequent in the spring and fall of the year; in the former of which it is generally easily cured, and is even sometimes salutary. Autumnal agues, on the other hand, especially in the country, and amongst very poor people who feed coarsely, will frequently continue a very long time, and return again next autumn; whereby the constitution becomes considerably impaired. In such instances the legs are apt to swell, and more especially the belly, which becomes hard, particularly on the left side; the tumour being termed the ague-cake. This tumefaction, however, instead of being a bad sign, as might be suspected, *a priori*, is a very favourable one, and indicates the recovery of the patient. This circumstance is noticed by Sydenham, and like other observations of that attentive practitioner, is a very just one, and was, doubtless, the result

of his experience. The hardness is probably owing to an infarction of the spleen, and usually subsides in the course of a few months, especially upon the use of moderate exercise, and a generous diet. It may be prudent, however, to assist the resolution of the tumour, by administering small doses of calomel, and afterwards light bitters, adding likewise chalybeates, if the habit of the patient seems to require them, and there are no symptoms of a morbid affection of the viscera. Even the bark has been recommended with this view by Drs. Brocklesby and Starck, though formerly esteemed so improper under infarctions of the viscera.

It were needless to enter largely into the subject, and it is equally foreign from the present intention, to be more particular in regard to the cure of this oftentimes very troublesome complaint. Some notice of it, however, is taken, because though no more peculiar to children than the last mentioned diseases, yet it may be said, that there are comparatively very few children who have not suffered by it during the years usually passed at school.

The ague, indeed, attacks every age, so that infants, even under a year old, are very liable to it, whenever it rages among adults. It is with a peculiar view to patients of the former class that the following directions are given, the bark being usually a specific for older children and grown people: to whom, however, it is generally proper first to administer a vomit, and one or more doses of physic, as well as sometimes to assist

the bark by the addition of aromatics, or steel. It would be improper, however, to administer these remedies very early in the disease, but to suffer the patient to have two or three regular fits before the bark and other tonics be administered, if the child be of a plethoric habit, and the febrile paroxysms severe. The small-pox, whether taken naturally, or by inoculation, as well as other acute complaints, has sometimes removed obstinate autumnal and chronical agues.

In a state of infancy, the ague is often owing to, or connected with, a foul state of the bowels, and obstruction of the biliary ducts, and is frequently accompanied with worms, or such a state of the alimentary canal as affords a proper nidus for them.

The tertian, or more common ague, at this age generally yields to purges of the pulv. é scammon. c. calomelane, or calomel and rhubarb, given on the days between the fits, and small doses of the pulvis antimon. on the return of the fever. Should this fail, a vomit should be administered an hour or two before the next cold fit is expected, if the powder should not already have had that effect.—A linen waistcoat, with fine powder of bark quilted within it, may be worn by infants next their skin: or, as a more expeditious remedy, the bark may be made into a poultice, and applied warm to the region of the stomach, and renewed through the day as often as it may get cool.* With the like view, a

* See Rosenstein on the Diseases of Children; also Med. Observ. and Inq. Vol. ii. p. 255.

piece of bread hot from the oven, and sprinkled with spir. camphor. is a very convenient mode of fomentation, in this and other complaints where a speedy perspiration is wished for.

In older children, the common saline draught, taken once in six or eight hours, will frequently succeed; as will warm bitters, and medicines that promote and keep up perspiration, Crude sal ammoniac also, in the dose of ten or twelve grains for children of five or six years of age, has sometimes cured this troublesome complaint; but may not be proper for delicate constitutions. Myrrh is a better remedy for such, giving from four to eight grains, before, or during the cold fit, and as much cream of tartar, every two or three hours, during the fever. Pepper, and likewise alum, are common quack remedies, and may be frequently given with success at this age; the former from five to ten grains, the latter from three to five, joined with the like quantity of nutmeg, three or four times a day in the absence of the fever. Another good remedy is flower of brimstone, given in the quantity of a table spoonful in a glass of brandy, before or during the cold fit; this is a proper dose for adults, but I have never administered this medicine to children.—These remedies are supposed to be beneficial by producing a different action of the parts.

A remedy of late years brought into more common use, is laudanum; but I have not yet had a fit opportunity of making trial of it in younger subjects. Thirty, or more, drops should be administered to an adult an hour before the cold fit may

be expected; this it is said, often proves an effectual remedy, even without the assistance of the bark, or when that medicine has failed, after three exhibitions, at the most, and not unfrequently, on the first.

Amongst popular remedies,* is a tea-spoonful of white resin in fine powder, mixed with the like quantity of pounded loaf-sugar, taken a little before the cold fit, and repeated afterwards night and morning; this I have found successful even where large doses of the bark have failed. Bracelets of mustard-seed and garlic have likewise been applied to the wrists and ankles, and, upon the testimony of Dr. G. Fordyce, with good effect. Such kind of remedies for this disease are numberless; I shall, however, mention another, which, though as anile as any, seems to have been very often successful, (as I have been informed by the late Dr. Huck Saunders, as well as others;) and is nothing more than the spider's web, rolled loosely up to the size of a child's marble, and washed down with a little warm wine and water, or chamomile tea, before the cold fit is expected: the child should then be put into a warm bed, and perspiration encouraged. This may be done, amongst other means, by fomentations to the pit of the stomach. A piece of bread, (as noticed above,) hot from the oven, and sprinkled with camphorated spirit, is not a contemptible one, in this and other com-

* The occasional obstinacy of this complaint is offered as the apology for such kind of prescriptions.

plaints, where a speedy perspiration is wished for.

I shall close the list of remedies with the following from Dr. Kirkpatrick, which is a very good one for patients no otherwise averse from the bark, than that the stomach will not bear it in large doses.

Take of fresh sassafras bark, Virginia snake-root, roch-allum, nutmeg, calcined antimony, and salt of wormwood, of each one drachm: to these, well rubbed together into a fine powder, add the weight of the whole of the best Peruvian bark; then add three or four drops of the chemical oil of mint, and with syrup of saffron make all into the consistence of an electuary. This is to be divided into twenty-four doses, one of which may be taken by children of eight or ten years of age, every four or six hours, unless the patient be asleep. To make this or any other preparation of the bark sit easy on the stomach, I have been long in the habit of advising the patient first to eat a bit of bread, or other light food, with which it may mix, instead of being received into an empty stomach, whereby it frequently nauseates.

## *General Observations on Coughs.*

Previously to treating of the hooping, and what I have termed the spasmodic cough, it may not be unwelcome to students in medicine, that I should premise some slight observations on

coughs in general; a complaint in children that we are often consulted for. It is, indeed, always of importance to be able to make proper distinctions in this affection, as it accompanies divers complaints, especially in infancy: and is sometimes a very harmless attendant, while at others, it is of the greatest magnitude, and calls for its appropriate treatment from the beginning. My remarks, here, however, will be very brief.

From what has been said in different parts of this work, it will be very evident, that a cough is not always to be considered as the original complaint, like the hooping-cough, any more than a direct consequence of a cold, or of specific pulmonary affection, as in the measles. Where it may happen to be so, enough, it is presumed, has been said under the head of fevers; and the hooping and spasmodic coughs will be presently treated of distinctly. The intention here is principally to remind the reader, that a cough often attends teething, and some bowel complaints, or a foul state of the stomach, as well as a common cold, and inflammatory and other fevers, (which, however, are often suspected whenever children are attacked with a cough;) and is a recurring symptom in many delicate habits. Very slight occasions are oftentimes sufficient to excite it in such children, whether from a frosty or damp air, or from any little illness that has reduced the strength, and particularly if the child be of a scrofulous habit. Every confirmed glandular affection will, indeed, be attended with a cough, which in that case is of the worst kind, as it is

attended with fever, loss of strength, and manifest disease; in the last stage of which the cough becomes permanent.

In every case, therefore, the cause and attendant symptoms, rather than the mere cough, should be carefully attended to, and especially if the child be costive, or the bowels foul, and their discharges of an unusually offensive smell. Purging medicines are in this case the proper remedies, which should frequently be joined with saponaceous ingredients, such as the aqua kali, natron ppt. or spong. ust. nothing being more common than an obstinate and teazing cough, especially during the night, when the bowels have been long in a costive state, and the alvine discharges are very fetid, or of a stiff and clayey consistence.

Though I have said, my intention has been rather to discriminate the causes, than to direct the precise remedies for coughs; yet it may not be amiss to give a few suitable prescriptions for coughs attendant upon common colds, especially after the period of early infancy. And to this I am inclined, on account of the more ordinary remedies met with in books being usually of the oleaginous kind, and ill suited to the state of the stomach in young people, and, indeed, not always well adapted to adults.

℞. Mucil. gum. arab. ʒiij
Mellis acetati ʒiss
Aq. distilatæ ʒx
Syr. papav. albi ʒij ft. mistura.
addatur P. R. N. spir. æther. nitrosi gtt. xij.

℞. Pulv. è tragacanth. comp. ʒj
Syrupi Limonis ʒss
Papaveris albi
vel mororum ʒiss
Spir. ætheris nitrosi ʒij
Misce. ft. Linctus.
℞. Mellis acetati ʒj
Syrup. papav. albi
——— mori āā ʒvj
Tinct. Tolutan. gtt. xx misce.
Fiat Linctus.

## *Pertussis, or Hooping Cough.*

This complaint, called also tussis ferina, is a disease unknown, probably, to the old writers; and is supposed to have been conveyed into Europe from Africa, or the East Indies: the Greek and Arabian physicians make no mention of it, and indeed it has not been well understood in any part of Europe, till of late years. Hence, probably, its great fatality in Stockholm, where, from the year 1749 to 1763, inclusive, 43,393 children are reported to have sunk under it. Even Willis supposed its seat to be in the breast, but Harvey makes it a disease of the stomach, and Astruc an inflammation of the larynx and pharynx, produced by an original affection of the former, from indigestion. He seems to have been one of the first that discarded the use of oily and pectoral medicines, (which, indeed, some prac-

titioners have since been weak enough to revive;) though he advised bleeding too indiscriminately.*

This disorder furnishes another proof of the observation made on the impropriety of submitting the complaints of children to improper hands—the care of old women, and frequent change of air, being all that this disorder is, by some people, thought to require:† but perhaps the maxim was never worse applied. There is, indeed, a milder sort of hooping-cough, as there is of every disease, which calls for very little medical assistance; and it is always in such cases that matrons and old nurses acquire their credit. But there is no complaint of children with which I am at all acquainted, in which medicine is at times more evidently serviceable, than a bad hooping-cough.

This disease is certainly highly infectious, and one of those that never appears a second time. It more commonly takes place between the age of four months and twelve years; but may attack at any time, adults being liable to its influence, though much less so than children. It often begins as a common cough, and is attended with

* See his Diseases of Infants.

† If this be true to any degree, so that children, with very little assistance from medicine, have seemed to get rid of an obstinate hooping-cough, by removing from one air to another; it is not improbable, that this may have arisen as much from getting out of infected beds and apartments, which might keep up the contagion, through the medium of respiration, as from any specific influence of the air, merely resulting from a change.

the usual symptoms of having taken cold, but in its progress soon becomes more severe; though the longer it may be before it plainly discovers itself by the *hoop*, the more favourable it is likely to be. A flux of rheum frequently comes from the mouth, nose, and eyes, and the food is thrown up, together with a viscid phlegm, (often in great quantities) in the coughing fits; between which the child generally appears to be perfectly well, and eats its food very heartily. These are the more common symptoms; but when the disease is violent, and has continued for some time, they become greatly aggravated, especially in the night, and the child will seem almost strangled in each fit, the face and neck becoming perfectly livid, till by a violent effort, attended with a hoop, it recovers its breath; the blood will likewise sometimes rush from the nose and mouth; and I have in two or three instances seen the eye-lids as black as if injured by a violent blow, and remain so as long as the cough has continued severe. When taken in time, however, and properly treated, the hooping cough is rarely fatal, and scarcely ever but to young infants, and never, as long as the patient is free from fever, or other disease.

It has been thought by some practitioners, that little more is required than emetics, and gentle laxatives, in which view it was, that the late Dr. James recommended his powder; though a late writer* has very imprudently wished to

* Mr. J. G. Jones.

discard the former altogether; whilst others have conceived, that this disorder will run a certain course, according to the degree of its violence, and the age and constitution of the patient; that no medicine tends much to shorten its duration, and that frequent change of air is the most appropriate remedy, as I was told very lately in a consultation with a very respectable physician.*

* This very popular opinion is supported by the authority of Dr. Darwin, and of Dr. Heberden, who in his Commentaries on Diseases, p. 435, says, "Experience has instructed us, that a change of air is of singular use in abating the force, and shortening the stay of this distemper." The efficacy of change of air, as a remedy for the hooping cough, is, however, much more limited, than many persons are willing to believe; and if by the expression "change of air," we are to understand, what many persons consider as synonymous, exposure to the open air, much mischief will often be produced. The hooping cough is rarely a dangerous disease, unless an attack of inflammation of the lungs supervenes. This then, is to be carefully guarded against, and one of the means of prevention is, to avoid exposure to an intemperate, or cold, or bleak air.

I am not acquainted with many, if with any instances, in which the "force of the disease has been abated" by change of air, and should not recommend it for this purpose; but I have often witnessed its usefulness "in shortening the stay of this distemper" *after its force was abated.* I believe that change of air is seldom advisable (unless the patient be placed in a house particularly close and unventilated) during the active state of hooping cough; but when the violence of the complaint is subdued, it is highly beneficial, particularly if the change be from a cold situation to one of warmer temperature, or when the coldness of winter, and the bleak east wind of March, is changed to the more genial warmth of spring, and the mild western breezes of April and May.† But even then much discretion is required to regulate the time and mode of exposure to the open air, otherwise ill consequences are likely to ensue.

S. M.

† The Breezes of April and May, this year, 1832, have been from the East generally, scarcely at all from the West.

But the fact is, that many other means are useful, and not unfrequently indispensably necessary, unless we would suffer the patient to be strangled in a fit of coughing, or fall into a decline, from the injury which the lungs must endure by a frequent repetition of such violence.

It must be exceedingly apparent, from the above history of the disease, that its various symptoms demand a considerable diversity in the treatment. The more important ones are, the state of inflammation, sometimes inducing peripneumony; the quantity and viscidity of the phlegm; and the spasmodic affection, and danger of suffocation; together with the exhausted state into which the patient may be reduced by the long continuance of the disease. If the breathing therefore be difficult, a blister is indicated, which, if the child is not very young, may be kept open for two or three weeks; or, what is sometimes preferable, the repetition of a small one, once in six or eight days; or a plaster of equal parts of the emplast. lythæ; and emplast. ceræ. If the face should be very livid, and swollen, during the fits of coughing; if any vessel give way; or the patient be plethoric, and more than two or three years old; or should be hot between the paroxysms; a little blood ought to be taken away, and a saline draught be administered every six or eight hours, and the bowels kept open, till the fever shall disappear. Otherwise, if none of these symptoms attend, bleeding does not seem, in general, to be indicated, nor much purging,* but may rather have

* Yet such a use of some aperient medicine, as shall secure one effectual motion daily, is often beneficial. S. M.

a tendency to protract the disease, by increasing the spasmodic disposition, and by weakening the patient. On the other hand, stomachic cordials, such as the oil of cloves, and bitter tonics, are often exceedingly useful.

There are instances, however, of a febrile diathesis continuing even in infants, after repeated bleedings by leeches or otherwise, blisters, and the use of various febrifuge remedies; and has then appeared to arise from the state of the bowels; and that not only when in a confined state, the stools in such cases being of a very dark colour, as in adult bilious subjects, and unusually fetid. Calomel, and repeated aperients, are here the appropriate remedies; and on which account it is of importance to examine the alvine discharges, whenever a febrile state is kept up, after the use of cooling medicines, bleeding, and other appropriate remedies.

In every case, if there be an inclination to vomit, it ought to be encouraged, unless the phlegm be brought up with great ease in almost every fit of coughing, in which case, nature seems able to accomplish the business herself, and it will then oftentimes be sufficient to keep the body open by the mildest laxative medicines. But it very rarely happens, unless in infants at the breast, that some kind of emetic is not necessary in the first stage of the complaint. The disease indeed frequently requires no other medicine, and often some of the preparations of antimony will be the most proper, for they frequently keep the bowels open, as well as produce vomiting. Ex-

perience will soon demonstrate which of the preparations of antimony is best adapted to the age and constitution of the patient.

If the cough should happen to be more violent at any particular time, the emetic should be given a little before the paroxysm is expected. Or perhaps a better method, at least in some cases, and particularly in very young children, is, to give tartarised antimony in small doses, together with a few grains of magnesia, or prepared oyster-shell powder, (according to the state of the bowels) three or four times a day, so as to keep the stomach in such an irritable state, as shall secure a gentle puking every time the fits of coughing come on. But in whatever way this medicine be directed, it will prove of no service if it does not excite vomiting, and must therefore be given in a dose suitable to the strength of the stomach, which is exceedingly various, not only at different ages, but in children of the same age, and of the same apparent habit of body. If one preparation of antimony may have any advantage over another, they have all much more over every other emetic I have made use of; the ipecacuanha, and oxymel of squills, being exceedingly unpleasant, and the latter as far as my experience goes, usually more uncertain than any other emetic.*

* It may be doubted, whether antimonial remedies possess such decided advantages over ipecacuanha, as Dr. Underwood seems to have believed. On many occasions ipecacuanha is found to exert a most beneficial effect; it may be given in

Such a plan is all that will be necessary in the common hooping-cough; but there are many cases which will require other means, and demand all the skill of the experienced physician. The cough, for instance, will sometimes increase not only for days, but for weeks together, and the strangulation be exceedingly alarming. In this case, the lac ammoniaci, but especially assafœtida, frequently proves a sovereign remedy, and though exceedingly nauseous, many children will take it tolerably well for the short time it appears to be absolutely required; and when they will not, it may be administered by way of clyster, dissolved in a small quantity of penny-royal, or common water. These medicines, however, will be very improper in the advanced stage of the disease, when attended with hectic heat, hæmorrhage, or other phthisical symptoms; a caution equally necessary in regard to the bark, which in the absence of these symptoms, and after the stomach and bowels have been well cleansed, is frequently very useful at the latter stage of the disease, when the patient has been exhausted by its long continuance. Upon the same plan with the assafœtida, camphor, and castor, are frequently beneficial, and have the advantage of being less nauseous, but I think proportionably less powerful. I take no notice of tincture of cantharides, though strongly re-

various forms, so as to be but little unpleasant, and it is generally more certain in its operation as an emetic than antimony. S. M.

commended by some writers, because I have had no experience of it myself, and indeed have never found any necessity for trying it. For the like reason I say nothing of arsenic, recommended by Mr. Simmons of Manchester.*

It will sometimes be of no small service, to rub the hands, and the soles of the feet, with the spirit ammoniæ comp. several times in the day; or the spine of the back, and the pit of the stomach, with oil of nutmeg,† or oil of amber; but as the smell of the latter is very unpleasant, it may be dispensed with, where the spasms are not exceedingly urgent. But when they are so, this oil is sometimes very useful, particularly when administered internally; and children of three or four years old will take a few drops of it very well, mixed in a spoon with a little Lisbon sugar; from which I have seen as evident advantages, as from any medicine whatever; and in certain cases, it has succeeded after all the other means I had made use of had failed. But frequently, no anti-spasmodic is equal to opium, in this, as well as in other diseases. With this view, a few drops of laudanum, or if a pill be preferred, two or three grains of the pil. è styrace, and to younger children, a small tea-spoonful of syrup of white poppies, taken at bed-time, will not only quiet the cough, and remove the stran-

* See Duncan's Annals of Medicine, for 1797.

† The futile remedy sold under the name of Roche's Embrocation, is said to consist of olive oil, mixed with about half its quantity of oil of cloves and amber. S. M.

gulation during its operation, and procure the patient some rest, by which the strength will be recruited, but in many cases seems to have a kindly operation on the disease itself.* It is in this way, I doubt not, that the cicuta has gained so much reputation, but I believe, it is no otherwise a remedy for it than as an anodyne. From a mistake, however, in this respect, the strong manner in which this medicine has been recommended by Dr. Butter, has certainly done harm; as I have known people depend solely upon it in very bad cases, to the exclusion of other remedies evidently indicated, which would, at least, have shortened the disease. Joined with emetics and other means, as the symptoms may indicate, it is, nevertheless, a valuable medicine; and where the form of a pill be, on any account, objected to, may be dissolved in a little water, or syrup. Instead of the ol. succini, the following will often have a good effect, in children of four or five years of age; acting both as a tonic cordial, and ultimately a sedative.

℞. Olei caryophil. aromat. gtt. xxiv
Sacchari purissimi ʒiss
Muc. gum. arab, ℥iij
Simul optimè terantur, addendo gradatim
Aq. cinnam. ℥iss. vel ℥ij
Aq. distil. ℥iv.
ft. mistura, cujus sumatur cochl. j. largum tusse appropinquante, vel statim post tussem.

* The draught recommended by Dr. Richard Pearson, in the Medico-Chirurgical Transactions, sometimes answers a very

If obstructions in the lungs be suspected, blisters should be applied, and recourse had to gentle deobstruent medicines; but at this period, the cure is chiefly to be accomplished by perseverance in cooling laxative medicines, by a vegetable and milk diet, (especially asses' milk) pure air, and gentle exercise.

The cough, after having disappeared for a week or more, is sometimes found to return with great violence, especially upon taking cold; but a gentle purge or two, a vomit, and abstaining from heavy food, generally remove it in a very short time. Should this fail, a grain of assafœtida, taken two, three, or four times a day, according to the age of the child, never fails to check it immediately. If these cautions should be neglected, the cough will oftentimes prove extremely tedious. And in this case I have known the lichen, or ash-coloured ground liver-wort, prove an excellent remedy. One ounce may be boiled in two pints of water, to one; and a table-spoonful may be given two or three times a day to infants of a year old: or a like decoction may be made of the oak-lungs, (lichen pulmonarius) or of the lichen islandicus. These have had an immediate good effect where infants have appeared to be going fast into an hectic state, after the cicuta, ol. succini, and

good purpose. It may consist of one drop of laudanum, from five to ten drops of ipecacuanha wine, two or three grains of subcarbonate of soda, and a little syrup and water. This dose is suitable for a child upwards of a year old, and is to be repeated two or three times a day. S. M.

cortex peruv. have failed, or the disorder has hung on unpleasantly.

A mode of cure of a very different kind has lately been announced by Dr. Struve, of Gorlitz, and may be noticed in this place, as worthy, at least, of a trial in obstinate cases, and in a conjunction with other means; though with a caution to young practitioners, in regard to infants and delicate children.

After prescribing an emetic, the following mixture is directed to be rubbed in every two hours, in small quantities, about the region of the stomach.

R. Antimon. tartarizati ℈j.*
Aquæ puræ, ℥ij.
ft. solutio; cui adde
Tinct. cantharid. fort. ℥j.

In various instances, the Doctor observes, that a gentle prespiration came on during the night, after the use of this application; that the violence of the cough immediately abated, and in a short time the symptoms totally disappeared.

In the like view of an auxiliary, I shall notice the experiments on inhaling the nitrous vapour, made by Mr. Paterson, surgeon to Forton Hospital. This he has not only proved to be perfectly harmless in very young children, in the mode recommended for fevers by Dr. Car. Smith; but was of very probable benefit in four of his own children, in all of whom the disease proved at least to be very slight.

* In Paris's Pharmacologia, the quantity of antimon. tart. is stated to be 3 i. S. M.

The only thing that remains to be spoken of is the proper diet, which is, indeed, of considerable importance; and for children, even of five or six years of age, ought to be little more than milk and broths. These are easily digested, and will afford them much more good nourishment than any kind of meats, and will sit much lighter on the stomach than puddings, or pastry, the latter of which is exceedingly injurious. The objection made by old nurses against milk, that it breeds phlegm, is utterly founded in a gross mistake, that cannot be too frequently controverted. It has, indeed, been sometimes mentioned by a certain class of medical people, but the objection is so truly unphilosophical, and unlike the objections of thinking men, that it scarcely deserves a reply. Should the milk, however, be found to curdle remarkably soon on the stomach, a little common salt, Castile soap, or testaceous powder, may be added to it occasionally, or asses' milk may be substituted for cow's. These light nourishments soon pass out of the stomach, or if brought up by coughing fifty times in the day, (as I have known them to be) a child of four, or five years old, will immediately take more of them with avidity; and will be better supplied in this way, (I mean by taking a tea-cupful at a time) than by making set meals, or taking a large quantity at once. If the child should be thirsty, a little apple-water, toast and water, tamarind tea, and other thin drinks, will be pleasant and useful. Patients treated in this way will get through the complaint, if not severe, in a very

short time; and where it proves violent, a child will struggle through this long disease, without any considerable loss of strength, or will be very soon recruited by a decoction, or cold infusion of the bark, together with gentle exercise, and country air, the best restoratives after every kind of disease.

## *Tussis Spasmodica.*

Much akin to the former complaint, is a troublesome cough, properly enough denominated spasmodic, or convulsive. In a certain state of the air it is sometimes epidemic, and young children, and even infants in the month, are then attacked by it, as well as adults. The irritation seems to be about the larynx, or a very little lower down, and is exceedingly distressing at the time of coughing; but the patient, though an infant, seems immediately afterwards to be quiet and comfortable. This cough is not usually attended with fever, nor other ordinary symptoms of a common cold, nor is it to be relieved by the like means; the cough remaining dry and hoarse under the use of pectoral remedies.

Children of two or three years old may be cured by the cicuta, and gentle laxative remedies; but the former being less adapted to infants in the month, such may take a few drops of the syrup of white poppies, three or four times a day, and their bowels be carefully kept open; which means seldom fail of removing the complaint in a

few days. Should the syrup constipate the bowels, or otherwise disagree, the sp. ammon. succinat. may be tried in its stead; which is a good medicine in other dry convulsive coughs, where there is no fever.

I have met with this complaint very frequently in children from two to four years of age, in some of whom it had been of several weeks standing, and after various remedies for coughs had been made trial of. In every instance, the complaint has been immediately relieved by the cicuta, and in a week or ten days been usually removed. The like good effect has attended an infusion of the oak lungs,* after many of the ordinary remedies for coughs have failed; it may very well be administered together with the cicuta, if that should not be soon attended with good effect.

There are, however, some more formidable cases, in which the symptoms are greatly aggravated, and children continue longer in a convalescent state. I have also been called to visit some under all the semblance of approaching death, with profuse sweats, rapid and feeble pulse, and laborious respiration, supposed by able physicians to be sinking fast under peripneumonia notha, or the true pleuritis, though with more obscure fever.

Although reduced to this state, under the best conducted antiphlogistic plan, yet has a recourse to the cicuta succeeded equally well, giving immediate relief to all the symptoms. But a degree

* Lichen Pulmonarius.

of dyspnœa, all along merely spasmodic, having, in some cases, still continued, it has been found expedient, after a week or ten days, to have recourse to the bark. At the same time, the violence of the cough, attended with very copious secretion of phlegm, which young children seldom spit up, has required two or three gentle emetics, which have then not failed having a happy effect: though, administered previously to the cicuta, I have known them greatly aggravate the symptoms, probably, by increasing the debility, and disposition to spasm.

As many practitioners, not very conversant with this complaint under its more aggravated appearances, have been led to consider it as inflammatory, so others, from the continuance and violence of the cough, have expected it to terminate in the hooping cough, but have been equally mistaken; this being a distinct species of spasm, and never attended with the true hoop.

Mr. Moss speaks of a spasmodic cough, different, he thinks, from any previously described,* and probably an endemic of Liverpool, resembling, however, the humoral asthma of adults, (he says) more than any other.

It is said to commence a few days after birth, and to continue for several weeks, or sometimes for months; and in either case so commonly proves fatal, especially amongst the lower class of people, that Mr. Moss is at a loss to suggest any appropriate remedy.

If it be truly an endemic, I can probably judge

* An. 1781.

but very imperfectly of it; but from many circumstances in the spasmodic cough described in this chapter, it does not seem unlikely that the cough at Liverpool may be of the same kind. What the former might become, if very long neglected, or improperly treated; or in what time it might prove fatal, I am not prepared to say; having always soon succeeded in its cure by the means I have recommended; which may, possibly, be worthy of a trial at Liverpool, as they will not set aside the little general remedies in use. To these may be added, the use of musk, camphire, Peruvian bark, and quassia, which appear to have been given with success in the spasmodic I have described; but whether preferable, in general, to the plan here recommended, time alone can determine.

## *Suffocatio Stridula.*

The croup, or acute asthma, is a complaint somewhat similar to the two former; to which, perhaps, children only are liable,* called, therefore, asthma infantum spasmodicum, also suffocatio stridula, cynanche trachealis, and esquinancie membraneuse. It is more probable that it is not contagious; as besides other negative evidence, it appears that in Chesham poor-house, where there were nearly thirty children, only one had the croup, though it was much in the town at that time, in the years 1793, and 1794.

* Unfortunately events have shewn that adults are not altogether free from an attack of the true croup. S. M.

Though this complaint has for several years infested this country, it has been greatly misunderstood both by writers and practitioners; there being certainly two species of it, perfectly distinct, and requiring very different treatment; the one being acute or inflammatory, the other chronical, or spasmodic. These seem to have been confounded by some authors, and one of them, perhaps, not known to others. Neither of them are often found to attack those who have arrived at the age of ten or twelve years, and according to Dr. Millar, the spasmodic chiefly seizes infants newly weaned; and is then the most severe. The acute croup, however, has appeared in children from within the year, to the fourteenth year. He is, perhaps, the first person in this country who has written particularly on this species; but Dr. Home has treated more distinctly on this complex disease, which had, however, been mentioned by some German writers, and well described by them, long before it was noticed in Britain.

Remote causes of this disorder may, possibly, be the lax fibres of children, the abundance of moist humours natural to them, and the vast secretion from the bronchial vessels; and perhaps the change of food from milk, which is easily assimilated, to one requiring more digestion.

The prophylaxis is the same as in most other diseases peculiar to children. If this complaint arise from the laxity of their solids, (which is certainly not always the case,) the quality of their food, and the natural weakness of their

organs of digestion, the general means of prevention, as well as of cure, will be readily indicated. Their food should be such as may be easily digested, and may prove nourishing. A due proportion of milk and broth,* (taken either separately or mixed) whilst children are very young, or light meats when they become older; good air and exercise, and a careful attention to the state of their bowels.

The proximate cause of the chronical croup is the presence of spasm, howsoever excited; the cause of the inflammatory, is a morbid secretion of a viscid mucus in the trachea, adhering so firmly to its sides as to impede respiration. The quantity and viscidity increasing, gradually lessens the diameter of the part, and if it effect this to a considerable degree, the disease must necessarily prove fatal.

The symptoms of either kind are spasmodic, being such as would be produced by any thing constantly irritating the trachea, or diminishing its diameter. They will therefore very much resemble those of the nervous asthma, but the complaint differs materially from the common spasmodic asthma of adults, in the peculiar croaking noise made in respiration, (from whence it has its name) and in the violence of the paroxysms; which, however, when the disorder is light, and in its commencement, leave

* A diet of milk only, even in adults, when long persisted in, though otherwise proper, will create flatulencies.—*Barry, on Digestion.*

no apparent indisposition, save a certain dulness, and a sense of fear, in children capable of expressing it. The fits, especially in the spasmodic croup, frequently terminate by sneezing, coughing, or vomiting, and return without any regularity. It is attended with a sharp, and shrill voice, and a flushed countenance, which grows livid during the paroxysms.

Dr. Millar, who has written largely on this disease, (I apprehend, as it appears in Scotland), divides it into two principal stages; in the latter of which no method of treatment has appeared to him to be effectual, but medicine is never more efficacious he thinks, than in the first, if the disorder be not combined with some other, and it be taken in time; though the crouping may be very considerable. This I saw remarkably exemplified in the first instance I met with, which was in a little boy of my own, who was nearly cured in two days. The sovereign remedy he directs is assafœtida, which should be administered both by the mouth and in clysters, in doses according to the exigency of the complaint; and where no marked inflammation has taken place, may be given very freely; and afterwards the bark, when the spasms remit.

This account of the disease can, however, apply only to the spasmodic, and is not the disorder usually known in this city by the term croup, but a mere spasmodic complaint, totally unaccompanied with inflammation; at least is so, whenever assafœtida is thus useful in the first instance. And this seems to be further evident

from the recovery of such patients, and the consequent want of proof of the existence of that tough membrane found in those whose bodies have been examined after death; in whom the disease is always of short continuance after the croup, or croaking noise in respiration, has taken place. Whereas, the other kind of croup has sometimes been known to continue for two months, and then has yielded to opium. Instances have likewise been met with of children crouping for two or three days, and being then seized with hooping-cough, which has instantly removed the croup: these circumstances seem to prove that species of croup to be truly spasmodic. I have seen it repeatedly in this form attend the cutting of teeth; being then the mere consequence of irritation, as we see cough, and various other symptomatic affections induced at this period. How far Dr. Millar may have mistaken what he calls the two stages of the croup, for two very different species of this complaint, has been hinted already. From my own experience, however, which has been considerable, as well as his authority, it seems very proper that a trial should be given to the assafœtida, when there is no degree of fever, and the child seems little, or no wise indisposed, in the intervals of the crouping. Emetics likewise will sometimes be found necessary,* as will the cicuta

* In one instance, medicines of this class were given in such uncommonly large doses, that it may not be amiss to notice them here.

From beginning with one grain of pulv. antimon. which was

and bark; one or other of which must be persevered in, as long as any symptoms of the disease, and particularly the croaking noise, shall remain. And from the success attending this practice, and a proper discrimination of the disease, (one species being often mistaken for the other,) there may be more room for hope in this cruel disorder, than some practitioners have been induced to think.

But the other species of croup is a most dangerous disorder, being truly inflammatory in the first instance, and is, I believe, always attended with a quick pulse, cough, and laborious breathing very soon after the croaking noise has taken place, and sometimes before it, with a sensible fulness about the fore-part of the throat; although at the time of the attack other children have appeared in perfect health.

It does not, however, always seem to be an original disease; being sometimes a consequence of bad fevers, especially the febris scarlatina, as well as of some chronical disorders that have reduced the patient's strength, and is then much

several times repeated, the child (under three years of age) took afterwards a drachm, and two drachms of vin. antimonii; then pulv. ipecacuanhæ ℈ss. grs. xv. and ℈j, to which was added gr. j antimon. tartarisati: and at length gr. x. and afterwards ℈j of vitr. album. The trial of emetics was then given up for several days; at the expiration of which he took oxym. scillæ ℥iij. with ℥j. vini antim. which succeeded better than any thing, though it puked him only very moderately; but continued to do so for the three or four times that he took it.— For remarks on the inertness of emetics and purges, see p. 113.

more dangerous. But the worst kind frequently appears to arise from the same causes as the malignant sore throat, only having its seat lower down, and is therefore more severe. And it has, in several instances, accompanied it, as may be known in the early stages of that complaint, by the croaking noise peculiar to the croup; and, I believe, is in such instances generally fatal. It has likewise accompanied the last stage of the putrid thrush, and has then carried off the little sufferer in a few hours. The croup has likewise been found to hang on for several weeks, like the spasmodic croup, without any alarming symptom, and has even disappeared, and suddenly recurring, has ended fatally in a very few days, before the child has seemed to be in danger, and after eating an hearty meal. An instance of this kind, with the appearances on dissection proving the nature of the complaint, is given by Dr. Edlin, of Uxbridge, in the Medical Review and Magazine for June 1800.

On the means of cure for this species very few directions will be necessary; the disease (except in rare instances) being always short, and the treatment very evident. Bleeding is always necessary, if the physician be called at the commencement of the disease, or stridulous noise; and if the patient be visited too late to endure this evacuation, I believe no hope can remain of his being benefited without it, unless the infant be very young; which, however, in another view, cannot but add to the danger. If the patient be three or four years old, and plethoric, a pretty

copious bleeding by the lancet may be the preferable mode; but if much younger, or of a delicate habit, four, six, or even more leeches should be immediately applied to the throat,* especially if there be any perceptible fulness of that part, and a blister applied to the nape of the neck. The patient may likewise breathe the vapours of warm water with vinegar in it, or an embrocation be constantly applied, by compresses of linen, to the foreparts of the throat. After the leeches and blisters, a vomit should be administered, and the sickness kept up for several hours, or even days, by small doses of the antimonial powder; which will generally succeed if had recourse to within six or eight hours of the commencement of the disease. If the bleeding, whether topical or general, should afford no relief, or if after an evident amendment, any exacerbation come on, leeches should be applied to the throat, and the vomiting kept up. At the close of the complaint, and to prevent a relapse, the bark proves highly serviceable, and will also restore the strength of the patient.

In the fifth volume of the Memoirs of the Medical Society, are some good practical observations on this disease, by Mr. Field. He prefers general, to topical bleeding, when called early in the disease; advises the body to be kept

* In this case, as in many other, the application of cupping glasses appears to me decidedly preferable to leeches. The quantity of blood removed is accurately ascertained, and is obtained in a much shorter space of time; both of which are very important advantages. S. M.

soluble, but dissuades from great evacuations by stool; objects to blisters to the throat; but recommends the following embrocation.

℞. Aquæ ammoniæ acetat; ℥ij.
Spir. æther. vitr. comp. ℥j.

or for very young children, equal parts of these, and of water,

He thinks he has reason to conclude the disorder to be contagious; but as he has not mentioned the ground of his suspicion, the opposite presumption, from the accounts from Chesham is the more probable one.

The French writers likewise depend much upon emetics, and afterwards lenient purges, and to prevent a return, advise aperitives, stomachics and tonics, particularly preparations of steel, and natural chalybeate waters.

In the Kingdom of Ireland, particularly about Mullingar, in the county of Westmeath, where there are many lakes, the croup is a very common complaint, and equally inflammatory and dangerous as amongst us. It is likewise apt to return, (though seldom so violently as in the first instance,) if the patient ventures abroad too soon, and is exposed to the bad air of that quarter. The method of treatment there is somewhat different from ours, blood being immediately drawn from the foot, instead of the throat or arm, and often in a large quantity, the child being placed, at the time, in a warm bath; a blister is then applied between the shoulders, and the bowels are kept open, chiefly by clysters. Emetics are not had recourse to, nor indeed, any means but the above; for unless the violence of the complaint

abates very soon, the child is thought to be past recovery. The complaint is, possibly, not perfectly understood in this quarter, and in the northern parts of that kingdom neither this species, nor the chronical croup, is at all known, according to my information.

In North America, a very different mode of treatment has been adopted; calomel being recommended as a most successful remedy, after bleeding and the application of blisters, (when peripneumonic symptoms attend,) and the ordinary remedies of emetics and purges. Dr. Rush of Philadelphia, is so sanguine in regard to it, as to assert, that the bark is scarcely a more certain remedy for intermittents, than calomel, when thus administered, is in this species of cynanche.

In a former edition I merely announced the sentiments of Dr. Rush, having then had no opportunity of making trial of calomel, his observations having but just come to hand. Since that time, however, I have made trial of calomel with success, though I do not feel myself warranted to speak of it in the strong terms that Dr. Rush and some others have adopted. Together with calomel, I have found it necessary to have recourse also to emetics and repeated bleeding with leeches, even in young infants; the former being administered frequently, so as to keep an infant throwing up as often as it crouped throughout the day. Mr. Anderson, senior, of Edinburgh, testifies the merit of this medicine, after other means had failed, and the patients lives been despaired of: other accounts, however, by Dr.

Rumsey of Chesham, are far less favourable; the exhibition of calomel, together with emetics and other remedies, failing of success in ten cases out of nineteen; and the disease evidently less severe in the nine which terminated favourably. But Dr. Hamilton speaks equally favourable of calomel, given in frequent and large doses, until the breathing be relieved, and then to be immediately abated: this, together with the warm bath, with which he always begins, having succeeded in almost every instance. Upon the whole, every reader, from these statements, and his own experience, will judge for himself; whilst the author, from his own, has no doubt that calomel will be highly useful, whilst bleeding, the warm bath, repeated emetics, and a blister to the throat, are very essentially necessary.

In Dr. Ferriar's Medical Histories and Reflections, vol. iii., there are likewise some very good observations on this disease; which he also has very properly divided into the acute and spurious. In the former he remarks certain precurrent symptoms whereby this dangerous disease may be foreseen; but I am satisfied, this is not always the case: though much deference is due to his great attention to this sad disorder, and the very considerable experience he has had. The treatment recommended is very agreeable to that I have laid down; but with the addition of one remark, very worthy of attention, viz. that the venesection should be very copious, and nearly *ad deliquium*.

Some years ago, Dr. John Archer, of Harford

county, Maryland, in America, strongly recommended the seneka-root, (Polygala Serega. Linn.) as an almost infallible remedy in this diease. I shall therefore present the reader with the doctor's account in his own words, in a letter he wrote to Dr. Barton, of Pensylvania College.

"I have in a great many instances found a decoction of the *Seneka* the most powerful medicine in the cure of this disease, and I am happy to tell you that I believe it may be depended on. I make a strong decoction of the root in the following manner, viz. half an ounce of the seneka in coarse powder, is boiled in eight ounces of water, down to four. Of this I give a tea-spoonful every half hour, or hour, as the urgency of the symptoms may require; and at intervals a few drops, to keep up the stimulus, until it either acts as an emetic or cathartic. I then repeat it, in smaller quantities, so as to preserve the stimulus of the seneka constantly in the mouth and throat.

"If the disease be more advanced, and the breathing more difficult, with a peculiar harsh or shrill sound, like air forcibly drawn through a small aperture; attended with a retraction of the upper part of the abdomen under the cartilages of the ribs; I then give calomel freely and frequently, and rub mercurial ointment on the throat and contiguous parts, so as to affect the glands of the throat and mouth, as quickly as possible, This I do that the mercury may co-operate with the action or stimulus of the seneka, and thereby hasten the separation of the membranous substance formed in the trachea.

"In this method I have succeeded in the cure of the croup, even beyond my most sanguine expectations."

Having never made trial of the seneka in this disease (though I have found it very useful in the latter stage of pleurisy) I have only to remark upon it, that I am informed it has been successful in this country, in one or more very bad cases, and seems to be very similar to the repeated doses of emetic tartar that have been recommended in this chapter; while the exhibition of calomel, and mercurial ointment accord with the application of blisters. Which of these means may be the more successful; or how far the application of leeches, at the commencement of the disease, may be safely dispensed with, actual experiment only can determine.

Instances of success likewise with the tinct. digitalis, (as directed by Dr. Maclean) have been twice announced by Mr. Custance, of Kidderminster. The last was in a child of two years of age, to whom gtt. vi. were administered every six hours. A great recommendation of this medicine is, that it succeeded in all the three cases; which were the only ones in which Mr. Custance had an opportunity of trying of it.*

I have examined the trachea after death in only three patients, in two of which I found the precise appearances described by Dr. Millar and others; the wind-pipe being lined with a tough viscid coat, so as mechanically to close up the pas-

* Medical and Physical Journal, vol. iv.

sage.* The third instance was in an infant who died suddenly of the hydrocephalus, a few days after appearing to be recovered from the croup.

## *Rachitis, or Rickets.*

This is comparatively a late disorder in Europe; Astruc observes that England is said to be the part in which it first made its appearance, and that it was then described by Glisson and Mayow; but he thinks it probable, that it appeared at the same season over all Europe, through the coldness of the weather. It was named Rachitis, from the Greek, implying that the spina dorsi is particularly affected by it;† though it rarely attacks the spine till the disorder is far advanced.

* It has been recommended, if an energetic trial of other remedies does not stop the progress of the disease, to perform the operation of tracheiotomy, and some instances have occurred, in which the patient's life has been preserved by this operation. In a case, which I attended with Mr. Lightfoot, this operation was proposed as a last and only remedy; it was performed by my much esteemed friend, the late Mr. Chevalier, and was completely successful. The particulars are detailed in the sixth volume of the Medico Chirurgical Transactions.
S. M.

† From this circumstance, it has been supposed to have been known in the time of Hippocrates; but his remark (*Aphor.* § 3. 26.) is certainly too concise to establish the point; as it is simply observed, that among other complaints, infants after the

It was first noticed in the western parts of England,* about the year 1628,† and is said to have taken place upon the increase of manufactures, when people left the villages and husbandry, to settle in large manufacturing towns; where they wanted that exercise, and pure air, which they had enjoyed in their former situation and employments.

This is a pertinent observation to have been made at that time, and accords with late experience and facts; manufacturing towns, abounding with this disease above all others, especially among the poor. It may, therefore, frequently arise from unhealthy parents, especially from mothers who pass too sedentary a life in a bad air, and feed upon a weak and watery diet; from children's food being weak, watery, or too viscid to be properly digested; but above all, perhaps, from bad nursing, and children being left wet, dirty, or exposed to a cold, moist air,‡ without

period of dentition, are liable to παρισθμια σπονδυλου τον κατα τὸ ἰνίον εισω ώσιες.—In *Mons. Le Febure de Villebrune's Greek* edition of the *Aphorisms*, there are, however, some observations tending to evince, that this disease is of an older date, by some centuries, than it has been generally imagined; and this, from the nature of the disease, is not unlikely.

* See Glisson. † Primerose.

‡ From the experiments made by Drs. Beddoes, Withering, and others, upon atmospheric air, and its relation to diseases, it cannot be at all surprising, that this disorder, particularly, should often be owing to foul air, in which what has been lately termed the azote is too predominant. And it is worthy of remark, that this complaint is scarcely known in very hot climates.

sufficient covering; from want of proper exercise, and from close and crowded apartments. On this account, children of poor people are particularly liable to this disorder: parents and governors of workhouses, charity schools, &c. ought therefore carefully to guard against the last-mentioned causes. Or lastly, from the habit of body being reduced by the long continuance of almost any of the complaints hitherto considered. From these sources arise what may be termed its proximate causes: such are, a load of undigested juices in the stomach, intestines, and all the first passages: an universal viscidity in the extreme vessels, especially of the joints; a corrosive acrimony from a too languid circulation, and a general obstruction in the fibres of the muscles.

The usual symptoms of rickets are soft flesh; bloated, or a very florid countenance; weakness; dislike to motion; with enlargement of the belly, head, and joints. The wrists and ankles enlarge first, afterwards the back and breast bones; and, indeed, all the bones swell and become soft, especially the more spongy ones. The pulse is quick and feeble, and the appetite and digestion usually bad. Teething is commonly late, though not frequently difficult, but the teeth often rot early, and fall out. Great acuteness of mind has been observed in this, and some other chronical complaints. It seldom attacks children before they are six months old, or above two years; the reasons for which are obvious.

As it appears to arise from a general weakness

and relaxation,* the indications of cure are to brace and strengthen the solids, and to promote digestion, and the formation of good chyle. These ends will be promoted by wholesome, and dry food, suited to the age; good bread, or biscuit; and roasted meats, rather than boiled, with a little red port wine. Should the child be too young to eat flesh meats, its diet ought to be chiefly of broths, milk, rice, millet, pearl-barley, salep, and semolina, with spices, if it be not inclined to be feverish. This, however, is sometimes the case in older children, though perhaps too rarely suspected, and requires in that stage of the disease a very opposite treatment; even small bleedings being then found serviceable. The child must above all have good nursing, and especially exercise and air, without being kept very hot or very cold; unless a strict attention be paid to these, medicine can be of but little service. If the child be too young to exercise itself by walking and such like, the nurse, besides affording it every exercise it can bear, may induce the infant to exert itself to no small advantage, by the following easy means. She has only to dash a few drops of water suddenly in its face several times a day, in the manner often done to recover people from a swoon, though less

* Mons. Bonhomme, of Paris, has formed a different and strange theory of the nature of this disease; and recommends very strongly the internal exhibition of phosphate of lime and phosphate of soda, together with an external washing with an alcaline liquid made by dissolving half an ounce of common potash, or sal tartari, in a pound of very pure spring water.

violently. This will oblige the infant to put almost every muscle into action, by which the blood will be forced through the minute vessels, and many of the advantages of exercise produced, and in a more powerful manner. To the same end, linen cloths wetted with cold water, with the addition of a little spirit of any kind, may be applied to the arms and legs, or to the spine every time the child is dressed or undressed, especially if the bones of these parts are become enlarged or distorted by the disease. The parts should afterwards be rubbed very dry with a piece of warm flannel.

If the child be of a gross habit, the eighth part, or a quarter of a grain of ipecacuanha, taken once or twice a day: gentle pukes, and very brisk purges, especially of the pulv. è scammonio cum calomel, prove of use. The tinct. aloës comp. is also a good medicine, a few drops once or more in a day, (as may suit the state of the bowels) taken on a bit of sugar, or otherwise. In such habits, all foundation of a cure must be laid in reducing the belly to its proper size, and in strengthening the stomach. If rather delicate, the cold-bath is often of more service than any thing else; but this should not be entered upon in winter, nor without previous purging.* Frictions afterwards with flannel and aromatic powders, or the fumes of frankincense, mastic, or

* While the belly remains enlarged, hard, and tense, the cold bath is inadmissible. Tepid bathing, in water impregnated with salt, is a much more useful remedy. S. M.

amber, especially on the back and belly, will further tend to strengthen the habit.

Besides such means, the cold infusion of bark, and other bitters, especially columba; or small doses flor. martial. tincturæ myrrhæ, or the vinum ferri, have often the best effect. Dr. Temple prefers the following form above any other.

℞. Rubig. ferri gr. iv.
Pulv. rhei gr. iij.
Sacch. albi gr. x.
Misce ft. pulvis, mane et vesperi sumendus quotidiè.

The rhubarb should be increased or diminished, as may be necessary; two stools a day being sufficient.—The following is likewise from him.

℞. Zinci calcinat. gr. ij.
Test. ostreor. ppt.
Sacch. alb. āā ℈j.
Pulv. aromat. gr. xij.
Misce et divid. in chart. vi. quarum capiat unam nocte et mane quotidiè. The rubigo, ferri, and the zinc are to be gradually increased.

It has been before remarked, that under every plan, a good diet, air, and exercise, especially riding on horseback, are of the utmost consequence; which, if duly persevered in, and the state of the stomach and bowels properly attended to, will often effect wonders. A cure, therefore, should not be despaired of under any circumstances, provided the internal and vital parts are not diseased. Besides, this is one of those chronical complaints which seem to be gotten the better of by time, and, like the following

one, wears itself out, as it were, and to which the abovementioned means will greatly contribute.—Sæpe pertinacia juvantis, malum corporis vincit. —(*Celsus.*)

## *Scrofula.*

This is primarily a glandular disease, though in its progress it attacks the adipose membrane, the eyes, the muscles, tendons, and even the bones themselves, especially the joints.* Such, at least, has been the general opinion, though from later investigations there is reason to imagine that is originates in the cellular membrane. It seldom makes its appearance before two years of age, nor later than ten or twelve, unless it be in regard to affections of the eyes, though there are more exceptions in respect to the latter period; and it then often proves fatal, by falling on the larger joints, the lungs, or other noble part. It is frequently observed to follow other disorders, particularly the small-pox, whether taken naturally or from inoculation; also the hooping cough, measles, teething, rickets, and many other disorders already mentioned. Hence, the nature of

* From this propensity to spread, the disorder is said to have taken its name. "Strumæ, vel scrofulæ, sic dicuntur quia frequenter in scrofis, id est, suibus, in collo fiunt; vel a multiplici partu, quoniam sicut sues multos edunt partus, sic in scrofulis ex una postmodum fiunt plures."—(*Tractatus de Morbis Puerorum, Amstelodami*, 1760.) The struma is, nevertheless, a complaint as different from scrofula, as it is from the broncocele, and is chiefly endemial.

this disease is better understood, as it so often falls upon weak and tender habits, either originally of a lax fibre, or worn out by previous diseases; or is gradually brought on by a heavy, indigestible, and bad diet, or a low, wet, and unhealthy situation. It is however, sometimes found to be hereditary, but will very frequently lie dormant for two or three generations, (resisted sometimes by inter-marriage in a healthy family) and afterwards appear with redoubled violence: as well as affect the greater part of a family very much, whilst the rest shall be entirely free from it. It is often attended, or rather preceded, by a peculiar look about the eyes, which are generally large, and a thickness of the upper lip; and sometimes proves a source of ill health through life, but is not usually fatal in the first instance. Long before the external glands become affected, especially in young subjects, the belly is sometimes observed to be hard and enlarged; and after death, the mesenteric glands, the lungs, and even the pancreas have been found diseased.

This is always a peculiarly unpleasant complaint, and frequently does not admit of so much relief by medicines, as many other disorders, yet it oftentimes disappears at the time of puberty, (and sometimes sooner) especially in females; but whether this be owing to the increased strength of the solids, or to other changes in the habit, naturally happening at that period, is not an inquiry proper for this place. On the other hand, after disappearing for several years, during which perfect health has been enjoyed, the humour has

unexpectedly, fallen upon some internal glandular part, frequently the mesentery, occasoning various pains and complaints, often attributed to other causes, and has undermined the constitution; producing ultimately pulmonary consumption, or a fatal marasmus.

Although I thought it very necessary to mention this disease, amongst others to which the state of childhood is liable, I am sensible how difficult it would be to point out any thing like a general, and adequate remedy. At its first appearance, however, bitter, or mercurial purges, are sometimes of use, as are also antimonial vomits; and frequently burnt sponge, and saponaceous medicines, warmed with spices, and continued for a length of time; though it should be observed, that this disorder, like the preceding, sometimes falls on habits of a somewhat plethoric temperament, and may, for a while, demand the interposition of certain antiphlogistic remedies. But when the disease is confirmed, lime water, and decoctions of the woods, together with crude antimony, kermes mineral, sulphur aurat. antimonii, bark, and steel, with wine, and a generous diet, are, I believe, most to be depended upon as internal remedies; from some of which, I have seen no inconsiderable cures effected. As externals, the following has been found useful; ox-gall, with camphor, unguent. hydrargyri, empl. hyd. c̄ cicuta, liniment ammoniæ, and fomentations with cicuta. But in this, as in other chronical complaints, good air and exercise are of the greatest importance. Indeed, the advantage of exercise in

this disease is so great, that I wish to lay a very great stress on it. But then it must be daily had recourse to, and by degrees be so considerable, as to render the patient every night sensibly fatigued. Thus I have known riding behind a carriage, almost without the aid of any medicine, entirely remove the complaint.

When there are external tumours, I am satisfied that the opinion I have already given to the public, in a larger tract on this complaint,* is both rational and safe; and that whenever they are at all disposed to come forward, and not seated on improper parts, they ought to be brought to as speedy a suppuration as is possible. To this end, an epithem of honey, flour, and yolk of egg, should be applied twice a day, and the parts be electrified. The scrofulous virus, when thrown on the surface, so far resembles the cancerous, according to the description of the late ingenious Mr. Hunter, that it is inclined to spread to a considerable extent; but as tumours of the former class will bear rougher treatment than the latter, I am confident that much benefit may arise from the use of external stimulants, by stopping the progress of the disorder in the neighbouring parts, as well as by invigorating them, and thereby disposing the ulcers to heal. Of this kind, are fumigations of hydrargyrus sulphuratus ruber, and hydrarg. cum sulphure. Also, light frictions with mercury, so as to make it pass freely through the lymphatics of the distempered parts, without

* See the author's Surgical Tracts.

affecting the system, have in a course of time been beneficial, and deserve to be brought into more general practice than they have hitherto been.

Under such a plan, it will be very necessary that the body be kept open; and to this end, one drachm or more, of the sal. cathartic. may be dissolved in a pint of water, and taken every day as common drink. This quantity of salt will give very little taste to the water, and, in some instances, has alone had a good effect in this dreadful complaint, especially in stronger children, and such as are otherwise healthy. On the other hand, children of a delicate and spare habit are more likely to be benefited by the tonic remedies before mentioned, and such as warm and invigorate the system; of which class one lately recommended in France has been found exceedingly useful, and of which I shall here subjoin the form in which I have generally made use of it.

℞. Ammoniæ ppt. ʒij.
Rad. gentian. incis ℈j.
Affunde spir. vini gallici ℥xij.
Fiat tinctura.

Sumat æger cochl. infantum ad cochleare largum ex aquæ puræ q.s. ter, quaterve in die.

I have had further reason to be confirmed in the above opinion respecting stimuli, from observations communicated to me by Mr. Partington, who, since the hints I threw out in the aforementioned work, has made use of electricity with very good effects, in these, as well as other cold tumours and ulcers I had mentioned; which have all healed

very kindly, or been dispersed in a reasonable time, in consequence of this stimulus to the parts. When scrofulous ulcers have been healed, and only some small tumours remain, I have experienced very good effects from the external use of as strong a solution of camphor in oil of almonds as can be made, which has dispersed them very soon; and it has been found a very successful remedy in the cure of the incipient bronchocele, though enlarged to the size of a turkey's egg; and requires only to be very well rubbed into the parts, three times a day. The patient should at the same time take a drachm or two of the tartarised natron every morning.

The following is strongly recommended by Dr. Temple.

℞. Terræ ponderos. salit. gr. x.
Aq. menthæ sativæ ℥iss.
Misce ft. haustus, ter quotidiè sumendus: et sensim augeatur quantitas terræ ponderosæ ad gr. xx.

Tobacco has also been lately very strongly recommended, in a treatise on this disease, by Dr. C. W. Hufeland, of Jena, author of "A Treatise on the Art of prolonging Life." Readers may consult the former work with considerable profit as it contains a fuller investigation of the disease, and better selection and adaptation of remedies, than has ever fallen under the author's reading.

An obvious discrimination should be made in regard to tumours about the neck, so frequently the early seat of this disease; since many of them

are of a harmless nature, or even salutary, the consequence of a slight feverish disposition, or of some little cold from a sudden stroke of air on the neck. These, it is well known, rise suddenly, become painful, and increasing daily in size, either very soon put on the usual appearance of suppuration, or begin to subside; and whether they break or not, are no indication of any thing materially wrong in the habit. On the contrary, scrofulous tumours always rise slowly, unless in very young infants, and immediately after the small pox; often continue a long time at a stand, and sometimes are not only months, but even some years before they suppurate; and then with very little pain, or true inflammation. For such, particularly when very large as well as indolent, embracing a large part of the neck, the white lily root, with an equal quantity of bread made into a poultice with milk, has been followed with a good effect, the tumour subsiding entirely in the course of a few weeks.

I shall only add further on the head of scrofula, what is very well known, that sea bathing, alone, sometimes effects a perfect cure; and, perhaps, in tepid water oftener than in its natural state. Should the child, therefore, have several scrofulous tumours, or the habit be much affected, trial should be made of the sea, and the tumours will, perhaps, be dispersed by the sea bathing: but this need not interfere with any other treatment of the tumours, should any other treatment be thought necessary.

## *Dysuria.*

Difficulty in micturition was mentioned in the chapter on dentition, and has been found more commonly troublesome during that process than any other period during infancy. The pain is sometimes exceedingly great, if we may judge from the long and violent shrieks of the child, who at times seems likely to be thrown into fits; but upon voiding the urine, becomes instantly quiet, and returns to its wonted cheerfulness, and ordinary habits.

Demulcent remedies, as noted in the chapter on teething, may be tried; but if the infant be very young, or nourished by the breast, they can rarely be taken in sufficient quantity for any length of time. If they fail, therefore, of good effect, I have added antimonial wine, which has always very soon been of use.

Some such form as the following has been prescribed:

℞. Kali ppt. gr. v.
Suc. limon. ʒj.
Aq. rosæ, gtt. xx.
— distil. ʒiss.
— fœniculi ʒss.
Sp. juniper. gtt. xxv.
Pulv. è. tragacanth. comp. gr. v.
Vini antim. gtt. iij. ad. vj.
Syr. alth. ʒss.

Misce, ft. haustus, ter, quaterve in die exhibendus. Or a decoction of the semen dauci, has

often afforded speedy relief; as also, a few drops of balsam capivi (mixed with vitel. ovi) in milk.

Together with either of these, I have kept the bowels open with castor oil and manna; have thrown up a clyster, twice a day; and put the infant up to the waist in a tepid bath, twice or more every day, when the pain has been most urgent: and in older children, have directed from half a grain to a grain of opium, to be introduced into the rectum every night at going to bed.

In some forms of this multifarious disease also, the *solutio arsenica* has lately been administered with success, and with safety, if confined to very small doses, once or twice a day.

## *Anasarca and Ascites.*

I shall not enlarge much on these disorders, however important, since they are not very common in young children; I have met with instances of both, however, at different ages.

In the chapter on teething it was remarked, that although a considerable depot of water may be made on the tops of the hands and feet during dentition, a general anasarca, or ascites, does not take place, if there be no internal disease. And, indeed, whatever bad health may, for a while, be induced by difficult teething, a morbid affection of any of the viscera is very rarely a consequence, unless a purging be improperly suppressed.

But infants previously in bad health, and especially such as have been prematurely weaned, or fed upon too thick victuals, not unfrequently have indurations of the mesenteric glands; and the complaint may be followed by dropsy, if dentition should at this time prove unusually difficult; and is then more likely to be fatal.

One case of anasarca accompanied with ascites, was of this kind, the infant having previously had a tumid and hard belly, loss of appetite and fever; and though these symptoms had been entirely removed, and the child apparently for several weeks in good health; a renewed process of dentition was accompanied with an universal anasarca, and a large collection of water in the belly; with an almost entire suspension of the urinary secretion.

Purging with calomel and jalap produced no good effect, nor moderate doses of the scilla spir. æther. nitrosi, and other diuretics; but an increased dose of these, and an ointment as in the following formulæ, soon produced a change, and both the anasarca and ascites, in a little time gave way.

℞. Infus. amari ʒij.
Ag. distil. ʒj.
Vini ferri ʒss.
Tinct. scillæ gtt. viij. ad xij.
Tinct. cinnamomi gtt. xv.
Syrupi è cort. aurant. ʒss.
Misce, ft. haustulus quartis horis sumendus.

R. Ung. hydrarg. fort. ʒss.
Spir. tereb.
G. camphor. āā ʒj.
Olei olivar. ʒxiij.
Misce, ft. linimentum; quo totam umbilici et dorsi regionem inungatur bis quotidiè.

The following pill also recovered an infant of fifteen months old, after being in a very debilitated state; though the operation both as an emetic and a purge was very considerable, requiring strong cordials and wine for the infant's support. One pill was given every six or eight hours, for two or three days; nor would so powerful a medicine have been ventured upon if every gentler mean had not failed.

R. Gummi ammon.
Scillæ recent.
Sapon. venet.
Pulv. sem. cardam. āā ʒss.
Elaterii ℈j.
Antim. tartaris. gr. x.
Misce ft. massa pilularis cum syrupo alth. et divid. in pil. xxx.

A remedy brought lately into use, as successful in adults, though I have had no opportunity of making trial of it in young children, seems worthy of notice, as it is not so nauseating as the above, nor as many other diuretics. Indeed, it does not always act upon the kidneys, though it frequently carries off the complaint; sometimes by promoting a general diaphoresis, and at others, by somewise promoting absorption, and strengthening the primæ viæ. The remedy consists

only of the expressed juice of the leek, which I have given to an adult, in the following form:

℞. Succi porri expr. ʒj ad ʒiij.
Mucilag. gum. arab. ʒij.
Tinct. cardam. comp. ʒss ad ʒj.
Misce, ft. haustus, bis ad quater in die sumendus.

External stimulants are sometimes proper, especially in the serous dropsy consequent upon a debilitated, rather than morbid state; of this kind is the application of a broad flannel band round the abdomen and loins, dipped in spirits of hartshorn diluted with water, about two parts of the latter to one of the former, which may be increased as the parts are found able to bear it: which has had an immediate good effect. In its stead the following may be had recourse to.

℞. Linimenti saponis ℥iss.
Tinct. cantharidis ℥ss, misce.

If but little benefit should be procured by medicine, in a reasonable time, it may be proper to make a few punctures on the tops of the feet, and especially on the præputium penis, if that part be very anasarcous; there being very little hazard in young children of the punctured parts inflaming, or becoming otherwise troublesome.

After the water is got off, and diuretics laid aside, the steel joined with cordials should probably be continued, till the child's strength be restored.

It may be needless to suggest, that as dry a diet as may be should be employed, and the bowels be kept open throughout the disease.

## *Ischuria Vesicalis è Muco.*

By this term is here intended an affection of the prostate gland, or the coats of the bladder; though the same symptoms may also arise from the ureters or kidneys, whether owing to a stone or other stimulus.

Like the last mentioned complaint, it sometimes appears during dentition, and other inflammatory affections, and will then call for cooling remedies; it generally disappears when the teeth have made their way through the gums, and the fever subsides. Even in more advanced childhood, there is nothing like fever or other precise marks of disease excited by this complaint; though it may be said, this disorder more commonly attacks children of a tender and delicate habit.

It is attended with the like frequent inclination to void the urine as in the former complaint, and with more or less pain in its excretion, or more commonly before it begins to come away. But in this disorder, the urine is always very foul, is loaded with a very ropy mucus, and sometimes comes away discoloured with blood, and at others, small coagula fall to the bottom. This disorder, indeed, puts on every appearance of the

like disease common in adults, especially old men, but is usually much slighter, and therefore more easily and speedily cured; for children being more iritable, the urinary passages are over stimulated by causes that would not affect adult persons.

The appearance is nevertheless alarming, as it may, possibly, arise from a morbid affection of the prostate gland, or the bladder, and must then be a serious complaint; or it may be owing, as has been observed, to a stone in any of the urinary passages, in which case a cure cannot be effected as long as the stone remains. Fortunately, however, this is not a frequent cause in early childhood; and is not the case here intended.

The disorder sometimes yields in two or three weeks to mere diluent, and demulcent medicines, such as the lac amygdal. with syrup. alth. barley water and gum arabic, spermaceti, and such like; and it is probable, in such instances, might in a short time disappear of itself.

In other instances more powerful means are required, which, either by creating a different stimulus, change the action of the parts affected, or, by their restringency, prevent that secretion which has been the cause of the irritation.

The aqua calcis, aq. kali, balsamum copaibæ, or decot. corticis, seem to be the properest remedies in the absence of fever. From three to ten drops of the aq. kali, or balsam. copaibæ, according to the age of the child, will be a proper dose, and may be taken three or four

times a day, as the urgency of the complaint may require.

After appearances of being perfectly well, the urine, in some instances, has become as turbid and mucous as at first, and the former irritation returned. In one such case, the complaint seemed to yield to an infusion of the golden-rod, of which two or three spoonfuls were taken three times a day.

### *Ischuria Renalis, or Suppression of Urine.*

This dangerous disorder is easily distinguished from the ischuria vesicalis, or ordinary suppression of urine, in which the secretion is duly made in the kidneys, and the urine conducted to the bladder; but being detained there, the accumulation is readily discovered both by the pain and tumour in the regio pubis. In the ischuria renalis, on the other hand, the urine is not secreted at all: but the superabundance of watery fluid is retained in the blood.

This disorder, I believe, is more common in adults, especially elderly people, than in childhood, and is a true palsy of the kidneys. In such instances, if the secretion be not restored in about twenty-four hours, the suppression has usually proved fatal very soon; though it is not commonly preceded by any considerable derangement of the general health.

In these respects it corresponds nearly with the ischuria of infants; for the first, and a very

accurate account of which dangerous disorder, we are obliged to Dr. Willan, who happened to meet with several instances of it within a short space of time. In each of these the disease was introduced by similar symptoms, a slight feverish heat being observed for about a week, accompanied with diarrhœa, and sometimes bilious vomiting. Towards the end of this time the urine was made in small quantity, and in about twenty-four hours the discharge of it entirely ceased, and the patients died unexpectedly, without complaining of pain or any particular uneasiness.

Inflammation of the mesentery is judged to be the source of the first symptoms; and the suspicion has been supported, in one instance, by an examination of the parts after death. A gangrene also, which had taken place, Dr. Willan conceived to be the cause of the fatal suppression of urine; but in a subsequent instance, it was found otherwise, the patient being perfectly recovered from the suppression, and apparently restored to health by the application of leeches to the belly; and a blister near to the os sacrum; but the child died about a month afterwards with symptoms of hydrocephalus, distinctly marked.

The abovementioned remedies, with gentle purges, clysters, and cooling diuretics, and the repeated use of the warm bath, are probably, every thing that our art has to offer for the cure of this disease in infants; and were its symptoms more distinctly marked, or formidable in their

first appearances, so as to lead to a recourse to it on the earliest approaches of the disorder, the remedies might be oftener successful than they have hitherto been.*

## *The Gravel.*

Although we see children of almost every age, afflicted with stone in the bladder, and such frequently voiding gravel mixed with their urine; the gravel is by no means, a common complaint in others. I have, however, been several times consulted for children, under three years of age, who have been so affected; which has seemed in some instances to be hereditary.

The disorder is usually slight at this early age, and merely accidental, sometimes disappearing of itself in a few days, or after taking only a little oil and manna, or other soft laxative, and some of the demulcent medicines recommended for the ischuria è muco. In other instances, I have directed a decoction of marsh-mallow and parsley, or wild carrot roots, or the infusion of sweet-fennel and wild parsley seeds, sweetened with syrup of marsh-mallows, or honey. A bit of Castile soap also may be dissolved in milk and taken as a breakfast, or supper; or a few drops of bals. copaibæ, be administered two or three times a day, and the body kept open by the kali tartarisatum, or the sal polychrestum.

* A very distinguishing symptom of the Ischuria Renalis, if not always, yet frequently accompanying this disease, is an unwillingness, or inability in the child to bend, or to be bent forward. S. M.

Should the complaint continue long, and the quantity of gravel increase; as much Seltzer water should be drank daily as the age of the child may admit. If it be attended with much pain, the warm-bath would, probably, be useful; but I have never known it so great as to require any kind of opiate.

This complaint, however, is sometimes more serious, lasts several months, and the water is almost daily loaded with gravel of different kinds; being sometimes soft, and of a pale colour, and at others, red and very gritty, or sand-like.

One case of this kind in an infant of two years old, after appearing to be benefited by several of the above, and by other medicines, returned again with greater violence than ever, and was attended with great pain in micturition. Sedatives, gentle diuretics, calomel, and the bark, were in turn had recourse to; the latter of which, together with a free use of mephytic water, appeared to carry off the complaint, and the child went into the country.

## *Incontinence of Urine.*

This is not a very common complaint, I believe, in children,* unless combined with the stone in the bladder, and then is not so constant, nor to the degree that is intended here. It is an invo-

* This complaint has occurred in my practice rather frequently, and not combined with stone in the bladder. S. M.

luntary flow of the urine, sometimes by day as well as during the night; arising, I apprehend, from a relaxation or other affection of the sphincter of the bladder, as in very old people, but is not attended with manifest fever, nor symptoms of decay. An affection of this kind, in which the urine runs away in the sleep only, is more common; and I have known it continue to the age of fifteen or sixteen years when not properly treated, and afterwards yield to sea-bathing. If, however, it be an original affection, and confined only to the night, (when every part is more disposed to relaxation,) and the child be young, it usually disappears as the child grows up, and thereby acquires strength; but it may be often assisted in the mean time, merely by exercise, living on dry food, dashing the contiguous parts with cold water, and such means as may tend to impart tone to the sphincter muscle and neck of the bladder, and scrupulously abstaining from drink near the time of going to bed: perhaps camphor and laudanum, often useful in the like infirmity in old people, may not improperly be made trial of.

The total incontinence generally comes on gradually, and is sometimes attended with excessive gonorrhœa, even in very young children, and is more difficult of cure: so likewise, if the complaint should succeed to other disorders, as the stone, inflammation of the neck of the bladder, or forcible use of the catheter; and especially, if it follow any somniferous disease, or a palsy of any other part of the body; in

which case the appropriate remedies must be employed.

In a general way, tincture of catechu, or of gum kino; the cortex peruv. balsam. copaibæ, and vitriol. album, may be made trial of; but nothing is usually so effectual as repeated blisters applied over the os sacrum; with proper doses of the tinctura cantharidis, or the powder, carefully administered in some soft emulsion. The former may be administered in doses of ten or fifteen drops to children, from five to ten years of age, and increased to two scruples and a drachm, two or three times a day; or the powder from half a grain to a grain and a half, given as often; which has generally removed the complaint, if there has been no morbid affection of the spine, as is sometimes the case. If these means should fail, recourse should be had to sea-bathing, and other tonic remedies. But from remarks made on this weakness in very young children, who from unwillingness to be disturbed in the night, almost constantly wet their beds, I have advised to take them up frequently in the night, and place them on the pot; not suffering them to rise from it till the bladder be emptied. By this means, children, whether from the habit of getting rid of the urine, or their dislike of being so often taken up, have been uniformly induced to call, and even to awake their attendants as often as necessary; and the complaint has, in consequence, entirely disappeared

## *Polydipsia, or Excessive Thirst.*

The affection here adverted to is not a symptomatic, but idiopathic disease, though it seems to depend, indeed, upon an idiosyncrasy; and is equally incident to children as to adults. It is, however, so rare a complaint in either, that but little can be said of its true nature, there being but few instances upon record. Of these, one began at, or soon after birth, and another when the child was about four years and a half old. The former, in whom the disorder continued in a very extraordinary degree, became the mother of eleven children. The latter while a child, and very lively, and apparently healthy, drank every twenty-four hours ten quarts of water, and made daily twelve of urine, as clear as the water he drank. Through the day he required a draught every half hour, and once every hour in the night.

Dr. Simmons, I believe, gave to the public the first accounts of polydipsia, as idiopathic, and has been at great pains in ascertaining the facts. Boerhaave, indeed, seems to speak of such a complaint: and Zuingerus of immoderate thirst as a very common affection of young children, coming on without fever or any other complaint, unless it be a lassitude of the extremities; says, the appetite continues very good, but the desire for drink so great, that on withholding it, they express vehement displeasure, and are threatened with

convulsions, and other nervous disorders. He does not, however, allude to the quantity that such children require, and adds, that in a little time their bellies become tumid; that they are subject to glandular affections, and fall into atrophy. On these accounts, this species of polydipsia seems to have no relation to the cases adduced.

The abovementioned instances of it occurred in France, and one has been met with in Stanground, near Peterborough, in an adult man near fifty years old, in whom the affection first took place after an intermittent fever, when he was in his twenty-seventh year. A similar case also presented itself some years ago at the Middlesex Hospital. This was in a child; but the thirst was not, in this instance, so great as in the aforementioned ones.

Though I can have but little to offer with any confidence, for the treatment of a disorder which is both rare, and depending upon a peculiar temperament of the body, yet this curious disease appears worthy of some notice in a work that is thought to comprehend a more complete account of the disorders of children, than has hitherto appeared. A slight record of it will also possess the further advantage of apprising practitioners of their being such a complaint; which, it is presumed, cannot fail of being acceptable, if any into whose hands the work may fall, should meet with children who have any evident tendency to it.

How far internal tonical medicines, with the cold bath and electricity, or attempting to promote

insensible perspiration, might tend to a removal of it, upon its first approaches, I can hardly venture to say; but the plan seems worthy of trial, as might that recommended by Dr. Rollo in diabetes.* This refers equally to regimen and medicine. Hepatised ammonia makes a chief part of the latter, administered at first in very small doses. The diet should consist of milk, with lime water, for breakfast and supper, and animal food for dinner, and that long kept, and very fat, without the least vegetable, bread, or other farinaceous substance. Confinement to the house, and rest, are also strictly enjoined. But if none of the above means, nor any other remedies that may be suggested, should pretty soon afford any degree of relief, it is presumed that no violence should be offered to so peculiar a temperament, lest some worse or real evil should appear in its place.

In the Medical and Physical Journal,† however, notice is taken of instances of this disorder occurring in adult persons; the one in a French clergyman, at Berlin, and the other by Dr. Dyce, of Aberdeen. The former seems to have been perfectly cured by very simple means by Dr. Domeier, who, in order to check the excessive perspiration that, in this instance, accompanied the disease, made his patient dress much cooler than he had been accustomed to do; to use the cold bath, and put his feet, from time to time,

* Notes of a diabetic case, 1797.

† For October, 1800, No. xx.

into cold water. He likewise directed acidulous drinks, made with the sulphureous acid, to quench the inordinate thirst.

In consequence of the above account by Dr. Dyce, another instance of this disease, in an adult person, has appeared in the same journal,* which was also cured by somewhat similar means, in the course of a month. An ounce of cort. Peruv. and half a drachm of sulp. zinc. was divided into sixteen doses; one of which was taken every six hours in a glassful of wine. Porter was the patient's drink, with the tamarind decoction to allay his thirst; and after a while, an opiate was taken at night, and fifteen drops of the acid. vitriol. dilut. three or four times a day, whilst the bowels were kept open with castor oil.

### *Diabetes Infantilis.*

This complaint is related by Morton in his Phthisiologia, and is worthy of notice in this place, but is not an idiopathic disease, like the former. He mentions it as not being a common disorder, and terms it a consumption from diabetes, attended with great thirst, as in the forementioned disease. He speaks of it as the effect of irritation from teething, and as a family disorder, having been fatal to all the male children in one family, except the last infant, to whose assistance he was called at the commencement of

* Vol. iv. No. 21, by Tuaam Peaal.

the thirst, and increased secretion of urine; which was sweet, as in the diabetes of adults.

This child, therefore, appears to have been saved by the treatment he adopted, but was not entirely free from complaint, as he had rightly foretold, until all the first teeth made their way. In the progress of the complaint, the Doctor remarks, that the diabetes was attended with considerable diarrhœa, under which the infant wasted fast, but without cough. The treatment, in the mean time, consisted in confining the child strictly to a milk diet from the first, and to allay the excessive thirst, he allowed only milk mixed with the Islington chalybeate water. This plan very soon became useful; but the symptoms recurring with aggravation whenever a tooth was making its way, the Doctor was induced to advise a few grains of rhubarb every morning, and a little diascordium at bed-time. These means were persevered in for two years, that is, until the first teething was completed: after which the child enjoyed perfect health.

## *The Seven Days Disease, and Pecheguera of Spanish South America.*

I shall close this part of the work with a brief account of two very extraordinary disorders, which should have been noticed among the earlier complaints of infants, if they had been diseases of this country, or even much known in other parts of Europe. As the seven days disorder has, how-

ever, actually made some appearance in this quarter of the globe, and may, therefore, at some future period, become more common, it may be proper it should be mentioned. The following account is translated from the French of M. Le Febure de Villebrune, who refers to the Spanish work of D. Ulloa, (*Disc.* xi. § § 19 and 20) and Barrère's Voyage to Guinea.

§ 19. The disease of seven days of new-born infants is common in both quarters of America, and equally dangerous in the high, as in the low parts. A great number of infants die of it, without any symptom antecedent to its accession, leading to a suspicion of it. They are, on the contrary, apparently healthy and robust, when the disorder makes its attack in the form of epilepsy: and few of those who are visited with it are found to recover. Though it has been said this complaint is not altogether unknown in Europe, it is neither so common nor so dangerous. It is conceived that the best preventive would be to guard infants from being exposed to the wind, till the first seven days are over.

This imperfect account allows of very little comment; but it seems probable, that this disorder may not be very unlike the tetanus of the West Indies; and from the mode of prevention proposed, the disease may be owing to some local custom or circumstance, as Dr. Clarke has noticed in regard to the latter.

§ 20. But infants at Guaneavelica are still liable to another very extraordinary complaint. Having escaped the seven days disease, they

thrive well until the third or fourth month; they are then seized with cough and pulmonic affections, which they there call pecheguera. The complaint goes on increasing without any sensible relief from the medicines made use of, and, a swelling taking place, they presently die. The disorder attacks only the white people, or children of the Spaniards; the Indians and the mongrels are not subject to it. The way to escape it, is to remove infants from the spot, before they are two months old, and to carry them to more favourable climates, into one of the Zuebrades, (or low grounds between the mountains) that are at a little distance. It is imagined, that the cold and intemperature of the climate is the occasion of infants being so soon seized with this complaint. This may be the case in some degree: but the vitiated habit of body of their parents, and the sulphurous vapours continually arising from the furnaces for the extraction of mercury, may likewise contribute to it. In fact, these vapours are so abundant, that when re-united by means of the cold, they form such a thick cloud in the atmosphere, during the season there called summer, as to cover all the colony.—*Notic. American.* disc. ii. p. 205. L.

ON THE

# DISEASES OF CHILDREN.

## PART II.

IN the former Part, considerable attention has been paid to cutaneous disorders; either from their being found to require direct medical treatment, or from their standing in connection with other complaints, strictly appertaining to the physician's department.

There are, nevertheless, many affections of the skin of a different kind; which being either usually unconnected with any disorder of the system, or else forming sores on the surface requiring appropriate topical remedies, accord more strictly with the province of the surgeon, and will therefore be considered in this place.

Of the cutaneous affections coinciding with one or other of the latter descriptions, I shall, for the sake of some order, treat first of such as appear on the head.

## *Tinea, or Scald-head.*

(PORRIGO SCUTULATA. WILLAN.)

The tinea, or porrigo, is a very troublesome complaint, and is said to be often a scrofulous symptom; but it is certainly more commonly communicated by contact, and when lighting on a scrofulous habit may be more difficult of cure. It is, indeed, highly contagious, especially amongst children at schools, or other places where they mix freely together, exchange hats, or other covering of the head, with such like intercourse; by which means, it has sometimes been communicated through a whole school. I hope, however, to point out a successful method of cure, the unpleasantness of which has improperly, I think, prevented its being more generally adopted.

From considerable experience, I may venture to say, that this being usually a mere complaint of the skin, is most successfully treated by topical applications. The disease is seated in the little glands at the roots of the hair: is sometimes dry, but at others moist, and then produces little ulcers; which being thoroughly cleansed, and made to digest, may be safely healed up; as I have found in many other affections of the skin, in which the system has, often over-scrupulously, been conceived to be concerned.

It is not uncommon, I know, to administer a variety of internal remedies, and perhaps they

At the Commencement of the complaint some such alterative Medicines as Hydr. c Creta, Combined with mild aperients are useful; and upon some occasions the Decoct. Sarsæ comp. may be advantageously applied.

As external Applications some preparations of Mercury are often beneficial at first; but after a time these are very apt to fail and it is then necessary to adopt some other Remedies, on which occasions I have found washes of Zinc Sulp. Iodæ Boracis: Alum. Sulph. &c very useful.

The Disease is, I believe, often cured by the Remedies first employed; but these being persevered in, under a supposition, that it is desirable not to leave off the Remedies too soon, a new Disease, the Consequence of Irritation, is produced which requires to be treated by ablutions, mild Applications &c. I have seen many Cases in which the Irritation of the Part has produced a Disease of quite a different Nature from Tinea and this has been cured by laying aside all external Applications and merely Taking Care to keep the Parts clean.

Some of the most distressing Cases of Pruritus which

may sometimes be required, though I have seldom given any thing more than lime-water, or a decoction of the woods; and a few purges at the decline of the eruption; which is always prudent, and sometimes with the addition of calomel.

If the complaint be taken early, before it has spread far over the head, and whilst the scabby patches are small and distinct, it may frequently be cured by an ointment made of equal parts of sulphur, flour of mustard, and powder of staves-acre, mixed up with lard, or other unctuous substance; or by the sulphur ointment, with a small addition of the calx hydrargyri alba. And this last preparation may very safely be made use of, if the patient be kept within doors, and the body properly open; as it will be necessary to rub in only a small portion, once or twice a day, on the parts immediately affected. But if the disease should spread, or has already extended itself over a great part of the head, the hair must be shaved off, and the head washed twice a day with a strong decoction of tobacco;* repeating this process till the scabs disappear, and the hair grows up from the parts they had occupied. Or, instead of the decoction of tobacco, the head may be well washed with the lotio saponacea, with the addition of a small quantity

* A case of stupor, ending in death, occurred a few years ago at Shoreditch, from the incautious manner in which a father washed the head of his child, with a strong decoction of tobacco, for the cure of tinea. S. M.

of the liq. potassæ, and the scabs anointed with the unguent. hydrargyri nitratis, in the place of the sulphur ointment and calx of mercury, the former being a very powerful, as well as a safe application, and may be used in any quantity that may be necessary.

But the complaint is sometimes of long standing before medical assistance is solicited, and is not only extended over all the head, but the scabs are thick, and rise high above the surface, returning as often as they may fall off. I have, however, never failed to cure the common tinea by a method, perhaps well known, but too seldom complied with in time, on account of its supposed severity. It consists in well washing the head, first close shaved, with a piece of flannel and a strong lather of soap suds, and then rubbing in very forcibly an unguentum picis, made of the petroleum, instead of the pix liquida, (and if this fail, adding a good quantity of the pulvis ellebor. alb or other safe depilatory) for near an hour at a time, always using it very warm; and covering the head with a bladder to preserve the ointment on the part, as well as to keep it from sticking to the cap, or other covering made use of; whilst it is otherwise useful, by promoting perspiration. When this has been done three or four times, not only the scabs, but the hairs will also loosen, which must be pulled out, however unpleasant the operation may be, as it will, indeed, prove a kindness in the end; and must be repeated till all the hairs be taken out: after which, new hair will rise free from scabs, which is a sufficient

have met with have yielded to the following lotion,
would it be a suitable Remedy for Tinea? I have never
tried it. (June 28. 1827). R. Fol. Tabaci ʒiij – ad ʒiv
Sodæ Muriat. ℥i
Aq fervent. ℔ʒxij
ft. Infus. per horas duas et cola, dein
adde Solutionem infra scriptam.
R. Hydrarg. Oxymuriat gr. iv – vi
Sp. vin. ten ℔ʒi
solve terendo in Mortario, et Infusi
Tabaci supra præscr. adjice

indication that the disorder is effectually removed. Some writers, with the like view, advise the application of repeated blisters, after the head has been close shaved.

The following plaster is strongly recommended by Mr. Thomas Morison, Surgeon in Dublin, as successful in the worst cases.

The head is to be well washed, and a bread and milk poultice applied, if the scabs are very dry; and the following plaster afterwards applied, spread on strips of linen, which are to be renewed every day. Take of common ale, one pound; of the finest flour, three ounces; mix them intimately; and having set them over a very brisk fire, add two ounces of yellow resin, stirring them constantly until they shall be perfectly incorporated, and take on a smooth gelatinous appearance.

There is, however, a spurious kind of scald-head, that is sometimes more difficult of cure; but it requires nothing but patience in the use of one or more of the above remedies, or at most, an alterative plan of the flowers of sulphur, or of some mild mercurial preparation, with the common decoction of the woods, or the Lisbon-diet drink; and in some cases to open an issue, or fix a seton in the nape of the neck. Or, should the difficulty consist in getting out the hair entirely, or destroying the diseased glands at its roots, the calx viva may be had recourse to, in one form or other, and is exceedingly preferable to an adhesive pitch plaster. In a few instances, the unguent. hydrargyri mitius has a wonderful effi-

cacy, but should be the last resort, and be very cautiously applied; and instead of being forcibly rubbed in, like other topical applications, should be only spread lightly, and very thin on the scalp: the body should at the same time be carefully kept open.

## *Scurfiness of the Head.*

### (PITYRIASIS CAPITIS. WILLAN.)

Some infants early contract a scurfiness on the head, which increases as they grow up; becoming likewise very thick, and itching exceedingly. It is more commonly dry, but is sometimes moist, and even discharges a great quantity of a very thin fluid. In either case, it can rarely be termed a disease, and is scarcely worthy of notice, but in a view to preventing mischief, from the application of improper remedies, or its degenerating into a real complaint, through neglect. Amongst the poor, indeed, it often arises from that source, and can be removed only by proper combing of the head, and otherwise keeping it clean. But should it arise spontaneously, as it sometimes does about the time of teething, very little need to be done, nor ought to be, further than keeping the head clean, and often combing, or brushing it cautiously, as above directed: at most, the scabs may be touched, every now and then, with a little cream till they begin to loosen, or with a drop or two of arquebusade water, if they are too moist; at

the same time, carefully avoiding taking cold on the part.*

I have, however, sometimes seen a scurfiness of the head take place even during the month, and attended with an excessive discharge of a thin fluid; which it would be alike improper either to repel, or encourage. A good general application in this case, though truly anile, is that of warmed butter and beer, with which the head may be washed twice a day; this keeps the head clean, and certainly not only does no harm, but has appeared in some instances to remove the complaint.

## *Scabies, or Itch.*

(SCABIES. WILLAN.)

This disorder, so commonly known, and easy of treatment, is mentioned chiefly in order that nothing may be overlooked relative to the disorders of childhood. It is a very contagious disease, but usually easy of cure, and seldom requires any thing more than a free use of the unguentum sulphuris. There is, indeed, a spurious kind, (as of the tinea) which is far less, or often nowise contagious, but is more difficult of cure, or at least more tedious, than the genuine. Should the brimstone ointment, therefore, fail, sulphur

* Sponging the scurfy head with tepid water, with the addition of a little spirit, and afterwards diligently brushing it, I have always found a safe, and very often an effectual remedy for this complaint. S. M.

should be administered inwardly, and sometimes mercurials; which may likewise be added to the ointment, (for which the unguent hydrargyr. nitratis is the fittest,) and in a few weeks, at most, will not fail of removing the complaint. It is common to administer at the same time some alterative diet-drink.

## *Herpes, or Ring-worm.*

(HERPES CIRCINATUS. BATEMAN.)

The herpes, like the foregoing complaints, is a disease of the skin, infesting some children almost annually, and appearing in dry scurfy blotches, on different parts of the body, and usually of a circular form. It becomes troublesome chiefly from the violent itching that attends it, and would, probably, get well of itself: it even sometimes has the appearance of being critical, or is, perhaps, rather an indication of some favourable change in valetudinarians, especially in adults, who are sometimes found getting the better of chronical complaints at the time the ring-worm makes its appearance. It is, however, often a blemish, as it frequently attacks the hands and face, and especially the forehead; and in the former case is sometimes sore.

The herpes yields very readily to stimulating and astringent remedies. Spirit of wine; saturnine lotions, with the addition of vinegar, or white vitriol; and ointments containing lead,

answer very well; or an ointment of calcined zinc and lard: but the unguent, hydrarg. nitratis is preferable to most others. The use of a flesh-brush is a good prophylactic, in habits accustomed to the complaint. It can be only in unhealthy children, that there can be any fear in regard to topical applications, or need of internal remedies.

Should the shingles spread and become sore, it should be treated as directed below.

## *Herpes Exedens, or Serpigo.*

(HERPES PHLYCTÆNODES. BATEMAN.)

This is a malignant species of the above complaint, but is generally local. It is mentioned in this place, as having relation to the former, being itself rather a sore than an eruption, and not very common in children.

Suppurative applications may be made use of in the early stage of the complaint, such as ointments of minium, soap, and Venice turpentine, or a suppurative poultice, in order to liberate the diseased glands on the surface, and absorb the acrid discharge. A very good poultice of this kind may be made of figs, onions, and white lily roots, boiled in water to a soft pulp, with, or without the addition of a little bread and milk. After this, the parts should be washed with saponaceous lotions, and lastly, with strong solutions of sulph. zinci. Should these fail,

the ung. hydrarg. nitratis will be proper; and, as the last remedy, caustic applications; of which, butter of antimony is the best, with which the little ulcers may be touched lightly from time to time. The patient may take at the same time of a decoction of burdock-roots, or sarsaparilla.

## *Herpes Miliaris.*

(HERPES ZOSTER. BATEMAN)

The herpes miliaris, zona herpetica, or shingles, was well known to the ancients; but has not been accurately distinguished by modern writers, as I know of, except by Mr. Pearson; being confounded usually with the common herpes, or ringworm.

It appears in the form of small vesications, which are filled with an almost transparent fluid, which if large and distinct, have but little redness in the interstitial spaces; but when confluent, there is a much more considerable discolouration.

This complaint is, however, attended with a feverish affection of the system, which the foregoing are not; and is often preceded by rigor, nausea, and sometimes vomiting; but is very rarely attended with danger. The febrile symptoms do not usually disappear on the eruption of the pustules, which gradually subside as the fluid acquires a denser consistence; after which the pustules dry off in the form of dark coloured crusts; and the

disorder terminates in a period of, from eight to twelve days, and not unfrequently without medical aid.

In the confluent species, which is attended with more fever, the patient should be kept in a warm atmosphere, take gentle diaphoretics and cordials, and sometimes diuretics; and on the drying off of the pustules, a gentle purgative should be administered.

It is amongst the vulgar errors, that when it appears on the breast or loins, if it should extend round the whole body, it would prove fatal. It is this form of the disease that is termed zona herpetica.

## *Verrucæ—Clavi Pedum.*

Those warts which appear upon the fingers, hands, and necks of children, may be considered as a small inconvenience, or a trifling deformity, rather than as a disease. They are seldom painful, except they have been improperly irritated; and have no tendency to proceed to any unfavourable event.

Surgical writers have generally agreed in considering them as the effect of a certain morbid state of that part of the skin in which they are situated; but what that peculiar condition of the skin is, by which they are produced, has not been exactly ascertained: the various accounts of it are all very problematical; and of these, perhaps, Mr. Freke's is as ingenious as any.

The hard, and almost insensible wart, with a broad base, and having a cutical covering, is the most common species. This little excrescence seldom rises high above the level of the skin, on the back of the hand; and is often remarkably flat and low when it germinates on the inner part of the hands or fingers; and, being a spurious production, seldom possesses a vital energy sufficient to prolong its duration beyond a few years. Hence we commonly observe, that those warts which appeared in infancy, disappear imperceptibly after the age of puberty, without the aid of external applications. This is sometimes the case likewise when warts have first appeared in adult age, more especially where they have been small and sessile.

The various methods that have been recommended of destroying warts, may be reduced to the two following classes. Such as intercept the circulation of the blood through the substance of the wart; or secondly, those which produce a destructive inflammation in them.

1st. Ligatures made of horse hair, or silk threads. Whenever these can be conveniently applied, they are the least dangerous, and the most effectual. For it is a certain fact, that warts removed by ligature return less frequently, than when destroyed by any other means.

2dly. Caustic applications, or the actual cautery; or spirit of sal. ammoniac with quick-lime; vitriolated copper; nitrated silver; butter of antimony; burning sulphur.

When the surface of the wart is destroyed by any of these applications, the hard crust must be scraped off the next day, and the medicament be reapplied; and this process must be repeated daily until the excrescence be destroyed down to its root.

When a wart is situated on a joint, or on one of the lips, or on the eye-lid, it will not be prudent to use caustic applications, unless under the direction of a skilful surgeon.

I have not mentioned the excision of the wart, because the excrescence is so very liable to sprout again when it has been cut through, that this method is adviseable only when it is proposed to employ caustic applications to the wounded part.

## *Clavi Pedum.*

Young people are less subject to this excrescence than adults; but being, nevertheless, not exempt from it, a cursory notice of it may be proper.*

Corns appear always about the feet; usually the upper part of the toes, and on the joints; on the under part of the foot where the pressure is the greatest; or under the nails; and are painful, especially if pressed much by tight shoes, or other covering of the feet. They differ also in other

* The reader may see a fuller account of the nature of Corns, and their treatment, by Mr. Carlisle. Medical Facts and Observations, vol. vii.

respects from the wart; the corn having the appearance of an inverted wart, the surface of the former being not unlike the inferior part of the latter.

The corn seems to be hardened skin, produced by compression: it is therefore rather a morbid change of that part than an organized excrescence, and on that account, does not endure the rough treatment of the wart: it may, however, be safely pared down from time to time, but not to that degree as to be made to bleed, or rendered sore, especially in people advanced in years. The common wafer made use of for sealing letters, moistened and applied to the corn, is both a harmless covering and defence, and has sometimes appeared to loosen this excrescence, and occasion it to be thrown off.

### *Steatomatous Tumours, or the Suet-like Wart.*

(MOLLUSIA. BATEMAN?)

Besides the abovementioned excrescences, there is one of a very different kind; which though, when appearing about the neck and face, it passes with many people for the common wart, is really a suppuration of the little sebaceous glands. It appears chiefly about the face, neck, and head, where this kind often grows in great numbers; and is the kind of steatoma here principally treated of. They more commonly infest young

children, and particularly infants when cutting their teeth: and will fall of, and appear again frequently, during that period. They discharge a suety, or cheese-like matter, as other inflammatory tumours of this class; after which, they heal up, and return again, like the stythe, or stye on the eye-lids, until the little cyst that contains them is gradually destroyed.

Being of this harmless nature, it is unnecessary to say much more on their treatment. As a preventive, the adjacent parts may be well rubbed two or three times a day; but when the tumours are grown to a certain size, they should be inclosed in a ligature before they break, or should be touched with the argentum nitratum immediately afterwards. The application of vitriolic æther has likewise been recommended, as producing the greatest degree of cold during its evaporation.

I shall just add, that in very large steatoma, it has been recommended * to pass a seton through the middle of the tumour; whereby inflammation and mortification being produced, large pieces of the substance of the mass are separated, until the whole is removed.

## *Ophthalmia.*

Having discussed the foregoing trifling matters, we come to more serious complaints; and first, those of the eye.

* See *Gotha* Journal of Inventions, No. xii.

This important organ, however, has also some slighter affections, which require but little attention. Accordingly we find, that the eyes of a new-born infant are very apt to water, as it is called, and be slightly inflamed, especially if born in the winter season. If it be owing to taking cold, it is probable, it has been either immediately after the child was born, before it has been given away to the nurse, or very soon afterwards; and on this account, a flannel cap becomes a very necessary part of its covering previously to its being formally dressed. This kind of inflammation, however, is seldom of much consequence; generally disappearing of itself, upon merely keeping the head warm, or by washing the eyes with a little rose-water. Should it, however, continue many days, or increase, three or four drops of the aq. lithargyri acetati, and a grain or two of white vitriol, may be added to two ounces of the rose-water; and the infant take a little manna, or rhubarb and magnesia, if the bowels should not be sufficiently open. A still more trifling affection is the sugillatio, which will oftentimes remain during the month, return, and disappear again, without the slightest injury to the infant.

But there is an inflammation to which infants are liable, that sometimes continues a long while, and therefore calls for further attention. This affection is accompanied with the true appearances of ophthalmia, attended with a discharge, as in the ophthalmia of adults: it will sometimes get a little better by common means, but seldom

remains so for many days together, and generally increases at the end of the month. It often seems connected with the state of the bowels, and the coming on of a purging will then frequently cure it.

Only the more common remedies, however, are called for, unless it prove tedious,* in which case the parts behind the ears should be made sore, and be kept so for some time. Previous to this, it is often necessary to apply a blister to the back, and a leech to one or both temples; to keep the body open, and make use of the cooling collyrium before recommended. If the child be inclined to a frequent return of it for years, as I have known even in very healthy children, it will sometimes degenerate into what is termed the watery eye; an excellent remedy for which is a grain of white vitriol, mixed with such a small portion of any unctuous substance as will form it into a liniment, which should be put into the inner angle of the eye every night, at going to bed. In some of these cases, however, the ointment of nitrated quicksilver has proved a more speedy remedy, and is a less painful application.

There is, however, a case of watery-eye attending older children, in which the discharge is very hot and acrid, and the eye at the same time inflamed. These affections disappear, and recur again suddenly, without children having sensibly taken cold, or any other manifest cause; and will

* For a more full account of the treatment of ophthalmias, see the author's Surgical Tracts, 3d Edition.

continue so doing for a great length of time. It is not a common complaint, and as far as I have noticed it, has attended only such children as have other marks of humour, so called, or some disorder of the skin.

The complaint has proved very obstinate, both in regard to the inflammation, and watery discharge, though all the common means of cure have been successfully attempted, until the head has been shaved, and an oiled silk cap applied over the whole scalp. This never fails to procure a great discharge from the head, in consequence of which, I have known the disorder removed in two or three days.

## *Ophthalmia Purulenta.*

But there is a far more formidable inflammation, called the purulent ophthalmy, distinguished from every other by the vast quantity of thick matter discharged, and great swelling of the lids.

This is so dangerous an inflammation, as to require the best advice on its very first appearance. It now and then appears at the birth, but more commonly seizes an infant a few days afterwards, without any previous complaint; and when neglected, has sometimes not only destroyed the sight, but dissolved the eye itself, in less than a week's time. I have likewise seen it exceedingly violent in children of four or five years old, but rarely at that age, without some blow, or other accident.

In this disease, every thing that may remove inflammation, and unload the vessels of the part, should be immediately had recourse to. The body should, therefore, always be kept open, and leeches be applied to the temples, especially in children of four or five years of age. In bad cases at this period, scarifications of the tunica conjunctiva, are necessary, as are blisters to the back, nape of the neck, and behind the ears. It should ever be remembered, that in advanced childhood, the taking away of blood at the beginning is often not to be dispensed with, nor to be sparingly done. The application of one leech to the temple, or neck, will have no good effect, though often repeated; two, three, or more, according to the strength of the child should be put on at a time: and a blister to the back soon afterwards; which will often do more to conquer the inflammation, than most other means.

Even in new-born infants, it is expedient in some cases, both to take away blood, and to keep up a constant discharge from behind the ears, which may be done by applying, every three or four days, a narrow slip of blistering plaster to these parts, and afterwards dressing them with the ceratum spermatisceti, or other mild ointment. The edges of the eye-lids should be kept constantly greased throughout the day, especially in new-born infants, that the thick matter may find an easy escape. At night the ceratum lithargyri acetati may be spread on soft linen, and applied to the eye, and over it a very soft cold poultice,

made with the aqua lithargyri acetati, laid on as lightly as possible; that by its constant moisture, the eye-lids may always be kept supple. But if the discharge should seem to be confined, or the eye affected, by the weight of the poultice, this application should be changed for soft linen rags, which should be frequently wetted with cold brandy and water, or some yet more astringent lotion.

Throughout the complaint, astringent and stimulating applications are to be made use of, unless the complaint be very slight, or sensibly gives way very soon to mere greasing the lids, as it sometimes will. What may be the very best remedy, in the worst cases, it may not be very easy to determine; but ever since I have seen Mr. Ware's first publication on diseases of the eyes, I have had such frequent, and successful recourse to the aqua camphorata, as recommended by him, that I am inclined to give it a general preference to other remedies. One drachm of the aqua camphorata of Bate's dispensatory, to two ounces of water, will be a sufficient strength to begin with. A few drops should be instilled into the eyes, several times in the day, as well as the lids be frequently washed with it. It will sometimes be necessary to inject it into the eyes with a syringe, the lids being so much swelled, as not to admit of its entrance by other means.

The topical remedies alluded to, in the place of the aqua camphorata, are tinct. opii, and the unguentum hydrargyri nitratis, which should be applied every night at going to rest; the former

being dropped into the eye after the lids have been touched with the ointment. It is sometimes proper to lower and soften the ointment with a little fresh butter, or ol. amygdal. and to add a little camphor; (or oftentimes one somewhat weaker, with the addition of camphire as directed in the note.*) In one instance, the complaint was speedily removed by the electric aura.

Where this inflammation has not been properly treated from the beginning, the eye is sometimes exceedingly injured by it, so that even the coats of the eye will burst. At other times the cornea becomes much thickened, and the pupil more or less opake, by means of one or more specks which the inflammation has occasioned. It should be remarked, however, that we sometimes meet with an agreeable surprise at the decline of this formidable complaint, and find the eye much less injured than had been suspected at the time we were first able to get a sight of it. And at others, even where the cornea has burst, the aqueous humour has been restored, and been confined by the cicatrice, the patient has recovered his sight. On the other hand, the cornea

* ℞. Unguenti hydrarg. nitrati ℥ss.
——————— Ceræ ℥j.
Gummi camphor. gr. iij.
Misce S: A:

The above tincture and ointment are usually a very speedy remedy for the sore eye induced by the small-pox, and measles; as well as for the ophthalmy in scrofulous habits; a complaint, under almost every other mode of treatment very tedious of cure.

has sometimes been so greatly injured, or the iris contracted, that though the eye has not been sunk, the sight could not be restored by any means. In other instances, a long and cautious use of escarotics, and paring off the thickened parts of the cornea, have afforded a certain degree of vision.

### *Psorophthalmia.*

This complaint is so much of the nature of the former, but with more sensible affection of the lids, and less of the eye itself, that I need only to recommend for it the use of the like applications. In particular, slight scarifications of the lids in some instances, and the application of the ung. hydrarg. nitrati, and immediately afterwards instilling a few drops of laudanum into the eye, will usually very soon have a good effect; but the cure is often a work of time.

### *Egyptian Ophthalmy.*

A disorder of the eye and the lids, not unlike the two preceding, has of late years been very prevalent in this country; and has been communicated through our soldiers, who returned from Egypt, and is very contagious; of which I have seen several instances both in children and adults: it is always, I believe, attended with excruciating pain, and frequently, with at least a

temporary loss of sight. From my own experience, I shall only say, that the abovementioned applications are the best I am acquainted with, together with very lightly covering the eye with the crumb of a new French roll, with a suitable hollow cut in it, and soaked in the aqua litharg. acetat. dilut. which should be renewed as often as it shall become anywise hard or dry. I am aware that every degree of pressure is strictly interdicted by some practitioners whom I highly honour for their successful treatment of disorders of the eyes; whilst the immediate use and benefit I have known to follow this application, makes it my duty to announce it.

### *Venereal Ophthalmia.*

In permanent inflammations in young infants, I have been inclined to the opinion of the late Dr. Hunter, and others, who after having tried a variety of means, and assisted in consultation with different physicians, have been induced to think that many of the very stubborn ophthalmias originate from a venereal taint, and can only be successfully treated by its specific remedy, in one form or other. This sentiment, however, requires a nice discrimination; and every practitioner will be very careful how he takes up such an opinion in particular instances;* however, it is right to

* The French physicians seem too much inclined to regard the purulent ophthalmy in this view, being a very common

observe, that if none of the means above recommended should produce a favourable change in eight or ten weeks, I believe nothing but that specific species of alterative will have any lasting effect.

Though it is not my precise design to treat on this disease, it may not be amiss to observe, that whenever a venereal taint actually exists, it is more safely treated by unction than in any other way; and infants would probably be cured much oftener than they are, if recourse were had to it in better time than it commonly is. If internal remedies, however, are for any reason preferred, I have found none so efficacious, convenient, and safe, as the late Mr. Ward's white drop. In a writer before quoted, I find a strong recommendation of the soft pulp of sarsaparilla reduced to a fine powder, and administered in the infant's pap. But having had no experience of it myself, I can only say, that where it may be found to agree with the stomach, it may have its advantages for new-born infants, or perhaps, prove an auxiliary to mercury in those of a more advanced age.

In an appendix given by Mr. Ware to his last account of ophthalmy, he mentions a species in young children, originating from a foul state of the primæ viæ. In this kind, no topical means will effect a cure, without administering at the

symptom amongst others, truly venereal, in many infants in the Hotel Dieu, l'Hospice de la Saltpétriere, Vaugiràrd, and des Enfans Trouvès; but when this species of ophthalmy appears alone, the case should not be hastily concluded to be venereal, however violent the ophthalmy may be.

same time active purges. He advises calomel particularly, of which a few grains should be taken at bed time, and a dose of jalap the next morning. This course should be repeated three or four times in quick succession. Tonic remedies, such as the bark and steel, are said to be sometimes useful afterwards.

A like inflammation he attributes to difficult dentition, which necessarily calls for a thorough, and sometimes a repeated lancing of the gums.

### *Leucoma, or Speck of the Eye.*

This is often a consequence of long-continued ophthalmias, and is mentioned by Dr. Armstrong amongst the diseases of children, in his second edition. He directs a variety of things for the cure of it, which he says are often efficacious if the specks have been recently formed, but when of long standing, he has never seen any method successful. I shall only observe, that in a very great number of cases, a drop or two of the aq. cupri ammon. instilled into the eye, two or three times a day, has removed such specks in the course of a few months, and sometimes much sooner, without any other means. Should this fail, however, recourse may be had to a solution of hydrargyri oxymurias, at first only one grain being dissolved in four ounces of water, afterwards gradually increasing it to two grains, as the eye shall be found able to bear it, and the

ointment of nitrated quicksilver be applied in the manner before recommended, and the like other remedies be continued as the disposition to inflammation may admit.

## *Cataract, and Gutta Serena.*

Although these disorders are not very common in young children, they do, nevertheless, sometimes occur; and infants have even been born with a cataract in one or both eyes, or totally deprived of sight by the gutta serena. I shall therefore speak of these two diseases together, and the rather because some of the remedies are here accommodated to both.

In the former of these, it is well known that the pupil appears white or pearl-coloured, instead of black; and in the latter has but little of an unnatural appearance, except that it is larger, and neither dilates nor contracts when exposed to different degrees of light, or does so in a very small degree.

It would, indeed, ill become a man of the least character and experience, to affect to have much to offer in a way of remedy for these dreadful complaints; the oldest and best practitioners never having pretended to be very often, or by any means uniformly successful in the treatment of them. From what I have known, however, they are not to be despaired of, and I should think it unpardonable not to hold out every occasion of good, or of comfort in my power, however little

it may be, in cases wherein art has so generally failed—*Valeat quantum valere potest.*

Where a disposition to cataract and gutta serena have been suspected, I have known very considerable benefit obtained, and even the sight fully restored, by an alterative plan of calomel and cicuta; or by the long continued use of an aromatic vapour with spirit. ammon. compos.* conveyed to the eyes by means of a tube properly adapted, and brushing the eyes and the adjacent parts, several times a day, with soft and smooth brushes, properly constructed for the purpose.

Somewhat agreeable to this idea, is the plan recommended by Mr. Ware, in his treatise on certain disorders of the eye; and which, like many other important discoveries, was the effect of accident. Upon this he happily improved, having succeeded, in several instances of incipient cataract, the consequence of external injuries, by exciting a transient inflammation. The application he has employed to this end has been æther, either alone, or diluted with a third or fourth part of a weak solution of hydrarg. oxymurias, and sometimes mixed with oleum succini; which has, in some cases, been soon attended with a sensibly good effect, though in others, not till it has been repeated for several weeks. The success attending these cases, Mr. Ware adds, encourages

* Half an ounce of the spirit with two ounces of water, should be kept boiling over a lamp, and be made use of two or three times a day.

him to hope for the like, where the opaque crystalline is either soft, or fluid; in which state it usually is when the disorder is discovered in infants, either at the time of their birth, or shortly afterwards.

In the gutta serena, electricity has succeeded in several cases; and in one instance, a lady, whilst under such a course, suddenly recovered the perfect use of her eyes, through a blow she accidentally received on the face, which produced a copious hæmorrhage from the nose. In imitation of this, the like discharge has been artificially procured by wounding the internal vessels of the nostrils; but without apparent good effect. Mr. Ware, in the abovementioned treatise, confirms the favourable opinion of electricity, and adduces four instances of gutta serena cured by it, and as many by a medicated snuff, composed of ten grains of hydrarg. vitriolat. with about a drachm of the pulvis asari comp. or in place of that, the glycirrhiza, or saccharum commune. The external use of the capsicum has likewise lately been attended with success. To this end one grain of Cayenne pepper is to be infused in cold water, of which a few drops are to be instilled into the eyes three times a day.

A curious remedy has been employed, with some success, by Professor Arnemann, of Gottingen; and any new remedy for such a disorder is an acquisition. This consists only in exciting vertigo, by placing the patient in a whirling chair, with his head at various distances from the centre. Not that the vertigo, it is observed, is a co-ope-

rating cause, though it is a favourable sign; but the strengthening and restoring tone to the eye, by exercising it with vertiginous, or rotatory commotions of the head. Another remedy advised by this author, is the exhibition of camphor, with and without belladona: the former in doses from two to six grains, generally twice a day, and the latter in doses of one or two grains, every day. These medicines, however, it is remarked, can be productive of good only in cases of real debility, arising from want of excitation, or in asthenic: while, on the contrary, in plethoric weakness, they must necessarily be detrimental to the patient, and aggravate, rather than diminish, the symptoms of the disease.

It should be observed, however, that where the belladona can be dispensed with, it certainly ought, as it is a medicine not to be trifled with. The exhibition of calomel, together with the camphor, without the belladona, has also been used, with much success, lately in London, especially while under a course of electricity.

I have little more to say in relation to the cure of the cataract by a surgical operation, either by extraction or depression, than that neither of them is advisable for infants unfortunately born with the disease, till they shall have attained to five or six years of age. Surgical readers will do well to consult the above-mentioned treatise for some excellent practical observations on the mode of extracting the opaque chrystalline; as well as the observations of Dr. Reimarus,* adopted by Dr.

* Magazine Encyclopedique, 1797.

Grasmayer, at Hamburg, on the use of the extract of the belladona dissolved in water, previous to the operation. A few drops instilled into the eye, soon rendering it paralytic for a short time, with great dilatation of the pupil, whereby the eye is said to be rendered very manageable under the hand of the operator.

### *Hordeolum Steatomatum, or the Stithe, or Stye.**

The species of stithe here intended, is sufficiently distinguished by the nosological term. It is a small inflamed tumour on the edge of the eyelids, more commonly on the side towards the nose; but there are sometimes two or more at a time. It rises suddenly, as if from a cold, or blast, and in the end suppurates, forming matter of a thick, or cheesey consistence; often, indeed, not for several weeks, or even months, but sometimes much sooner. It is occasioned by an obstruction in the glands of the eyelids; and the matter being enclosed in a hard cyst, the inflammation often returns in the same spot, till the cyst being destroyed by repeated suppurations, the cavity is afterwards filled up, and the complaint disappears.

* The derivation of the word *stye* has often been the subject of enquiry. Horne Tooke traces it back to the Saxon ꞅtiȝan, ascendere, to rise up; and Archdeacon Nares agrees in this etymology; but he derives *stithe* from ꞅtið, hard, which quite agrees with the description of the disease, and is probably the real origin of both these words. S. M.

All that is necessary to prevent the return of this temporary blemish, which greatly weakens the eye, is to imitate this process of nature. To this end, the little abscess should be touched, as soon as it breaks, with the argentum nitratum, cut to a point (carefully avoiding doing injury to the eye); which, by destroying the cyst, at once removes the complaint.

When these stithes are small, or hang by a very narrow base, they may be safely cut off, or tied very tight with a bit of silk, and when separated, touched with the caustic as before mentioned.

## *Deafness.*

Children are frequently rendered deaf in different degrees, in one or both ears, by very slight colds, and at the expiration of a few days the hearing returns, without recourse to any means. It is, however, sometimes otherwise, and it becomes necessary to give a little purging physic; to keep the ears warm; and to confine the child to the house: and where this does not succeed, the complaint is not a little difficult to cure, unless when owing merely to indurated wax. In this case it will be proper to syringe the ears with warm water, to which should be added a tea-spoonful of lavender, or honey water; and a few drops of warmed oil of almonds may be instilled into the ears at going to bed. If these little means fail, warmer remedies should be made use of, such as the following, which, after properly syringing,

will always be successful, if indurated wax be the only occasion of the complaint.

℞. Olei amygd. ℥ss.
Ol. succini rectific. gtt. xx.
Spir. camphorat. ʒss.
Tinct. castor. ʒj.

Misce, et instill. guttas iv. vel. vj. calefact. aur. affect. nocte et mane.

Deafness, however, is sometimes owing to the want of a due secretion of wax, and is then much more difficult of cure. To promote this secretion, a few drops of the soap liniment, oil of almonds, and æther, and such like warm acoustics, should be tried, and continued for some time, if they should not occasion much pain: and in all cases, blisters may be applied behind the ears. The juice of onions, or a clove of garlic, raw, or roasted, put into the ears, has sometimes restored the secretion, and removed the deafness; and in many cases it has been effected by electricity; yet in not a few cases all these means have failed. I have, however, fallen upon a method that has been universally succcessful by very simple means, consisting only in adapting an entire covering to the ear, made of any adhesive plaster, spread upon thin leather, so as completely to exclude the external air. The plaster should be renewed as often as it gets anywise loose, repeating it till the secretion of wax is in sufficient quantity; which seldom requires more than five or six weeks. But I am sorry to add, that although aurists have found it so difficult to restore this secretion, and have therefore conceived deaf-

ness to be often owing to the want of it, I have frequently found it nowise relieved by a return of the secretion. Possibly, this may be owing to the cause of deafness lying in the auditory nerve, which is frequently the case; and here also, electricity is particularly adapted, either through the meatus auditorius externus, or the Eustachian tube. Medicated snuffs, also, that invoke gentle sneezing, and discharges from the head, have sometimes been found surprizingly efficacious; as hath likewise sea-bathing. Should these different methods fail, very little is to be expected from art. Nature, however, sometimes effects the cure; and children, after having been deaf for several years, suddenly recover their hearing.*

### *Abscess within the Ear.*

It is not uncommon to meet with fetid discharges from the internal ear, either with, or without inflammation, and external soreness;

* The deafness of children is very often dependent upon that cachectic habit, which improper diet, and a deranged condition of the stomach and bowels, principally tend to produce. When this is the case, no plan succeeds so well in curing the complaint, as a combination of alteratives and daily aperients, with so much of some such tonics as sarsaparilla, uva ursi, steel, or bark, as may be found requisite. And this plan is found useful, not only in the affections of the ears, but of the eyes of children. Parents are too apt to place reliance upon local applications to these parts, when the cure can only be effected by a regular exhibition of internal remedies. S. M.

but this is usually in children of one or more years old, rather than very young infants. If a little cooling physic, and wiping out the matter frequently, should not remove the complaint, detersive injections should be used, and some one of the warm acoustics directed for deafness, be afterwards dropped into the ear. The child should also be made to lie, as much as may be, on the affected side, that the discharge may have a free vent.

Should the quantity and fetor of the matter increase, a blister must be kept open on the nape of the neck, a few purges of calomel be taken, and on the intermediate days, the hydrargyrus cum sulphure. But above all, in the worst cases, fumigations with the hydrargyrus sulphuratus ruber, and hydrargyrus cum sulphure mixed together, should be made use of morning and evening; from which I have seen the best effects when the discharge and fetor have been very great, and the ulcer of long standing.

## *Ear-ache.*

It is needless to say much on this article. The pain is usually spasmodic, or if not, it is owing to taking cold in some part about the head, especially the teeth. In this case, a diaphoretic at going to bed, and a dose of cooling physic the next morning; with a clove of garlic put into the ear, or a poultice of onions applied over it, will remove the pain, which is liable to recur, however,

if accompanied with tooth-ache. If these fail, a blister may be applied behind the ear.

If it arise from spasm, the pain is often exceedingly severe, and is apt to return frequently; being readily excited by every little cold, especially in some habits, tormenting young people at times for several years. The juice of rue is here a good remedy, or if this fail, a little laudanum added to the acoustic directed for deafness, and dropped warm into the ear.

### *Tooth-ache.*

I just glance at this painful complaint as at the former, which also frequently accompanies it at every age; while some young children suffer by it greatly during, or after shedding their first teeth.

If it be proper to have them drawn, that is the well-known, and most certain remedy; but when that operation may be, on any account, objected to, palliatives will sometimes succeed; such as a blister behind the ear, a clove of garlic, or a few drops of laudanum, made warm, and instilled into it, or a pepper corn bruised, put into a little linen bag, and wetted in hot brandy; pounded ginger and white of egg, laid to the cheek; a few drops of caryophil. aromat. applied on lint to the hollow tooth, or the smoke of tobacco forced into the ear, and especially the paste, or plug, contrived by the late Mr. Cockran, which the great good

effects I have been witness to, will, I hope, be a sufficient apology for mentioning; especially as it is calculated to become a permanent remedy.*

## *Cancrum Oris.*

This is chiefly a complaint of children, is often talked of by nurses, and is usually as trifling as any. It has indeed, been said by some writers to prevail very much in England and Ireland, and to be often a serious complaint. Such a disorder, if it really be canker, may be treated as under the next article; but the common canker is rarely troublesome to cure.

It sometimes makes its appearance in the month, at others, about the time of teething; and frequently at the age of six or seven years, when children are shedding their first teeth, and the second are making their way through the gums, which are covered with little foul sores, extending sometimes to the inside of the lips and cheeks. It seldom requires more attention than was mentioned under the article of dentition; any mild, astringent application, and keeping the body open, usually effecting a cure; or if it does not, and the complaint makes its appearance at the

* If the paste or plug here commended was deserving of the encomium bestowed upon it by Dr. Underwood, it is to be regretted that the memory of it should be lost. A remedy calculated to become permanent, ought not so soon to be consigned to oblivion. S. M.

time of teething, it will generally go away as soon as the teeth are come through.

The worst species of this complaint that I have happened to see, has been during the second period of dentition, when a child has been shedding a number of teeth together, leaving the rotten stumps behind, which have been neglected to be drawn out. The whole gums will then sometimes be spongy, or dissolve into foul, spreading ulcers; and small apertures will be formed, communicating from one part to another, accompanied with an oozing of a fetid, and some purulent discharge.

If the stumps of the decayed teeth can be got at, they ought to be extracted; after which, some such application as the following will soon brace the loose gums, and heal up the ulcers, howsoever foul, or numerous they may be.

℞. Bol. armen.
Gum myrrhæ.
Cort. Peruv. pulv.
Cremor tatari āā ʒi.
Mel. rosæ q.s. misce, ft. Pasta.

℞. Aq. calcis ʒvij.
Tinct. myrrhæ.
Mel. rosæ āā ʒss. ft. Mistura.

The gums should be touched several times in the day, especially after meals, and at going to bed, with the above paste, and the mouth washed occasionally with the mixture.

If no considerable change for the better should take place in a week or ten days, a drachm of alum may be substituted in the place of one of

the astringent powders ; and instead of the above mixture, one acidulated with as much of the muriatic acid as the parts will endure, occasionally made stronger, till some amendment be perceived; the bowels being, in the mean time, kept properly open. If internal remedies be thought necessary, Peruvian bark, sarsaparilla, and mineral acids, will be the properest; and the child may be kept on a diet of milk and vegetables.

### *Gangrenous Erosion of the Cheeks.*

This complaint has some resemblance to the canker, though it is much more dangerous, and is not a mere local disease. I have seen no clear account of it in any late writer but Mr. Dease, of Dublin, who seems to have met with the disorder pretty frequently, and describes it very accurately in his tract on the diseases of lying-in women, &c. to which I am very much indebted on this occasion. Mr. Hurlock, indeed, in his treatise on dentition, printed in 1747, mentions a complaint that seems to be of this kind, though he does not appear to be well acquainted with it.

It usually attacks children from two to six or eight years of age, especially the unhealthy, and such as have been subject to worms. The whole body often feels cold on the approach of the disease: after which a black spot appears on one of the cheeks or lips, and spreads fast ; but without any marks of inflammation. Oftentimes the whole side of the face is eaten away, together

with the lip, so that the bare jaw bone and inside of the mouth appear. In the end, the entire lower jaw falls down on the breast, and the whole side of the face is dissolved into a putrid mass; a colliquative diarrhœa taking place from the offensive matter that is continually swallowed, especially by very young children.

In the cure, internal as well as external remedies are required; but only such as correct putrescency, and support the strength, seem to be of any use. A few drops of the acidum muriatic, therefore, taken inwardly, in the infus. rosæ, or in the child's drink; the saline draught in effervescence; and in the end, the bark, in doses suited to the age, with good broths, jellies, and wine, are the proper remedies. The parts should be washed, and likewise injected with muriatic acid in chamomile, or sage tea, and afterwards dressed with the acid mixed with honey of roses, and over all a carrot poultice. The child should in the mean time be gently purged with magnesia or rhubarb, to carry down the putrid matters it may have swallowed. By this treatment, Mr. Dease informs us, he has recovered every patient except one, since he had recourse to this plan, which the world is much indebted to him for making public, though fortunately this complaint does not appear to be, by any means, a common one.

*Induration of the Breasts.*

It would be improper to pass over the slightest affection that has on any occasion exceedingly alarmed parents, and sometimes perplexed the younger part of the profession. Of this kind are affections of the breasts in females, previously to, or about the time of their beginning to enlarge. At this period, they sometimes become very painful; and, upon examination, a hardness and swelling are discovered, and in some instances, sharp points may be felt, which are very painful when pressed. The hardness is deep seated, around and behind the nipple, and is sometimes loose, at others somewhat fixed, and attended with severe lancinating pains, which have given rise to disagreeable suspicions in regard to the probable nature of the complaint; and would, indeed, at a more advanced age, claim serious attention. When happening in families addicted to scrofula, that disorder is naturally suspected, and sometimes a morbid scirrhus has been feared. In some instances, only one of the breasts is affected, and after some months, the other, or sometimes both nearly at the same time.

A variety of alterative medicines, aided by topical applications, have been administered in different instances, and continued for several months. These have sometimes taken away the pain, reduced the tumour, and diminished the hardness; but have, in no instance, entirely re-

moved the complaint. Yet no evil consequence, in any instance under my eye, has ever ensued in patients at the abovementioned age; nor have I heard of any from other practitioners, though it has sometimes been seriously apprehended.

The result of the whole has shewn, that the remote cause of the complaint has originated in an irritability of habit, in connection with that distention of the parts, which, at a certain age, nature always promotes.

The design of this chapter being to hold forth encouragement, from the probable harmless nature of the complaint, it were needless to point out the means, that, on different occasions, have been sometimes unnecessarily employed. I shall remark only, that keeping the body open and cool, with every other attention to the general health, must in every instance be proper; and should the pain be very great, a poultice of bread and milk, or of aq. lithargyri acet. comp. may be applied; and a few grains of Dover's powder be taken for a few nights at going to bed.*

* In the treatment of this complaint, "when a hardness and swelling is discovered, attended with severe lancinating pains," it seems requisite to apply leeches, from which evident relief has on various occasions been obtained. In addition to this, lotions with liq. ammon. acet. water and laudanum, either cold or tepid, as circumstances may require, may be recommended, and are generally useful. From ten to twenty grains of carbonate of soda, combined with some mild aperient, may likewise be directed two or three times a day. S. M.

*Abscess in the Hypochondrium.*

Children, though less liable to this disorder than adult persons, are sometimes attacked by it at an early age. It commonly arises from falls, or blows received on the part, or from lying on the grass, and other similar occasions of a cold in the bowels. It is always attended with, and sometimes preceded by alvine complaints, and not unfrequently by the true cholera. In either case, there is always a pretty early appearance of tumour near, or upon the regio pubis, accompanied with great tenderness and pain, especially upon pressure.

The intentions of cure are directed to the pain, fever, and state of the bowels. To these ends, the antiphlogistic plan is to be pursued, in order, if possible, to prevent suppuration. Therefore, soft opening medicines are required, such as castor oil, infusion of senna with oil of almond and manna, and such like; with frequent clysters, and afterwards opiates, and saline draughts, as the degree of pain and fever may demand. The part affected should be fomented externally with the decoct papav. albi; leeches should be applied once or more, and afterwards a blister, if no relief be obtained, and the external tumour be not in the mean time increased. But if the parts become more swollen, a large bread and milk poultice should be applied, and changed two or three times every twenty-four hours; and the

matter let out as soon as may be. The suppurations being between the muscles and the peritoneum, there will not be much discolouration of the skin, as in the case when matter is formed in the cellular, or adipose membrane, above the muscles. Such a change, therefore, must not be waited for; but an opening made as soon as any fluctuation can be perceived, lest the matter should make its way into the abdomen, or produce sloughs and a foul ulcer. After the matter is let out, no other application is usually required than the same kind of soft poultice. The bowels must likewise be kept open by the gentle laxatives before mentioned, and the diet be very light, and of easy digestion; which should be continued for some time.

### *Psoas, or Lumbar Abscess.*

Frequently as this disorder takes place in adults, it is as often met with in younger subjects, and even such as are only four or five years of age; and must therefore be ranked among the diseases of childhood.

It is a true chronic inflammation, and, like the last mentioned complaint, is often occasioned by bruises, strains, or lying on damp ground: and is not uncommonly connected with a scrofulous taint of the habit. The inflammatory symptoms being rarely severe, suppuration takes place slowly, and many months elapse before the matter can be felt externally; which sometimes

points high up about the loins, hip, or groin, and at others, above the middle, and on the inside of the thigh ; in the most benign the abscess frequently bursts in the groin. It is, in any case, a very dreadful disease, and is noticed here for the sake of pointing out to young practitioners the first symptoms of this insidious complaint, and marking the outlines of a practice which has proved the oftenest successful.

A slight lameness, and shortening of one of the legs, is usually the first symptom. In a little time, the thigh is observed to be bent forward and upwards, which gives an appearance of depression to the glutæi muscles. But its most characteristic mark, in its early stage, is a sensation of weakness in the loins, with a tendernes about the origin of the psoas muscle, manifest upon a careful examination of the parts.

The first indication is to procure a resolution, if possible, upon the approach of these first symptoms, and before those of a hectical nature supervene; but unfortunately, they are too often overlooked, or mistaken in the beginning.

With a view to a resolution of the inflammation, recourse should be had to bleeding by leeches, and cupping; by blisters, issues, and setons; by emetics; purging with calomel; by the warm bath, a supine posture, and low diet; and sometimes a caustic, or quicklime mixed with honey, applied near the lumbar vertebræ; but above all, by electricity: a stimulus, which in all affections of the joints, previous to the formation of pus, is, perhaps, the most successful.

Should these means fail, or advice be sought for too late to expect any thing from them, of no less consequence is the treatment, after the matter is formed: which should be evacuated, by an artificial opening, as early as possible, and by a very small aperture. If the abscess be large, one or more setons may be employed, in order to prevent the matter being too suddenly evacuated, as well as to keep up a beneficial stimulus, to induce the cavity to fill up. By these means, (which contain considerable improvement upon the ancient practice,) several very unpromising cases have been recovered; but it would be unjust not to notice, that a more important improvement has been made by Mr. Abernethy, which is peculiarly adapted to very large collections of matter, and seems likely to render this disease, for ages usually fatal, far less untractable.

The principal circumstance in this plan, is the making a small opening in such a manner and oblique direction, as to be capable of being closed again after having given vent to the present collection of pus; and repeating the operation at such intervals, and as often as shall be necessary. But for further information the reader is referred to the tract itself; it being both beside my purpose to enlarge, and would be unjust to add any thing that might induce him to overlook the accurate account with which Mr. Abernethy has favoured the public.

Nevertheless, as it is certainly the duty of every writer to offer what he accounts the best

information; it becomes me to observe, that Mr. Abernethy's reasons for emptying the cyst both at first, and on every subsequent opening, are, at least, controvertible. It has been thought by others to be an improvement to let out only a part of the matter in very large collections of it. And I have myself known some, and heard upon good authority, of other cases, in which the latter method seems to have the preference: none of the evils from the distention of the cyst, which Mr. Abernethy suspected, having taken place.

Mr. Abernethy, however, as it appears from a more recent publication, retains his opinion as the result of experience, and is now not anxious about the obliquity of the aperture. He, nevertheless, closes it carefully, and assists its healing, and makes a fresh puncture as often as the abscess shall fill to a certain degree.

This sentiment is submitted to the public upon Mr. Abernethy's authority, having had no reason myself for altering my opinion; the only case I have seen since my former edition, in which the whole of the matter was evacuated, did not succeed.

Mr. Abernethy is further of opinion, that opium administered at regular intervals, and in doses suited to the occasion, has been very useful in mitigating the pain and irritability of the abscess, and in consequence, the corresponding hectic fever.

When the abscess has been some time opened, the diet should be changed for one more cordial and nourishing; and the bark, steel, or vitriol,

be administered, and the patient enjoy a pure air, and take such gentle exercise as his situation will admit of, without an increase of pain.

I have only to add, that nature will endeavour to relieve herself, even in this dreadful disease, by absorbing the pus, very many months after a large quantity has been formed. A lady, who was long confined to the house, and chiefly to her bed, through extreme weakness, and the weight of the limb, has found the size of the tumour very considerably diminished; the appetite greatly returned; and the use of the limb so far restored, that she is able to walk abroad, and partake of the ordinary comforts of convalescents, who are yet in a weak state.—This was the statement of the case in a former edition; to which I have the pleasure of adding, that it is now some years since she was first able to take this exercise; though she has not yet recovered her strength.

## *Morbus Coxaris.*

A very similar disease to the above, and equally dangerous, is the morbus coxaris, or abscess of the hip-joint; a complaint differing only in the precise seat of the disease. The swelling and pain are here, indeed, more circumscribed, and the abscess always gives way near the region of the joint. The preceding symptoms, however, much resemble those above-mentioned. But the equivocal nature of the first appearances, and the

difficulty of ascertaining the probable degree of subsequent injury, are such as will not allow of a discussion in detail in a work of this sort.

I shall observe, however, that a degree of lameness is frequently the first thing noticed; and a short time afterwards, both the thigh and the calf of the leg become sensibly lessened. The patient also does not stand equally on both legs, and the affected one projects outwards from the body; and in the end the thigh becomes shortened. It is generally attended with a severe pain in the knee, and very early an uneasiness in moving the head of the thigh bone in its socket. It occurs from infancy to manhood, and often derives its origin from trifling accidents. It is frequently at its first appearance mistaken for other disorders; accordingly, the paleness, languor, and listlessness that follow the first symptoms are often attributed to worms, and the tumour itself considered simply as scrofulous: whence an erroneous practice is frequently adopted. It is, moreover, mistaken for rheumatism and sciatica in adults, and in children, for indolence and trivial accidents.

On the head of treatment, I shall only observe, that in a view to procuring a resolution, which is the first intention, the means can differ but little from those prescribed for the foregoing complaint: and we have the authority of the late Mr. Pott* for expecting considerable benefit from issues or setons, applied in the manner

* See a short account of his Life, by Mr. Earle.

directed for the palsy of the lower extremities. Should an abscess, nevertheless, be formed, its after treatment must vary considerably according to the degree of injury of the joint, and adjacent parts. Nothing, however, will contribute more to the cure, than long and strict rest of the limb.*

### *Abscess under the Fascia of the Thigh.*

The nature of this deposit is so much of a kind with the two preceding ones, as well as so much less dangerous, that it would be needless in this work, to do much more than mention it in its place.

Mr. Abernethy is of opinion, that the whole of the matter should, in this case also, be evacuated, and by a larger opening than for the lumbar abscess; and does not, therefore, advise a reunion of the lips of the orifice. I have, however, seen the method which I have noticed as successful in the former, equally so in this abscess; and, from the result in one very bad case, am disposed to think there may be considerable advantages in closing the aperture, and making fresh punctures as the matter shall collect.

* For a full account of these abscesses, readers are referred to a Treatise by Mr. E. Ford.

### *White Swelling of the Joints.*

I shall be equally brief also on this article, the disease being well known to every surgeon; and my intention in naming it being only to mention, from experience, a few remedies that have been found successful in young subjects, if had recourse to in good time, and before matter has been formed. Such are the repeated application of eight or more leeches, and afterwards small blisters to the joint; gentle frictions of the part; two or three vomits a week; with entire rest of the limb; and in the end, sea-bathing, especially if the patient be of a scrofulous habit. It has been said, that a poultice of boiled turnips, with a lump of hog's lard, applied twice a day, has, in several incipient cases, entirely removed the complaint. And in a few instances that I have known, electricity has had an immediate, and wonderfully good effect, even where the joint has been considerably enlarged, the pain very great, and the child incapable of straightening the limb.

### *Paralysis of the Lower Extremities with Curvature of the Spine.*

This complaint has been of late years so thoroughly announced, that it should seem unnecessary for most readers to enter into a minute de-

tail of it, after the accurate description given by the late Mr. Pott, whose early account and judicious treatment of this dreadful disease, has added lustre to the reputation acquired by his former publications. Some late observations have, indeed, seemed to detract both from his merit, and expected success; I can, nevertheless, from my own experience, vouch for the great utility of the plan in this morbid deformity.

It will be proper, however, carefully to distinguish it from the simple curvature of the spine, in which a greater number of vertebræ is concerned, and the legs are not peculiarly affected; as well as from a complaint presently to be noticed, under the name of debility of the lower extremities, in which there is no manifest change of figure in the spine.

The palsy of the lower extremities is certainly confined to no age, and being at first very frequently mistaken in young children for the trifling effect of some fall or strain, is intitled to peculiar notice in this work. I have never met with it, indeed, where it has not been preceded by some fall or violent exertion, though, as Mr. Pott has observed, such supposed accidents are seldom much noticed previous to the debility taking place; it is, however, probable, there may be some predisposing cause, without which no common strain, would induce so much mischief in a part continually exposed to accidents.

The curvature is generally in the neck or back, though sometimes in the upper part of the loins, and varies in extent and degree according to the

number of the vertebræ that may be affected. The first symptom noticed, by children of an age capable of expressing their feelings, is an increased sensibility, and irregular twitchings in the muscles of the thighs. This is succeeded by a dislike to motion, especially to moving briskly; the patient on such occasions finding himself likely to fall, his legs getting entangled through their weakness, and a disposition to cross each other, in his attempts to step forward. Soon after this, he perceives himself unable to stand upright long together, and that the legs and thighs have lost much of their natural sensibility. Matters seldom continue long in this state, and the weakness increasing, patients lose more and more the use of both the lower extremities, till some are unable to move them at all, even in bed: and these advances of the disease are said to be more rapid in adults than in infants. In the latter, I have particularly remarked that rigidity of the ankles noticed by Mr. Pott, by which the toes are pointed downwards, so that the heels cannot be brought to touch the ground.

As my intention is only briefly to point out the disease, and the proper means of relief, it is not of importance to enter into a further detail of the progress of this disorder, and of other complaints which are induced by it, whenever the original disease has been long neglected.

The obvious remedy is that first happily suggested by Mr. Pott, viz. a large issue or seton placed on each side the curve, at such a distance as may prevent their bursting into one. Where

had no experience of them, nor does it seem very probable, that such auxiliaries are likely to avail much when the issues shall fail. After the recovery, however, if the patient is of a scrofulous habit, sea-bathing is peculiarly indicated.

The moxa has been successfully made use of in one instance, by Mr. Gimes, after the caustic, as directed by Mr. Pott, is said to have failed. But as the burning was several times repeated, and the recovery appears to have been unusually slow, it is not very certain, but that a repetition of the caustic might have proved equally beneficial.

The assistance of the stay contrived by Jones, and since made by Bowley and Kebble, has been recommended upon the authority of Sir James Earle; and a trial of it, under proper cautions, may be made whenever the issues may fail, or the cure seems to be at a stand.

## *Debility of the Lower Extremities.*

This disorder either is not noticed by any medical writer within the compass of my reading, or is not so described as to ascertain the disease here intended. It is not a common disorder any where, I believe, and seems to occur seldomer in London than in other parts of this kingdom. Nor am I enough acquainted with it to be fully satisfied, either in regard to the true cause, or seat of the disease, either from

my own observation, or that of others, with whom I have corresponded, except in the instance of teething, or of foul bowels; and have not myself had an opportunity of examining the body of any child who has died of this complaint. I shall therefore only describe its symptoms, and mention the several means attempted for its cure, in order to induce other practitioners to pay attention to it.

If it arises from teething, or foul bowels, the usual remedies should be employed; and have always effected a cure. But the complaint as often seems to arise from debility, and usually attacks children previously reduced by fever: seldom those under one, or more than four or five years old. It is then a chronical complaint, and not attended with any affection of the urinary bladder, nor with pain, fever, nor any manifest disease; so that the first thing observed is a debility of the lower extremities, which gradually become more infirm, and after a few weeks are unable to support the body. If there be no signs of worms, (as is here supposed), nor other foulness of the bowels, mercurial purges seem to be of no use; neither has the bark, nor hot nor cold-bathing. Blisters, or caustics on the os sacrum, and the great trochanter, and volatile and stimulating applications, with friction with mustard and oatmeal, dry, to the spine, legs, and thighs, have been chiefly depended upon; though there is no appearance of an enlargement of any of the vertebræ, nor of suppuration in the external parts, and therefore no resemblance to the in-

flammation of the intervertebral cartilages, the psoas abscess, nor the morbus coxaris of De Häen.

When only one of the lower extremities has been affected, the above means, in two instances out of five or six, entirely removed the complaint: but when both have been paralytic, nothing has seemed to do any good but irons to the legs, for the support of the limbs, and enabling the patient to walk.* At the end of four or five years, some have by this means got better in proportion as they have acquired general strength: but even some of these have been disposed to fall afterwards into pulmonary consumption, where the debility has not been entirely removed. On this account it may be suspected, that the complaint is sometimes owing to scrofula: and I have been very lately informed by a gentleman of character in the country, that he has seen one instance of a paralysis, or debility of this kind, in which, upon opening the body after death, the internal surface of the lower vertebræ lumborum was found carious, though there was no abscess of the psoas muscle, nor external tumour on the back, nor loins.

I have seen a similar debility seize grown people, especially women, after a very long illness, and has continued a year, or more; during

* It may be doubted whether irons to the legs can ever be useful in a state of paralysis of the lower extremities. If the limbs are paralytic, how are irons to the legs to enable the patient to walk? S. M.

which time they were utterly incapable of walking without the help of crutches. These cases, however, have always been attended with great pain in the commencement of the complaint, though without tumour of the limbs; and have seemed to be benefited by the external use of the waters at Bath.

### *Discolouration, accompanied with Debility of the Limbs.*

Attendant upon debility of the lower extremities, there is sometimes a discolouration, equally distinct from those already mentioned, and another yet to be noticed. It takes place at a more advanced age, and seemingly in consequence of previous bad health. I know of no writer who has noticed such a complaint, and have not met with it often enough to be distinctly acquainted with its nature; nor have I, as yet fairly seen the result.

Children so affected have gone off their feet, as it is called, or dragged them only very feebly, after having been able to walk stoutly for some time. They have become in every respect weak and languid; their head has grown large, and their limbs become emaciated, but do not feel cold to the touch, though of a deep leaden-blue colour from the fingers and toes to the elbows and knees, with the face almost equally discoloured, and like that of adults in a fit of asthma. A fall,

or such like accident, has sometimes been suspected as the cause of these symptoms, but unsupported by any appearance on the vertebræ, or other parts.

The bark and cordials have been made trial of without any advantage; and cold bathing has seemed to be prejudicial. The application of leeches to the livid parts, friction, spirituous and volatile embrocations, and blisters; repeated electricity; tepid sea-bathing; steel, exercise, and a generous diet, are the means I have hitherto directed, after purging with calomel; but I am not able to state their certain effects; most of the cases I have been consulted for residing out of town.

In several instances, a discolouration of this kind, appearing only at times, and recurring again, during many months, attended with cough and occasional difficulty of breathing, has disappeared totally as the children have acquired general strength and good health, without any manifest advantage from the means that have been used.

### *Curvature of the Bones from Weakness.*

Crookedness of the bones, particularly those of the lower extremities, has been mentioned as a common consequence of rickets, and may claim a transitory notice.

The principal inquiry in the treatment of

deformities of this kind, respects the use of irons for the support of the limbs, whenever the distortion happens to be considerable. The propriety of this assistance has indeed been doubted by some practitioners, as well as their unpleasant appearance objected to by parents; who have, therefore been inclined rather to trust only to cold-bathing. Friend, however, as I am to the latter, I may venture to say from experience, that it is likely to be prejudicial at the time it is often had recourse to; for by strengthening the system, it rather serves to confirm the crookedness which the bones have already contracted. It is an advantage, on the other hand, that the bones remain soft and yielding as long as the curvature is considerable, if so be the pressure of the superior parts be at the same time duly counteracted. To support the limbs therefore, with irons, as long as the softness of the bones disposes them to yield under the weight of the body, is certainly a rational intention, and has been very beneficial in numberless instances. This end obtained, the bones being still lengthening as the child grows up, they naturally incline to become straight; and at this time the cold-bath and other tonics are properly indicated, and will co-operate in the cure of the complaint. The only care required is that the irons be made as light as possible, and be properly adapted, and that they be lengthened as often as may be necessary. It is possibly for want of due attention to this last particular, that irons have in some instances been

really found to do harm; the reason for which must be obvious to every one.

When a curvature takes place in the spine (without any disease of the vertebræ or cartilages) the like method should be taken. Proper instruments to support the head and upper parts of the body have been contrived by different artists, but those first made by Jones, and now by Kebble, appear to be the best. There is, indeed, a slight disposition to this curvature in some children of a scrofulous habit, that does not require so inconvenient an instrument; and for which the stays made by Laurie and Holmes, in Bartholomew Close, may therefore be preferable.*

But if the injury extend to the hip, and contiguous bones, it will not be manifest at the time: and when discovered, can be benefited only by the cold bath, and other general remedies. If this distortion should be considerable, it may, indeed, become a source of manifold evils in females, as will be noticed in another place.

Should the bones of the arm be curved, either by accident or disease, in this soft state, rollers and pasteboard splints, properly applied, will be sufficient to support, and restore them to their natural form.

* Of the use of irons and stays to counteract any kind of curvature of the bones, my experience does not allow me to speak highly. Though sometimes useful, they have on many occasions appeared rather to do harm. S. M.

## *Paronychia.*

This complaint occurs in very different degrees, but is introduced here principally in a view to the most benign; many young people being very subject to a mild species of this complaint, which being perfectly superficial, is not improperly termed the cutaneous whitlow, and will attack the ends of the fingers several times in a year, without any previous injury of the part. The subject is noticed, therefore, chiefly with a design of recommending a prophylactic which I have frequently seen successful. This consists only in bathing the fingers several times a day, in the following mixture, the moment that a sense of any preternatural heat, or pain, shall be felt.

℞. Misturæ camphoratæ ℥iv.
Ag. litharg. acetati ʒij.
Tinct opii ℥ fs.
Misceantur.

In the malignant, or deep-seated whitlow, doubtless the best method is to make an early opening down to the bone, which will occasion the patient much less pain than allowing the matter, gradually to make its own way to the surface; which is likewise always attended with much mischief to the parts; and sometimes even gangrene.

I shall only add, that in the commencement of the tumour and pain, nothing can be more im-

proper than the recourse so commonly had to a bread and milk poultice; instead of which, where poultices are required, those made with the water of acetated litharge are abundantly preferable, and should be applied only very moderately warm.

## *Furunculus.*

The common boil only is intended here; and is noticed from its frequency in young people towards the time of puberty, who are sometimes vexed with a succession of them. This is the true phlegmonic inflammation, and is therefore most acutely painful, the skin of a deep red colour before the suppuration is complete. Though oftentimes hurtful in older subjects, they are, however, justly accounted salutary in others, and do harm only when repelled, or hastily dried up. If a poultice of bread and milk, therefore, be applied from the first, (if the boil be in a convenient part, otherwise a gum-plaster), and the abscess dressed with any warm digestive as soon as the skin gives way, the slough, which the boil always forms, will soon be thrown off. It is sometimes for the want of this, that another boil forms in the neighbouring parts, or the child is teazed with sore eyes, or some humour, as it is termed, on the skin.

Two or three doses of purging physic may be taken, at proper intervals, after the boil is healed.

*Perniones*

This is a complaint so well known, that it can need no description. It is generally owing to the circulation of the blood in the minute vessels of the extremities being checked, by a child having been long exposed to cold or wet, and afterwards running to the fire, instead of recovering the natural heat by general exercise, and friction of the parts affected. If the injury be exceedingly great, as it sometimes is, when a person has lain for several hours in the snow, the circulation cannot always be restored, and some parts actually mortify. To prevent this, if possible, instead of bringing the person near a fire, he should be immediately stripped, and well rubbed all over, especially the parts most affected, with snow, and afterwards with salt and water, and be then put into bed. If neither snow, nor ice be to be had, cold water should be made use of, or flannel sprinkled with spirit, or volatiles. If the parts be turned black, which they often are when they are what is called frost-bitten, the patient, especially if a young child, should be confined to the bed, as long as the weather is severe, and the parts shall continue discoloured. But my intention is to treat chiefly of slighter attacks; on the first appearance of which, known by the heat, itching, redness, and swelling of the heels, toes, or fingers; the parts may be well rubbed with a soft brush, or soaked in smiths' forge water, and afterwards

rubbed with mustard and brandy, soft soap, or salt and onions; or they may be embrocated with the liniment. saponis, or spirit. camphoratus, to two ounces of which may be added a tea-spoonful of the aqua litharg. acetati. But I have for some years experienced the good effects of far simpler means than any of these, which I have hitherto never found equalled by any of the warmer remedies alone. It is the cerat. sperm. ceti. spread on a large piece of thick lint, or the emplast. saponis on cloth; to be applied as soon as the extremities begin to itch, or become painful; or if this should not very soon be of use, both embrocating, and covering the parts with compresses of flannel wrung out of the aqua ammoniæ acetatæ, which should be continually preserved moist.

Some children are disposed to have chilblains every winter; as a preservative against which, if it be the hands that are liable to be affected, warm leather gloves should be worn, (avoiding woollen, which in these cases is unfriendly to the skin;) and above all, wearing for a few hours in the day, or night, and especially when abroad in the cold, oiled-silk gloves, which is one of the best preventives both of chilblains and of chopped hands, that has been hitherto known. But if the feet are usually the affected parts, the heels only may be covered by a piece of washing-leather, and over this a piece of oiled-silk, secured round the insteps, and worn day and night during the cold months; and should be taken off only for the purpose of washing them, and rubbing the

parts with the brush or liniments, as mentioned above.

When the swellings are broken, it is common to dress the sores only with a little cerate, and to wait for the return of warm weather, when they usually heal of themselves; but by this means they often remain bad through all the winter, and when large, are sometimes not well till the summer is very far advanced; and I have even seen them remain very bad both in children and grown people, at the end of September.

After having attended great numbers in this complaint, I am satisfied this kind of sore requires applications somewhat more invigorating, being a species of gangrene; and though it will not always endure very warm digestives like many other ulcers, yet when the chilblains are pretty large, a portion of some digestive joined with the cerate, is very friendly to them. And I have known some sores, though very small, which had remained in a very obstinate and tedious state long after the breaking up of a hard frost, whilst they had been dressed only with cerate, or other mild or drying applications as they are called, begin to heal immediately upon adding a small portion of some warm digestive, and applying a flannel roller, without any other alteration in the plan. But if they are spread to any considerable size, nothing contributes so much to their healing, as touching the sores every day with bracing and invigorating lotions, particularly diluted solutions of steel, or tincture of myrrh; which in a very few days will produce kindly granulations

in these, and other cold sores, though of long standing.

When the parts are much swollen, and the sores have been long foul, it will be often necessary in severe weather, to make use of poultices, of which those made of rye-meal and the compound water of acetated litharge are more active, and therefore preferable to bread and milk: the latter, however, if a little brandy be added to it, answers very well in many cases. If these are applied over the above dressing of cerate and digestive, and changed twice a day, the sores will heal in much less time than by any of the common applications I have seen used; especially if the parts surrounding the sore be well rubbed with camphorated spirit. If children be not very young, purging them with a little calomel twice a week, will often expedite the healing of the sores; in the worst cases, a decoction of the bark, as well as cordials, and a generous diet, are required.

I have now, for many years, had strong proofs of the good effects of electricity* in chilblains, both as a remedy and a prophylactic, especially in elderly people; many of whom are afflicted with them every winter.

* The partiality of Dr. Underwood for Electricity as a remedy in various and dissimilar diseases, cannot but have been remarked by the reader; I wish I could add, that my experience sanctioned this favourable opinion. S. M.

## *Ambustiones.*

Burns and scalds are mentioned by some old writers; and though a misfortune by no means confined to young people, they too often fall to the lot of infants, through the carelessness of their attendants; and for want of being properly treated at the instant, children often suffer exceedingly, when a fit application would have rendered the injury trifling.

When such an accident happens, the nearest astringent at hand should be made use of, such as brandy, or other spirit, oil of turpentine, wine, or even cold water, till something more proper can be procured, into which the injured part should be plunged, or be covered with pieces of cloth dipped in such liquors, which will prevent the blistering of the part: or in the momentary want of any of these, holding the injured part before a moderate fire.* As soon as it is possible to procure officinal remedies, the following will be very proper.

℞. Aq. calcis ℔j.
— litharg. acetati ʒss.
Spir. vini gall. ʒij.
Misceantur.

* This is a popular expedient very often resorted to; I have several times known it to be used, and it always appeared to increase, rather than to lessen, the anguish of the sufferer.
S. M.

Where ice can be conveniently applied, and renewed day and night, for three or four hours at a time, it will be found the best early remedy in every bad case; or in the want of this, keeping the parts constantly wetted with cold water.

If the injury has been too long received to admit of much relief by these means, and deep sloughs are actually formed, a very proper dressing may be made of equal parts of cerat. è lapide calamin. and unguent. sambuc. viride; diminishing the proportion of the latter as the sloughs shall be thrown off, and the sores become disposed to heal. But should the injured surface be large, or the pain occasioned by removing the dressings be very great, it will be sufficient to cover the parts with pieces of linen dipped in cold-drawn linseed oil, which should be moistened every day, and suffered to adhere till the sores are in a state to admit of being dressed in a common way. The repeated application of cold water has been strongly recommended, and afterwards strips of litharge plaster.*

A strong solution of soap in water has long been in use with artificers employed in any business exposing workmen to very bad scalds, and is a very excellent remedy. About three quarters of an ounce of soft soap is a proper quantity for a pint of water. But the soap taking some time in dissolving, and requiring a certain proportion of boiling water, the lotion cannot be made cool

* Baynton on Ulcers, in a letter from Mr. Simmons, of Manchester.

enough for immediate use by the addition of the proper quantity of cold water; a remedy, therefore, more convenient, and perhaps more efficacious, may be made of ol. oliv. aq. fluv. frigid. and aq. kali puri. Six ounces of oil to ten of water, with two drams of the ley, will make a pint. This quantity may be sufficient for a burn on the hand or foot: which is to be immersed, and kept about half an hour in the liquor, which will remove the injury if had recourse to immediately: but must be repeated as the pain may require, if the scald or burn be of some standing. Could a person scalded all over, be instantly put up to the chin in a cold bath of this kind, and the head, at the same time, be frequently immerged, or well-washed with the liquor, I believe very little injury will ensue. Another good domestic remedy is that mentioned by Mr. Parkinson; a strong brine, made by placing sliced potatoes and common salt, in alternate layers in a pan, allowing them to remain until the whole of the salt is liquified; which must be then drained off, and preserved in bottles, ready for immediate use. Whatever sores may be formed, should be treated afterwards according to the foregoing directions.*

* For some new ideas on the nature of burns, and their treatment, the reader is directed to an essay, written by Mr. Kentish, 1797.*

* This note was, in the subsequent editions of Dr. Underwood's work, swelled into a long defence of this chapter, against some censures of Mr. Kentish, but it has not been thought necessary now to reprint it. S. M.

## *Luxations and Fractures.*

Infants are not only liable to these misfortunes by a fall from the lap,* but the bones or joints may sometimes be unavoidably injured in the birth. There is in this case seldom any luxation, I believe, but of the shoulder, which is not difficult to be reduced, and requires little afterwards, but that the limb be kept perfectly quiet.

It is very common for nurses, especially during the month, to support the lower jaw of an infant whenever it happens to yawn, in the apprehension that the jaw might otherwise be dislocated. This practice is at least an evidence of the nurse's attention, and can do no harm, though I have never known the accident happen. Should it, however, through some violence, take place, either at this age, or in older children, it will occasion a very awkward appearance, and prove very distressing to the child, who will be disabled from taking any nourishment till the luxation be reduced. Nothing more, however, is required to this end, than to place the thumb of each hand in the back of the mouth, and the fingers on the outside, under the jaw, so as to

* It is a very good custom of some nurses, whenever they sit down before the fire, with an infant in their lap, to pass a strong pin through the child's and their own clothes, thus effectually preventing the child from falling down, should they by chance doze or sleep. S. M.

depress, and at the same time bring it a little forward, to disengage the head of the condyle, and then force the jaw suddenly back.

Fractures, indeed, are not quite so easily managed as luxations, and probably happen more frequently. The bones are yet but little more than gristle, and are easily bent, or even broken. The former is very readily restored, but I shall be more particular on the latter, as the subject is of some importance.

Fractures in the birth are usually of the collar bone, the arm, or the thigh: the treatment of the two former of which will include all that is necessary to be observed of such as may happen in other parts.

The first, however, requires very little attention, as it will be necessary only to draw the shoulders back, confining them in that posture by two or three pins in the clothes, and to apply a piece of the empl. litharg. cum resina, or emplast. saponis spread on leather, upon the rising end of the bone, and a larger piece over the first.

A fracture of the arm demands a little more attention, but will always end perfectly well. The difficulty consists in keeping the fractured ends of the bones opposed to each other, without rolling up the arm so tight as to occasion pain, or much swelling of the hand; which, in a new-born infant, a very small pressure will effect. I have found no method so well adapted as the following, which, allowing of a little tumour about the fractured part, without the necessity of loosening the roller, preserves the ends of the bones in due

contact; without drawing the roller so tight as to prevent the free return of blood from the inferior parts of the limb.

To this end, three little splints, about half an inch in width, and an inch and a half long, may be made of fine linen cloth, five or six times folded together, to the thickness of common pasteboard: and being soaked in a mixture of flour and white of egg, should be placed in the usual manner, along the fractured ends of the bone. Being applied wet, they will accommodate themselves exactly to the figure of the limb, and when become dry, will be sufficiently strong to support the bones. They should be applied immediately on the skin, without the intervention of a roller; by which means, when the parts swell, which they should always do a little, there will be space enough between them to allow of it, notwithstanding the pressure from the roller, which should be applied over them. This ought to be of very fine flannel, and should not be drawn near so tight as for adults, nor will there be occasion for it, as the chief dependance ought to be on fastening the arm down close to the side, by strong pins fixed into the little gown, in the manner the surgeon may best contrive at the time. The gown, therefore, ought not to be changed, nor the arm moved, but in his presence; and if the hand be not inflamed, nor very much swelled, and the child continue easy, the part will not need to be opened under eight or ten days. Till this time the same gown should be worn, and be preserved clean by such coverings as may be

easily removed. The speedy union of the bones will depend upon a strict attention to keeping the limb as still as possible; and if it be so preserved, the accident will afford very little trouble after the first ten or twelve days; and at the month's end, the child will move that arm nearly as well as the other.

### *On Cutting the Tongue.*

The directions on this head, as well as the notice taken of many of the following little disorders, proceed rather from a desire that nothing on the subject of children's complaints should be omitted, than from their real importance. Some of them, indeed, have been entirely overlooked by preceding writers; and though they will seldom require much attention, it may sometimes be of advantage to know what has been serviceable in similar cases. The instance under consideration, however, is too trifling a matter to dwell upon. And indeed the little operation, performed in order to lengthen the tongue, is very frequently called for where there is no absolute occasion for it, the confinement being seldom so considerable as to make it really necessary to divide the frænum. The child will suffer so very little, however, in the operation, that when it is carefully done, it will be attended by no inconvenience; and if it can afford the mother any satisfaction, it will be very proper to comply

with her request. It seems, therefore, only necessary to add, that some little care and steadiness are required, or the sublingual veins may be wounded, and in consequence an infant may lose its life. To avoid this danger, the bridle may be divided by a small curved bistoury, instead of scissors. The handle and blade, when open, need not exceed two inches in length; and the point should be a little curved, and the back made broad, whereby the point may be easily forced through the frænum in the most troublesome case, whilst the back of the instrument will sufficiently press down the veins, so as to be entirely out of the way of being injured. These cautions have been judged by some people to be very trifling; but besides that infants have actually bled to death, the following equally fatal accident has arisen from cutting too deep, which I shall therefore notice in this place, as well as describe an instrument contrived for suppressing the bleeding.

### *Suffocation from swallowing the Point of the Tongue, and Hæmorrhage.*

The occasion of this accident, as has been said, is cutting too deep in dividing the frænum: I have here to notice its symptoms and remedy. The former are those usually attending strangulation, and come on suddenly, and without any probable cause but that of the tongue having been cut; but to which they are seldom attri-

buted by those who are strangers to the complaint. The infant appears greatly agitated; the face turns black; and unless these symptoms soon disappear, the child goes off in a convulsion. But if they are presently removed, the infant is as suddenly well; though they generally return again, and have in several instance proved fatal.

Mr. Petit* has perhaps the credit of discovering the true cause of the complaint. The remedy consists in bringing the tongue into its proper place, and if the infant be suckled putting it immediately to the breast, which will give the tongue a natural direction. Should the child be brought up by hand, the tongue should be watched for some time, at least till the bleeding shall be stopped; the complaint taking place only in consequence of that being considerable, so as to become an inducement to the infant to continue sucking at the part.

When the sublingual veins are actually wounded, the danger, it has been said, is considerable; and it is to Mr. Petit that we are again indebted for the best contrivance for suppressing this hæmorrhage. The means consist only of a piece of ivory, in the form of a short fork; the prongs of which should be so placed as to press against the apertures in the veins, and the other end against the inside of the lower jaw, and should therefore be broad and somewhat convex, that it may keep its place.

* Memoires de L'Academie de Sciences.

## *Hæmorrhage of the Nose.*

This complaint was hinted at in the chapter on Sneezing, and some account of it is met with among the old writers; I shall therefore bestow a few words upon it, though it is not often of much consequence, I believe, before the age of puberty.

If a child be feverish, or otherwise unwell, the hæmorrhage is often a mere symptom arising from the complaint under which it labours, and will disappear upon that being properly treated. But a bleeding at the nose sometimes takes place in the healthiest children, the vessels of this part being weaker than those which are covered by the true skin, and often afford a salutary outlet, in case of plethora, and therefore usually contract when the intention of nature is answered; after which, a dose or two of cooling physic should be given. But it may be sometimes necessary to draw a little cold water up the nose, to which some vinegar may be added; to compress the nostril from which the hæmorrhage arises: and confine the patient as much as may be to an upright posture. Should these little remedies fail, the head, hands, and feet, may be bathed with cold vinegar and water, and the nostrils be stopped up with dossils of lint, which, upon urgent occasions, must be dipped in warmed oil of turpentine, or other styptic

blood issues, lies always so deep that it cannot be secured by ligature, nor be conveniently cauterized; the latter of which, indeed, would be very disagreeable. I have, however, conveyed the lunar caustic to the part, which has stopped the bleeding for a time; but it has always returned. Nothing further, however, is necessary, than to adapt a proper compress, and secure it by sticking-plaster and bandage; which should be continued for two or three weeks; or it may be restrained merely by a small dossil of lint, and cross strips of sticking-plaster applied in the manner hereafter directed for the rupture at this part.

There is indeed another kind of hæmorrhage of more importance, but this seems to be sympathetic, and is attendant upon infants who are in an ill state of health during the month, and is, perhaps, a bad sign. It takes place where the cord has been apparently well healed; but the skin afterwards gives way, and the bleeding is much more considerable than in the former. It requires, however, nothing more than the application of common styptics, with proper compress and bandage. The bleeding not appearing in the least to be critical, ought to be suppressed as soon as may be, and whatever complaint the infant may labour under, be treated according to its kind.

## *Soreness, or Ulceration of the Navel.*

The care of this part has been so uniformly submitted to nurses, that unless some very unusual complaint has appeared, medical men have seldom been consulted. On this account its disorders have been rarely mentioned by writers, nor probably have all the affections to which it is liable been generally known.

The separation of the cord is the work of nature, whose operations are usually performed in the best manner and time. It may here be remarked, however, that in regard to the time there is a considerable variety; a complete separation in some instances taking place in five days, and even earlier, and in others not till the fifteenth or sixteenth. When so late, the funis is usually found hanging only by a very slender filament, which if perfectly dead, as it usually is, ought to be divided; nature having herein failed of her intentions.

The separation of the funis, however, is not often followed by much soreness or pain, though there is frequently a true ulcer of the part. The common applications of a bit of singed linen cloth, a toasted raisin, and dusting the part with hair-powder, or the powder of ceruse, are usually sufficient for the common soreness consequent upon the separation of the cord. In some instances, however, the discharge is very great, and the part continues to appear raw, and

indisposed to heal or dry up. In such cases, I have often found three or four small pieces of a soft cabbage leaf, one of the best applications. They should be laid one over another, that they may be preserved moist and cool, and should be continued as long as the discharge shall be considerable.*

A more troublesome case is that of the part becoming sore, often some weeks after it has appeared to be healed; and as far as I have seen, (unless in some very bad cases presently to be noticed,) has taken place only where the skin of the belly has extended an unusual way on the cord; occasioning likewise, as will be noticed in a subsequent chapter, a disposition to exomphalos. This soreness is likewise attended with much thin discharge, which disappears and returns irregularly, together with a raw appearance of the part; which is not many days in the same state. The bowels are in this case usually affected, and should therefore be carefully attended to, and proper remedies administered, according to the nature and number of the stools; the part being at the same time covered with cabbage leaves, or with a poultice of bread and milk, or of aq. litharg. acetati comp. or the decoct. corticis, according as it may be more or less healed; or the raw part touched, now and then, with the argentum nitratum, blue vitriol, or pulvis lapid.

* Pledgits of lint soaked in a solution of sulphate of zinc and borax, and kept upon the part, have proved a sufficient remedy for this inconvenience. S. M.

caliminaris, as its appearance, and the quantity of discharge may suggest.

By one or other of these means I have always found it get well, but sometimes not in less than five or six weeks, when it has usually dried up suddenly; previous to which the infant has seldom thriven properly. In several instances, however, I have enclosed the raw part in a ligature, and this method has usually removed the complaint in a couple of days, and seems therefore always to be preferable where it can be effected.

But there is a much more alarming ulceration, which, like the former, takes place some time after the part has been properly healed, and is probably always the consequence of some other illness, or a general debility of the infant. In such cases the sore has been found to spread over a great part of the belly, and even to mortify. Here very little can be done, I believe; all the instances, excepting two, that I have known anything of, having proved fatal; not so much indeed from the local affection or tender age of the subject, as from the original cause of the gangrene.

Whatever is found proper in a similar state of parts on other occasions, should be made trial of, such as fomentations, poultices, and a liberal exhibition of the bark and cordials, under the use of which, however, the infant rarely survives long enough to afford a due trial of their effects.

Mr. Pearson, nevertheless, has informed me of two cases of this kind of ulceration, which took place in children turned of six months old; one

of whom recovered under his care by the means above recommended, which were had recourse to as soon as the sore began to spread. The other case had been attended by another gentleman, and was not seen by Mr. Pearson till a short time before the infant died.

A case of this kind, but more mild, fell under my observation, in which, upon the separation of the funis, a foul ulcer with great tumour and hardness took place, which was not healed till the end of the fifth week. Fomentations and poultices however, with the exhibition of cordials, effected the cure, without recourse to the bark: though the infant was not free from danger till near the end of the month.

### *Unkindly Separation of the Funis Umbilicalis.*

The uncommonness of the appearance here intended may be offered as a reason for noticing it, as it can require but little if any medical assistance. I have only once seen such a case; and being at a loss what turn it might take, it is imagined that other practitioners may not be displeased with this account of the probable result.

This case is hinted at under the article of Hepartomphalos, the subject of which was born in the Lying-in Hospital; where the funis was tied in the ordinary manner, about three inches from the abdomen. But instead of separating close

to it as usual, only the part enclosed by the ligature decayed, the portion below it preserving its former appearance, except that it was a little shrunk or shortened: some unusual vessel, or vasa vasorum, it is probable, keeping up the life of this caducous part. In this state it remained for some days before the nurse made mention of it to any one; and as it appeared probable it would gradually shrink away, no particular directions were given; but it was purposed in a few days, to tie the funis close to the belly, if that should not be rendered needless by the cord becoming dry and dropping off in the usual manner.

When the child was near three weeks old, the funis appeared a little raw and moist, and the ligature was then determined upon; but the mother being called to a place as wet-nurse to a great distance, left the hospital suddenly, the remaining funis being still a living part, but only half an inch in length, and the child very healthy; and having heard nothing of it since, it is presumed has continued so.*

* I have seen four or five cases of a disease of the Umbilicus, which I suppose to be of the same nature with that above described. It appeared to me to be a true fungus springing up from the umbilicus to the height of half or three quarters of an inch; and much resembled in shape and size the funis, except that it had no external covering. In one of the cases a ligature was applied, but did not cure the complaint, the fungus continuing to grow, after the tied portion had sloughed away. A daily application of the lunar caustic cured two of these cases, the others yielded to the constant application of a solution of sulphate of zinc. S. M.

## *Herniæ.*

Ruptures may take place in different parts, but they usually appear at the navel or the groin. The exomphalos is sometimes complicated with the ventral hernia near the part, and is occasioned by the separation of the recti muscles, the linea alba being there deficient; but it seldom extends far above or below the navel. The simple exomphalos is a very common complaint, which if immediately attended to is easily cured, perhaps merely by the use of the cold-bath: but if neglected may prove troublesome as the child grows up, especially to females. It will be sooner cured however if treated like the hæmorrhage of the navel, by adapting a pyramidical compress, made of round pieces of good sticking-plaster, spread upon thin leather, with pieces of card placed between them; or what is more easily prepared, and is adapted to poor people, a piece of bees-wax as broad as a shilling, and half an inch thick; the upper part of it may be round, and the other flat, which should be placed on the navel. But if the child be a twelvemonth old, these remedies will then require a pretty tight bandage round the waist; and such a compression I have frequently observed nurses afraid of, who often loosen the bandage so much as to render it of very little use. On this account I have for several years recommended Kebble's elastic bandage, which if this rupture be complicated

with the ventral, becomes the more necessary; and sitting quite hollow on the sides, and making no kind of compression but on the part affected, and the opposite point of the back, perfectly answers the end, and generally in three or four months. But for the simple exomphalos in young children, I have for some years succeeded equally well by the ingenious contrivance of Mr. Kelson of Seven-Oakes. This consists in bringing the parts together by means of three or four strips of adhesive plaster, applied starwise, across the navel, which are to be renewed as occasion may require. I have often observed startings of the navel happen to such infants, in whom the skin of the belly has extended further than is common upon the funis; on which account nurses should be directed to be particularly careful in such instances, and keep the part more than ordinarily confined.

The bubonocele is of more consequence, yet may be safely left without a bandage, especially as the cold bath alone generally cures it when happening to children before they go alone; the nurse carefully attending to returning the prolapsed parts as often as may be. In early infancy, there is likewise some difficulty in retaining the truss on the part, and it is continually liable to be wetted. If a rupture however should be very large, and the infant unusually fretful and crying, recourse may be had to a steel truss; to which it will be necessary to pay great attention lest it slip out of its place, or the rupture fall down and be injured by the pad. After two years of age

indeed, when children begin to take more exercise, the use of a truss seems to be absolutely necessary, of which those made of steel by Mr. Kebble are incomparably the best. Should the cure of either kind of rupture proceed slowly, cold-bathing will assist it as well as be proper, for some months after leaving off the bandage or truss.

Lastly, it may be prudent to drop a word or two on the strangulated hernia; which is more apt to take place in the groin than in any other part, though happily it is not very common in children. I have, however, seen a fatal instance of it in an infant only six weeks old. It can be necessary to do little more than to repeat here the observation made in the chapter on vomiting; that when any part of the intestine is strangulated, the stomach will frequently eject every thing that is put into it, and should therefore furnish a suspicion of such an accident, and lead to an immediate examination of the parts. Should the slightest appearance of tumour or heat be discovered, the experienced surgeon will pay a proper attention to it, and can need no directions from this work. I shall only observe, therefore, that the free application of cold water or of ice, after the ordinary remedies have failed, has in several instances succeeded: upon the like principle, vitriolic ether has been recommended.

## *Hydrocele.*

This distension of the scrotum is of a nature similar to the hydrocele of adults, and when it falls to the share of infants, I believe usually appears at the birth. It has been sometimes mistaken for a common rupture, and a linen bandage been applied in the ordinary manner. It is, however, easily distinguished from that complaint by the tumour being transparent, without pain, and from not readily retiring upon pressure, nor being increased by the crying of the infant.

It has been thought always to be a congenite complaint, and that the tumour does not retire upon pressure; but I have seen a few instances where it has been otherwise.* In one I had occasion to examine the parts very attentively at the birth, on account of a little mal-conformation of another kind, and neither then nor the next morning saw any appearance of hydrocele; nor was it discovered by the nurse or mother till six weeks afterwards, though the parts, for the reason abovementioned, were frequently examined. About this time I was sent for in haste, on account of the appearance of a large hydrocele, which, however, by the mother's report, was before I got there considerably diminished. The scrotum nevertheless contained (as I imagine) near a table

* Mr. Le Febure de Villebrune met with it in a child of twenty-two months old.

spoonful of water, and was from this time distended in different degrees, as the water happened to retire more or less through the tunica vaginalis and rings of the muscles, which I apprehended must have been preternaturally open; though no portion of the mesentery nor intestines ever descended. The complaint however disappeared in a few weeks, by only dashing the parts with cold water three or four times a day.—This infant was a twin; and it is remarkable, that the other child had likewise a hydrocele, which was not discovered for three weeks after the former; but was much smaller, and got well by only the like gentle treatment.

The hydrocele is a harmless complaint, and would probably always disappear of itself in the course of a few months; but may much sooner be dispersed by some astringent lotion. The aq. ammon. acetatæ has succeeded with me perfectly well, and I have sometimes made use of compresses wetted in vinegar and water, with the addition of a little spirit, as the skin has been able to bear it. Perhaps the addition of crude sal ammoniacus, as advised by Mr. Keate in the treatment of adults, might assist the absorption of the water; but I have myself never had occasion to make trial of it. The smoke of burning gum benjamin received upon flannel and applied to the part, is likewise a good remedy. But the speediest method is to puncture the bottom of the tumour with the point of a lancet; which, as it may always be done with perfect safety, and with very little and only a momentary pain to

the child, is often preferred by the mother, as it instantly removes a blemish which cannot but be unpleasant to her, whenever any other person may chance to be witness to it. In whatever way the water be got rid of, I never knew it return, nor the child suffer any consequent inconvenience; though the complaint is so common that I have seen it in many score instances, and cured in different ways.

### *Pneumatocele.*

Having never seen the complaint, and conceiving that the preceding disorder has often been mistaken for it, I should not have noticed it, but in the view that nothing relating to infantile complaints might be overlooked. Should the scrotum however be really distended with wind, a piece of cotton fumigated with gum mastic may be applied twice a day, and the part embrocated with the compound water of acetated litharge and camphorated spirit, and be supported with a proper bandage.

### *Retention of the Testes.*

One or both of the testicles, in some instances, remain in the abdomen of infants at their birth, and then a tumour appears in one or both groins, forming another affection resembling the hernia,

and is noticed on that account. As the application of a steel-truss, or indeed any other bandage, might here be attended with bad, if not fatal, consequences, it is of importance to avoid the mistake.

This complaint being generally owing to a preternatural stricture of the rings of the abdominal muscles, or to a want of due action in the cremaster or gubernaculum: I have nothing to recommend, unless it be in a negative way, to forbid any rude handling of the part, in order to force the testicles into the scrotum. If any thing of this kind should be judged necessary, from a disposition of the parts to give way, the descent should be only very cautiously assisted, and that not frequently. In the course of a few weeks or months, however, the obstacle, of whatever kind, usually gives way; though sometimes indeed the part remains confined through life, and its unnatural position is certainly attended with some inconveniences, and a greater chance of injury to the testes; of which I have seen more than one instance in adults. In some a hernia congenita has likewise taken place, and been attended with such troublesome effects, as to render it necessary to have recourse to a truss, (carefully adjusted,) notwithstanding the situation of the testicle. Should inflammation take place, in consequence of any accident during infancy, every proper means of counteracting it should be immediately had recourse to, such as gentle laxative medicines, and sedative embroca-

tions and cooling poultices, made of the compound water of acetated litharge.

### *Tumefaction of the Prepuce.*

This little complaint, like the hydrocele, arises from extravasated water, and is a partial anasarca, and if it be not attended with inflammation, nor owing to a stone sticking in the passage, as it sometimes is, never proves of any consequence. It is sometimes preceded by a copious discharge from the part, of a thick but soft consistence, resembling a strong lather of soap, or the froth of milk, which disappears as soon as the tumefaction subsides; by which the natural secretion from the glands has been confined.

The part may be washed frequently with the ac. litharg. acetati comp. or be wrapped up in a poultice of that kind, and the body be kept open, which usually removes the complaint in two or three days; but if it should not, the part may be lightly scarified, and afterwards fomented. Should it arise from inflammation, as in the erysipelas infantile, the inflammatory cause must be properly treated. If from a stone in the passage, the stone must be extracted, if within reach; or if otherwise, it should be forced back into the bladder.

## *Prolapsus, or Procidentia Ani.*

This is a descent of the internal coat of the lower bowel, (this coat it is well known being much longer than the others, and full of folds); and is either owing to its laxity or to irritation. It is no uncommon complaint, nor usually difficult of cure, being generally a symptom of some other; such as worms, or other foulness of the bowels; or has been induced by rough purges, diarrhœa, long costiveness, a stone in the bladder, or other irritating cause; and is usually preceded by tenesmus: to each of which the proper remedy must be applied, or the cure of the prolapsus will be attempted in vain.

But if the complaint should remain, after the irritating cause has been removed, it will then depend merely upon a relaxation of the part, arising from the long habit of descending every time the child has gone to stool; and is, in general, easily cured merely by an astringent lotion. To this end, a compress of lint or soft tow, of sufficient thickness, wrung out of the dregs of red wine, to which may be added a few drops of the aq. litharg. acetati should be often applied, and secured by a linen bandage, so as to make a firm compression on the part: or a compress may be sprinkled with fine powder of myrrh, frankincense, and dragon's blood, or impregnated with the smoke of turpentine cast on burning

coals. Or suppositories may be made of powder of balaustines, red rose leaves and oak-bark in honey, and introduced into the bowel after going to stool.—It may be found expedient to have the part supported at such times, by a servant placing a finger on each side the gut, as well as for the child to sit on a high seat, so that the feet may not touch the ground, or for older children to stand; but these cautions will not be necessary unless the complaint has been of long standing, or the descent be considerable.

When this is the case, astringent fomentations and injections will also be expedient. These may be made of a decoction of the cortex quercus, which must sometimes be rendered more powerful by the addition of alum, the quantity of which should be increased as the part may be able to bear it.

Should such a case occur in children, as it frequently does in adults, in which the bowel may not be easily returned, on account of supervening tumour and inflammation, the stricture will never fail to yield to an injection of cold water with a few drops of aq. lithargyri acetati, with five or ten of the tinc. opii.* An hour or two after such an injection has been thrown up, the prolapsed intestine, though perfectly black as well as swollen, will be found to retire of itself; the sedative quality of the injection removing the spasm and stricture, which afforded the only im-

* I have found it necessary to apply leeches in such a case, before the inflammation and tumour could be reduced. S. M.

pediment to the re-ascent of the bowel.—With the like view, Mr. Bell, in his System of Dissections, recommends the use of "a strong cone of paper softened (by being moistened at the point) and oiled. This is to be introduced into the gut with gentle but continued pressure; and when the gut is completely reduced within the anus, the cone is easily withdrawn, with little risk of its bringing down the intestine again."

Children affected with this complaint should usually sit on a hard, flat-bottomed stool, or a chair without arms, and of such a height that their feet may not touch the ground.—For children of eight or ten years old, who take much exercise, recourse may be had to Mr. Gouch's suspensory as improved by Mr. Savigny, instead of the linen bandage above recommended.

### *Discharges from the Vagina.*

These are either sanguineous, mucous, or purulent. As I speak professedly only of appearances before the age of puberty, I have merely to remark on the first, that infants have sometimes such a discharge from the vagina a few days after birth, and that the like happens to girls of eight or ten years old; but neither appears to be of any consequence. Should it, however, on any account be thought necessary to prescribe something, a little testaceous powder or magnesia, according to the state of the bowels, will be sufficient, as the discharge always disappears in a few days.

Children of five or six years old, are subject to a mucous gonorrhœa, resembling the genuine fluor albus of adults, which will in some instances be in an excessive quantity, so as to run through all their clothes; and is sometimes, though rarely, tinged with blood. If it were suffered to continue, it would probably injure the health, but I believe may always be cured by one or other of the means recommended for the next, which may be called purulent gonorrhœa.

### *Purulent Gonorrhœa.*

This is also no uncommon complaint, even in children of two years old, and is then, in general, easily removed by a little cooling physic, and keeping the parts perfectly clean. I have sometimes made use of a lotion of the aq. litharg. acet. comp. which I believe is preferable to most others, if had recourse to in the commencement of the complaint; and if there be any excoriations, they should be covered with the unguent. cerussæ acetatæ, spread upon linen, or lint. Instances will now and then occur in this species also, in which the quantity of discharge will be exceedingly great, so as to run down the child's limbs several times in the day, and will last for two or three weeks: but it has always disappeared in that time, and not uncommonly, where it has been the most copious, ceases almost suddenly.

When the purulent discharge makes its appearance much later, as it not unfrequently does,

and is much discoloured and fetid, it gives rise to a suspicion which young practitioners cannot be too guarded against. There are, indeed, instances of little girls, not more than six years old, being injured, and it is therefore of consequence to make a judicious discrimination: but there are, on the other hand, instances of a very suspicious appearance, as late as the age of thirteen or fourteen, where no injury could be received without the consent of the party, who is generally perfectly innocent, and where, therefore, the least suspicion would be very distressing to her, and might make a whole family miserable.*

Discharges with the worst appearances are frequently carried off in eight or ten days, merely by the treatment above recommended: but I have

* Induced by motives of humanity, I hope I may be permitted to add a word or two more on this subject; since the prudence and information of practitioners may not only prevent a vast deal of unnecessary distress to many worthy families, but may even save the character, or life, of another party suspected of criminality. For, besides many instances wherein inattention or ignorance might give rise to injurious suspicions, there are cases which call both for great attention and experience, in order to form a just and decided opinion. I have, indeed, known the discharge to be so ill coloured and fetid, and attended not only with great pain and inflammation, and excoriation in different parts, but such tumours and other appearances resembling violence offered, about the furca, and in other instances, with an abscess in the labia, that had the patient herself advanced any charge, I fear I should not have hesitated to have joined in with it; and yet from the event, as well as the whole history of several cases, it has been very evident that no kind of injury had been received; nor any thing like intercourse taken place.

seen some cases in the youngest subjects of a bad habit of body, where mercury, as a deobstruent, has proved useful, though I could not have the least suspicion of a venereal taint. In such cases, I have found Ward's white drop a more convenient medicine than any other preparation of mercury; it may be given in the dose of half a drop, and, by degrees, be increased to two, and even three drops, once or twice a day, for two or three weeks. But where this has failed, I have only to add, that I have been always able to succeed by giving the decoctum corticis, cum balsam. copaibæ, ovi vitel. soluto; which is also an admirable medicine in the fluor albus of adults.

## *On the Venom of Insects, and of certain Animals.*

Though the following accidents, like some others before mentioned, are not confined to any age, they are at least more formidable when they fall to the lot of little children. On this account, it may not be improper to recommend suitable antidotes against the bite or sting of certain venemous creatures to which they may be more particularly exposed; and first, of such insects as the wasp, gnat, and other flies. Indeed, for the most venomous, such help can rarely be had before considerable inflammation has taken place; after which it will take its course, and will continue, if occasioned by the large gnat, three days, and by

some other insects, for six; though the tormenting itching may be allayed much sooner by the means of proper applications. If the bite should be on the eyelid, the inside of the lip, or ear, very troublesome symptoms may follow, and the infant will be vexed by it exceedingly.

In the absence of better remedies, the first application may be of the strongest spirit at hand three parts, two of vinegar, and one of sweet oil; taking care it do not get into the eyes. But as soon as may be, the following should be applied very frequently; which will check the progress of the venom, and allay the pain and itching immediately.

R. Spir. camphorati, ℥ss.
Aceti distil.
Tinct. opii āā ʒj.
Misceantur;

to which, if the injury be not too near the mouth, may be added twenty drops of the water of acetated litharge.

The bite of the common bug, which infests crowded places, not only occasions a tormenting itching in children of a very delicate skin, and in certain grown people newly come from open villages, but will also sometimes raise blisters as large as pigeons' eggs, and will inflame the parts for several days. A very good application is vinegar with a small quantity of olive oil, and a few drops of laudanum; oil alone would rather increase the size of the blisters. But the best application for the sting of any of the above-mentioned insects, where the inflammation extends far, is ice, which

immediately takes off the heat and itching: and should be repeated for an hour or more at a time, every three or four hours, as long as may be necessary.

The sting of some insects has sometimes been found to penetrate one, or more of the absorbent vessels, and has then produced an appearance that would have been very alarming if such insects could convey a truly morbid poison. I have seen large branches of lymphatics, very tumid and inflamed, running from the knuckles to the axilla, producing an almost intolerable itching and burning, until the last mentioned remedy has been applied; which has presently abated these troublesome symptoms, and carried off the hardness and inflammation by the next day. For the highly venemous bite of the viper, the immediate application of olive oil, is the well-known and certain remedy; as well as the internal exhibition of the volatile alcali.

## *On the Bite of morbidly enraged Animals.*

Under the painful impressions of an awful accident that happened in my own family, at the time I was first engaged in this part of the work, (though, I thank God, the alarm terminated happily) I cannot avoid dropping a few words upon the bite of morbidly enraged animals.* It is not

* The disease among dogs has been known, it is said, about 2050 years.

my intention, however, to advert to the peculiar nature of this most malignant poison, nor to enumerate the many deceitful remedies that have been at different times proposed with an air of infallibility, imposing on the ignorant, but whose inefficacy is too well ascertained.* Nor is it my design to propose any new remedy, but rather to lament that the best preventives should be so ill attended to, particularly amongst the inferior class of people, to whom this dreadful accident happens oftener than to the rich. And on this account, as well as the subject being rarely treated of, it is hoped the intention will apologize for obtruding a friendly caution in this place. For after a good deal of experience, and much inquiry and reading on this subject, I am confident that nothing ought, in any instance, to be depended upon, but taking out the injured parts by the knife or caustic, or the assistance of both; which, however, if duly and timely effected, cannot fail to prevent every evil apprehended.† But when-

* In regard to dipping, or rather half drowning in the sea, I shall just remark, that I should have more hope of its efficacy upon the first approaches of the hydrophobia, than as a preventive very soon after the bite.

† Since former editions of this work, this opinion is further confirmed by the cases of Mr. Jesse Foot, published in Dr. Simmons's Medical Facts and Observations; in which we see the different success attending excision of the parts, and various other highly extolled remedies, even in subjects bitten by the same animal. A remarkable case is also given in the 4th vol. of the Memoirs of the Medical Society of London, by Dr. James Sims. A very melancholy case has also been published by Dr. Moseley.

ever the situation of the wound may not admit of going deep enough to insure success, or too much time may already have elapsed, the stronger mercurial ointment ought to be rubbed in very freely, so as to raise a salivation; which has not only been thought to have proved an effectual prophylactic, but to have also succeeded even where evident symptoms of infection had taken place;* though such testimony, I am sorry to add, is much weakened by many later experiments.

For the sake of such readers as may not have opportunity for reading many different publications, it may not be superfluous to subjoin the judicious directions of the faculty in Paris, submitted to the Committee of Public Instruction, which will bring the whole of the indications into view.

Let the wound and the surrounding parts be well washed with lukewarm water, to take off the slaver as much as possible.

Let the wounded flesh be then instantly cut out with a sharp instrument; or cauterized with hot iron, or with the spirit of nitre, or vitriol, (commonly known by the name of aqua fortis, and oil of vitriol†) or by the argentum nitratum.

* See Histoire et Memoires de la Société Royale de Medecine, Annèe 1783, 2de partie.—*Tissot, Dr. Layard,* &c.

† Dr. Hamilton's experience confirms the efficacy of excision in numerous instances, when done as late as the fifth and sixth day after the bite; and in some instances, after reinflammation of the bitten part, and commencement of the symptoms. He also prefers an excision of the parts, as more certain than

Suppuration will be accelerated and pain alleviated by filling and covering the wound with a poultice of bread and milk, applied lukewarm, and renewed every four hours.

Let the surrounding parts be then rubbed with strong mercurial ointment. If the danger be imminent, and the bites deep or numerous, salivation should be excited as soon as possible. It is also necessary, in this extremity, to cut away, burn, or cauterize the flesh around the wound, even although it should appear to be healed up, It is certain that the wound opens when the hydrophobia makes its appearance.*

In a work calculated for as extensive usefulness as the writer's resources may supply, it can scarcely be judged improper to add to all that I have said, the pertinent observations found in Dr. Hamilton's last edition on this melancholy disorder, as guards or preventives of injury.

The following symptoms, he tells us, may be noticed in dogs about to become rabid.

1st. A disinclination to food.

2nd. A marked melancholy.

the caustic, unless the kali purum is made use of, which forming an immediate eschar to some depth, the eschar may be removed by a spatula, and the caustic be repeated immediately, as often as may be judged necessary.

* Is it *certain*, that the wound opens when the hydrophobia makes its appearance? or is this one of the received opinions which are in reality unfounded? It has fallen to my lot to see several cases of hydrophobia, and I cannot recollect that in a single instance the wound opened. In two cases I am sure it did not. S. M.

3d. The eyes appearing mixed and dull.

These symptoms, he says, mark the first stage, yet with scarcely anything pathognomonic. But, it is added, that the animal now occasionally forgets his master, and is irregularly peevish; and it becomes at this time highly proper to regard our safety, and not to trust him if he snarls, nor to caress him.

The second stage is more distinctly marked; the dog does not feed with avidity, though he does not refuse either victuals or drink; the latter in no stage offending him as it does man under this disease. But he shuns other dogs, and is equally shunned by them. A convexity may likewise be discovered in his back, formed by drawing his hinder towards his forelegs; and an extreme dryness of his nose.

In the last stage he loses all recollection, quits his master's house, runs forward any where, and rushes, without barking, at every animal coming in his way, but turns not aside to bite any; and within the space of two days after dies convulsed. If he be tied up, he bites at his chain in this stage, and is furious if approached.

I have only to add (what it is, indeed, a great satisfaction to be able to say) that, dreadful as this accident is where the poison has taken effect, it is evident that only a very small proportion of those who are bitten by animals actually enraged, becomes really infected.* Fortunately, the clothes sometimes prove a defence, by wiping

* Dr. Hamilton says, not one in sixteen.

off the foam from the animal's teeth: at others, it does not happen to be forced into the wound, or is not yet possessed of a poisonous quality; or lastly, it is not absorbed, or the system may not be in a state to be infected. These assertions are supported by numberless facts, though much less frequent, perhaps, in London, than in some other parts, especially in the vicinity of large forests on the continent, where such animals are very commonly met with, and often wound great numbers of people.

It is, doubtless, the uncertainty of the bad consequences of such injuries, that has supported the credit of many fallacious remedies on this melancholy occasion. Encouraging, therefore, as the above circumstances certainly are, it would indeed be madness to confide in them, where the proper remedy may be made use of in time; and though I should wish to conceal rather than spread these acknowledged facts, could I think they would have such an effect, it is, on the other hand, no small satisfaction, that such encouragement may be justly held out to those who may be under any alarm for themselves or their friends.

### *Disorders recorded under obsolete Terms by Ancient Writers.*

I should here close the account of diseases, did I not meet with several others recorded by the ancients, which may therefore be briefly

noticed; as some readers may meet with the terms elsewhere, which they may be at a loss to comprehend. They appear in the works of Rhazes, Paulus, Ætius, Fabricius ab Aquapendente, Celsus, Primerose, and a few less ancient writers. Of some of the diseases there mentioned, I indeed know nothing but from the authors' own account of them, or that they are needless distinctions of diseases, (already sufficiently noticed) which the ancients were very fond of making, especially in complaints of the skin, but can answer no practical end: of the others, a more particular account will be given. Among the diseases recorded by these writers, are *Lentes*, *Hispiditas*, *Achores*, *Favus*, *Psorophthalmia*, *Impetigo*, *Ranulæ* or *Batrachos*, *Seriasis*, *Paristhmia*, *Parulis*, *Inflatio*, *Crinones*, *Malum Pilare*, *Phthriasis*, *Hydroa*, *Macies*.

The first six are affections of the skin, or of the eyelids. *Achores* and *Favus* are a sort of crusta lactea, so called by some, when of a dark colour, or ulcerated and extending to the head; and *Impetigo* when it attacks the chin: but by others the term *Achores* is applied only to adults. The scald head, also, denominated *Tinea* when the scabs have resembled moth-holes in cloth, and *Favus* when like a honeycomb, has been by some termed *Achores*, when the discharge has been unusually acrimonious. *Psorophthalmia* is confined to the eyelids, and is so named by Ætius, and others after him.

*Ranula* is said to be an inflammatory tumour of the parts under the tongue, and, according to the

ancients, particularly of the veins: it sometimes ulcerates, but often presents a species of soft and lax œdema. Celsus says the tumour is sometimes inclosed in a cyst, which must be taken out; the operation for which is fully described by Aquapendente. Although such seemingly different accounts are given of this complaint, the *Ranula* appears to be no more than an infarction of the sublingual glands; and, I believe, is not very common either in infants or adults; and, indeed, is mostly an endemic complaint. I have seen it, however, in this country, both in infant and adult subjects; and in one of the former, of about a year old, it rose very suddenly, and increased so much on one side of the tongue, that in about two months its edge was turned up to the middle of the roof of the mouth. At this time the tumour was very hard; but soon afterwards becoming soft, it was judged likely to break at one point. But soon getting softer and loose, the tumour abated, and the edge of the tongue resumed its natural position. The whole tongue, however, appeared now to be elevated; and from the child being so young, and the difficulty of examining the parts very accurately, Mr. Sharpe, who was attending with me, was as well as I, for a few days, in some doubt, whether the natural horizontal position was owing to the absorption of a part of the fluid, or to its having spread to the opposite side. About this time we had proposed the external use of mercury; but this change led us to postpone it for the present, and in a little time the whole tumour disappeared; the infant

having been all the while in good health, and able to suck, as well as to feed by the spoon.

I have seen it in an adult bigger than the largest walnut, and was then very troublesome, both in speaking and deglutition. When of such a size, it is usually soft, and contains a fluid, and sometimes calcareous concretions, owing to an obstruction of the salivary ducts. In this case, it needs only to be opened, and to be cleared of all the concretions; but if it be hard, the whole tumour must be extirpated. Tulpius relates a case in which the matter adhered so firmly, that the surgeon, after having laid open the cyst, was obliged to have recourse to the actual cautery, to destroy the inspissated juice. *Seriasis*, from σιρος, *quia caput quasi excavatum cernitur;* the bones about the fontanelle, or sometimes the membrane only, being depressed, or drawn in. Paulus (*lib.* i.) describes it as an inflammation about the cerebrum, in which the brain is said oftentimes to mortify within three days; but if it should not, the child, it is said, will recover.* I have never met with anything like this disorder, accompanied with a depression of the skull, though I have seen the precise depression unaccompanied with any disease, and something very like the disease without the depression, The latter was noticed in an infant of five weeks old, who died of convulsion fits, the

* Perhaps Hippocrates may allude to this disease, Aph. 50, sect. 7. "Quibus cerebrum fideratum est, intra tres dies interiunt, si vero hos superavint, sani fiunt."

brain appearing as if in a state of mortification, and smelling exceedingly fetid. *Paristhmia* is an inflammation of the tonsils, or throat, but is certainly not common in this country; it is hinted at by Hippocrates in his book de Dentitione. *Parulis* is a complaint described by Paulus as a painful tumour about the gums; Rhazes calls it a blister in the mouth, and of which I have seen one instance. *Inflatio* is a distention of the skin from wind or water after a child has been reduced by long illness. *Crinones*, or *Grubs*, is little known as a disease, I believe, in Europe. It is a secretion from the sebaceous glands, and appears on the arms, legs, and back, of sucking children, and is absurdly enough thought by some to be produced by insects: * older children are often found to have some appearances of it, but it seldom affords them further trouble than a little itching, and they amuse themselves with forcing out of the skin what they call worms. In the instance of infants so affected, rubbing the parts with a coarse cloth, by the fire side, is all that will usually be necessary in northern climates.

Though this kind of affection is generally of little consequence, whether in infants or young children, I have, nevertheless, sometimes known it prove a very troublesome complaint in older subjects, especially in females about the time of puberty. In such instances, the whole neck, back, and breast, will be covered with little black

* Astruc. Lieutard. Peachy.

spots, which gradually inflame, till the parts become totally covered with heated pimples. These at first itch intolerably, so as frequently to keep the patient from sleep through the greater part of the night; and in consequence of being continually rubbed, turn to little inflamed and angry boils. When some of these have discharged the sebaceous matter, and are healed up, others will arise in succession; and at the end of several months, the superior parts of the body are covered with them.

After making trial of common purges and alteratives, to no lasting advantage, I have cured the complaint by washing the parts morning and evening, for a few days, with the lotio saponacea, and afterwards rubbing in a little unguentum hydrargyri nitrati; and when the soreness has gone off, making use of a proper flesh-brush, for two or three months. The patient may, at the same time, take fifteen or twenty drops of the aqua kali ppt. two or three times a day, in a cup of sassafras tea, or milk and water.

A complaint, sometimes confounded with the former, is that called *Malum Pilare*, and is supposed to be spoken of by Hildanus as sadly tormenting one of his own children. It is also mentioned by Paré; but I have never met with it myself. It is said to be owing to hairs not duly expelled, which stick in the skin, especially in the back of young infants, whom it torments by an incessant itching, and sometimes raises small tumours. The cure is said to consist in fomenting the parts, and then pulling out the hairs with a pair of nippers.

*Phthiriasis,* or *Morbus Pediculosus* is a complaint I should not have mentioned, were it not sometimes found very troublesome, and the heads even of children who are kept the most cleanly, much pestered with these ugly vermin. It is not, therefore, intended to treat of it as a disease in other parts, (which are sometimes equally occupied by them) and will be quite sufficient to say, that the cure is, in general, very simple, and requires only that the hair be sprinkled for a few days with the powder of staves-acre; a remedy that is kept a secret by some foreign perfumers, who sell it at a great price. Should this, however, be ineffectual, a very small quantity of the calx hydrargyri alba may be joined with it. Some people have strongly recommended an ointment made of parsley seed boiled in fresh butter, which is to be well rubbed into the hair for three or four days. *Hydroa,* or *Sudamina,* is a trifling eruption from the sudorific glands.

*Macies,* or according to some, *atrophia lactantium,* is applied to a decay, said to arise either from worms (and is then called *atrophia verminosa*)* or to the unsuitableness of the breast-milk: which though it may be good in its kind, will not prove alike nourishing to all children. The milk is then properly directed to be changed, upon which it is remarked, the child will often recover, as I have noticed more at large, in the chapter on the management of children. This disorder is, how-

* See Harris.

ever, an incipient, or rather threatening atrophy, or marasmus, from whatever cause; and into which an infant may fall, in consequence of almost any of the complaints treated of in the foregoing pages, when they may happen to prove of very long continuance; and especially, as I have frequently witnessed, from a disordered state of the bowels; the sovereign remedy for which is then calomel, which I have directed frequently for two or three weeks, when the medical gentleman previously employed, had been administering astringents; and it has been in consequence supposed I have been mistaken, and that the child must soon expire under so debilitating a plan; whereas, after a few doses of the calomel, it has sensibly acquired strength. I have been thus particular in this case, to induce my brethren to make trial of it, in this species of supposed fatal marasmus.

I have now gone through all that can possibly be ranked amongst the disorders of infants, and have taken sufficient notice, as I apprehend, of every complaint worth mentioning, that I have met with, either in my reading or practice; and may flatter myself this tract will be found to possess the advantage of completeness above every work of the kind. That nothing may be over-looked, it remains to take notice of some congenite disorders, and external blemishes; and first of those on the head.

## *Encephalocele, or Hernia of the Brain.*

Many infants come into the world with various parts imperfectly formed, especially about the head; and never more commonly than in the upper part of the skull. If the deficiency be very great, and accompanied with a like want of brain, which it usually is, such fœtuses fall under the class of Monsters; and being never, or seldom, born alive, are not subjects of this work.

The Hernia of the brain, on the other hand, is met with in infants otherwise completely formed, and is generally curable. The public is indebted to Mons. Ferrand for an accurate description of this complaint, given in the fifth volume of the Memoires de L'Académie Royale de Chirurgie.

The Encephalocele is a soft circumscribed tumour, usually of a round form, and correspondent in size with the extent of the deficiency of cranium; to which the complaint is owing. It is without fluctuation, or discolouration of the skin, but is attended with a perceptible pulsation of the brain, which synchronizes with the pulse. The tumour retires and disappears upon pressure, and is always situate either on one of the fontanelles, or in the course of one of the sutures, and is never larger than a pullet's egg. Where the defect in ossification is very considerable, a much larger portion of brain is consequently protruded; which, strictly speaking, it were less proper to call a disease, than a fatal mal-formation, as it is

pertinently remarked by Mons. Ferrand; and no more resembles the true encephalocele, than an eventration resembles the common intestinal hernia. It will be very necessary, however, carefully to distinguish this incurable evil from other soft tumours of the scalp, presently to be noted, which it very much resembles; the latter having frequently the like precise feel of a bony margin around them, as is common, indeed, in cases of extravasation upon any solid surface. The tumour is also colourless, and often as large as in the fatal mal-formation, but has a considerable fluctuation; and is further distinguishable by the tumour not retiring upon pressure, nor being attended with any pulsation.

The encephalocele is, indeed, easily distinguished from them all, by the brief description above given of it; and fatal as it would be were it left to itself, requires only to be properly understood, in order to adopt a rational and effectual remedy; which consists in a careful and due compression of the part. This may be effected by the application of a piece of sheet-lead, somewhat larger than the tumour, and pierced with holes, that it may be sewed to the child's cap. The compression should at first be very moderate, and never so great as to give the infant pain, nor disturb any of the natural functions; though it should be gradually increased as the tumour shall retire. This is all that is required from art, the cure being the business of nature, which, if the child continue healthy, will proceed in the work of ossification, and in due time fill up the vacancy

It is by no means an uncommon occurrence for the Heads of Children, where the Labour has been slow, to be very considerably tumefied, the Scalp assuming a dark red Colour, sometimes approaching to black. These Tumors usually begin to subside soon after Birth, and in two or three Days entirely disappear On many occasions it is unnecessary to employ any curative Means, but it is generally advisable to apply some Lotion to the Part. Tepid Water with the addition of Vinegar, Brandy or Port Wine is often used for this Purpose: or a dilute Solution of the Liquor Plumbi Acetatis, or of Borax, or Sulphate of Zinc, may be had recourse to. Sometimes the Cuticle is abraded by external Irritation or rough management and sometimes it burst in consequence of internal Pressure in either of which cases an Ulcer may form upon

in the skull. The protrusion of the brain was before an obstacle to this process, whilst the injury that tender organ must sustain by the pressure from the sides of the bone, exposed it to all the evils which compression never fails to produce, and which it were needless to enumerate in this place.

### *Tumours of the Scalp.*

There are other tumours on the head of newborn infants, which it were improper entirely to pass over. The one I shall first mention is of the least importance of any, being occasioned merely by long compression in the birth. It is of different sizes, and the skin is always discoloured; but in any case can seldom require much attention, as it frequently disappears in a few hours. If large, it is common to bathe, or foment such tumours with red wine, or with brandy, or vinegar, diluted with water; and, in general, they gradually subside, though sometimes not perfectly, for several days. Some of them, however, are of more consequence, and concerning the treatment of which practitioners have differed. The absolute impropriety of opening any tumours arising from compression has been insisted on by many, but I believe it may in some cases be really necessary, in order to prevent a troublesome fungous sore, and even a caries of the skull. The discrimination, however, is sufficiently obvious, such assistance being re-

quired only where the above remedies and compression have had no effect, and the tumour is found sensibly to increase day after day, which in some instances has been the case to the end of the month. Such growth is always owing to the extremities of the arteries ruptured by long compression, being still open, and pouring out an ichorous fluid into the cellular membrane, and thereby keeping up and increasing the original tumour.

Upon opening the integuments, a bloody fluid is let out, and the tumour nearly subsides, which afterwards requires nothing but moderately astringent applications and pressure, which should be continued for a little time after the aperture is closed.

Another kind of tumour, of a more unfavourable appearance, was hinted at under the article of encephalocele, and of which it may be proper in this place to take a little further notice. These tumours contain a kind of serum, and are often very large, but without that discolouration of the scalp and bruised appearance, which there constantly is in those last described, nor do they, indeed, seem to arise from compression. I have at least, seen them extending over a third part of the head, and raised an inch or more from the skull, after the shortest and least painful labours. To the description before given of them, it may be added, that this kind of tumour, I believe, will always subside very kindly, though sometimes not completely, until the end of the month. In some instances, it begins to lessen in six or eight

the Part requiring appropriate Applications, but all the Cases of this kind that I have seen have done well, and I think have all healed in less than ten Days In a very few Instances of this kind of tumefaction of the Scalp, where I have believed that the Inflammation was not merely external, I have applied a Leech or two; I once had some Blood removed by a cupping Glass, a very torpid and dull State of the Child indicating great Pressure on the Brain. But when the Brain appears to be suffering from Pressure I prefer a more immediate Abstraction of Blood from the System by letting the Jugulars bleed, as recommended p xxix.

It happens occasionally that Children are born with Tumors on the Scalp apparently containing a serous thin gelatinous fluid; and such tumors sometimes arise a few Days after Birth without any assignable Cause. In such cases there is little or no discolouration of the Skin; on pressing the Tumors the Children appear to suffer uneasiness rather than acute Pain; the Tumors are very elastic for however slight an Imprint you make with your Finger, on removing the Pressure the Surface immediately becomes uniform. These tumors continue to enlarge for several Days sometimes, and present an alarming extent of tumefaction occupying several Inches in circumference, and being perhaps at the apex about an Inch or an Inch and half in thickness. In every case of this kind that I have seen absorption has taken Place and the Tumor has disappeared frequently however lasting from three to six weeks notwithstanding the use of directional Remedies.

days after birth, but in others, not till near the end of the third week, and then subsides very rapidly; and as it falls, more and more of the skull may be felt, from day to day, in proportion as the absorption of the fluid takes place. To assist nature, therefore, in this operation, embrocations of acetum distil. sal ammon crud. and spirit camphoratus, should be made use of, with a gentle compression of the part; as well as keeping the bowels properly open.

A tumour of a different nature from each of these is described by Michaelis, of Harbury; but as I have never seen it, and, indeed, imagine it is not known in this country, I shall merely state it as related by Loder.*

This tumour is to be distinguished from swellings on the head, with which children are sometimes born, or that appear after a slow and difficult birth, occasioned by long pressure, or the rupture of some blood-vessels; and it differs by the following marks, from any other swelling of the head, hernia cerebri, or hydrocephalus internus.

1st. By being often observed after very easy labours.

2d. By not always appearing on prominent parts of the head; though this may sometimes be the case, on account of their generally being remarked at the temples.

3d. By commonly appearing one day after birth.

* Lod. Journal of Surgery, vol. ii.

4th. By being more elevated and circumscribed than any other swelling on the head, and by showing a perceptible fluctuation.

5th. By the skin, with which it is covered, keeping its natural colour and state, and by its being easily moveable on the tumour, without changing the situation of it, a circumstance that seems to prove its being deep; the skin, therefore, appears to move on the tumour when the child is crying.

6th. By not disappearing, or diminishing on the application of pressure, and where, also, no stupor is occasioned; a sympton that always takes place in a hernia cerebri, or hydrocephalus internus.

7th. It differs from a tumour caused by the rupture of blood-vessels, or from a lymphatic swelling by the singular change which the bone on which it is situated, is observed to undergo. The external table of the bone is entirely wanting; the diploë uncovered, and the edge of the impression that is thus occasioned may be plainly felt. By this peculiar circumstance, the tumour is particularly distinguishable from any other.

On opening it, a black and coagulated blood is found in it, lying immediately on the diploë. It is very probable that the tumour originates from a disease of the bone; and that it is not occasioned by the former, on account of their both being found in the same state from the first moment.

To remove this tumour by discutients, is an attempt that has, in most cases, proved ineffectual.

The disease of the bone is increased by the pressure of the blood exciting the absorbent vessels to a greater action in the bone, whereby, at last, a hole is occasioned, and the brain injured by its being pressed. The only thing that can be done, is to open the tumour; and to let out the blood, in order to prevent the further absorption of the bone. This operation is not without danger, on account of the loss of blood that runs from the bone as from a sponge; but by making the incisions small, it may in a great measure be avoided. It is, however, very seldom that it succeeds in healing the bone, and the children generally fall a sacrifice to this singular affection. Fortunately, it is rarely observed; but, according to Michaelis, it seemed to occur more frequently at Harburg than any where else. He relates a case of this disease, which may be briefly stated, as follows; a tumour of the size of an egg, appeared on the right temple of a new-born infant, the following day after a labour, which had been uncommonly easy. As it showed the abovementioned characters, there could be no doubt of its being this species of tumour. He first tried to dissolve it, and a cold solution of sal ammoniac and saltpetre in vinegar, and cataplasms of the herb Arnica, were accordingly applied; but having continued them nearly a fortnight, without the least effect, the tumour was opened, and a black thick blood discharged from the wound. The bleeding, which was not very considerable, ceased on the application of alcohol, in which scraped linen was

dipt. The wound began to suppurate the next day, and in twelve days it was healed up; the child felt no pain whatever, and was quite well: an impression, however, remained from the want of the external table of the bone. A few weeks after the child was seized with a general erysipelas, of which it died. Dr. Michaelis being curious to inform himself of the state of the bone, where the tumour had been situated, cut through the integuments, when he found the bone appearing with a rough surface, deprived of its external table, as far as the tumour had extended, and only seeming to be regenerated in some places.

### *Lymphatic Tumours on the Head and Spine.*

There is another kind of tumour appearing sometimes on the head, and at others, on some part of the spine, which is not owing to accidents in the birth, but is of a morbid nature. These tumours contain a lymph, and are attended with evident fluctuation, as may be discerned by the touch; and unless they are exceedingly small, ought in no case, I believe, to be punctured, or even removed by ligature, though adhering only by a small pedicle. Those on the spine of the neck, or back, or on the loins, if they do not arise from the dura mater inclosing the medulla spinalis, seem to originate at least from the periosteum of the spine; and the issue having a morbid source, will be kept up after

the tumours are opened, or even totally extirpated, and preventing the sore from healing, the infant sinks under the discharge, or dies in convulsions.

But there are other tumours of a similar appearance, which being nevertheless, of a different kind, may be sometimes safely extirpated, and will be noticed below after the Spina Bifida, to which likewise they bear a considerable resemblance.

*Imperfect Closure of the Foramen Ovale, and Canalis Arteriosus; with other preternatural Conformations of the Heart.*

The subjects of these affections have been termed pueri cæruleati; but the affection itself might more properly lead to a name, and be termed cutis cæruleata; though neither would describe at all the nature of the disorder.

Dr. Sandefort, Mr. Abernethy, and more lately Dr. Nevin, of Glasgow, have given instances of it, which accord with those before offered to the public by other writers.

These morbid deviations appearing in different parts,* have in all the same tendency, viz. in a greater or less degree, to obstruct the passage of the blood through the lungs, which in some instances has continued nearly the same as in the

* See Morgagni, Epis. 17. Art. 12. Lond. Med. Journal, page 4, and Med. Observ. & Inq. vol. vi.

unborn-fœtus. The peculiarity, is sometimes in the pulmonary artery, which is constricted, or closed, as it rises from the right ventricle; at others, in the septum cordis, which has an unnatural opening, affording a free communication between the two ventricles; sometimes in the aorta arising equally from the anterior and posterior ventricles; and sometimes in the imperfect closure of the foramen ovale, or the canalis arteriosus.

These sources of disease are mentioned merely with a view of pointing out the symptoms by which they may be known, and not of suggesting a remedy; which is out of our power. The recital, however, may serve to prevent fruitless attempts, and perhaps the aggravation of the symptoms, and consequent distress of the patient, where, upon due knowledge of the disease, art has evidently nothing to offer. The imperfections are owing entirely to an original mal-formation of parts, or to a deficiency in the powers of the system soon after birth; the only time in which that diversion to the circulation can take place, which nature has intended upon the change made in consequence of respiration.

The precise time when this new mode of circulation should take place, is not attempted to be settled, the passage between the auricles, and that between the two great arteries, being open in children of very different ages; nor do both always close at the same time. It is conjectured, however, that this process ought to begin from the birth, as it is found to do in the remains of

the vessels of the funis umbilicalis;* so that, although the fetal apertures in the heart should not be actually impervious at the end of some months, it is imagined that some constriction has usually taken place, and that, at least, some check is given to the blood's passing from one side of the heart to the other, in the free manner it does in the fœtus. This, it is natural enough to conceive, and I apprehend, is owing to a greater quantity of blood rushing into the lungs, in consequence of respiration, (which lessens the difficulty of entering that organ;) by which means, a greater quantity flows into the left auricle from the pulmonary veins, which filling the part, prohibits an entry from the right. Upon the like principle, the aorta being more distended by a large quantity of blood from the left ventricle, does not allow the pulmonary artery to empty itself into it by the canalis arteriosus.

Sometimes one of these apertures is found open, and the other closed up, especially the canalis arteriosus, which is of the greater consequence; the foramen ovale having in several instances been found pervious in adults; and it is imagined is always so, in those divers who can remain the better part of an hour under water.

Whether the preternatural aperture be in the

* It is probable, however, that they are not very firmly closed for some time, as I have easily forced the vessels open, by an injection, in children who have died at the end of the month.

vessels, auricles, or ventricles; or wheresoever any morbid stricture may be, whenever it may prove of any consequence, the constant symptoms attending it are a discolouration of the face and neck, with a sloe-blue, or leaden-colour of the lips, such as is met with in some fits of asthma; and sometimes an unnatural coldness of the body. The discolouration almost always takes place very soon after birth, and is increased, and attended with difficulty of breathing, as often as the child is anywise agitated; and whereby he is disposed to throw himself in a horizontal posture. These symptoms are not at all relieved by procuring stools, by the warm-bath, or any other means made use of as a remedy for fits: nor can be, but by the child being kept as tranquil as possible.

If the aperture be in the canalis arteriosus, children usually, but not always, sink very soon under the complaint, and for want, it is imagined, of a due portion of oxygen gas, owing to the full proportion of blood not passing through the lungs. But if the aperture be in the inferior parts of the heart, infants more commonly survive for months, or even for years; although some physiologists have conceived there may be the like disproportion of oxygenated blood. An instance of such prolonged life, with an accurate account of the disease, is recorded in the third vol. of the Medical Transactions of the College of Physicians. In such instances, the system having been accustomed to the effects of this derangement, is better able to withstand them;

the patient, however, can endure but little motion, the heart becoming thereby surcharged with blood, and respiration rendered more difficult; hence also the blood is detained in the extremities, and the face, neck, and hands, become particularly discoloured. Some time, indeed, before the patient sinks under the disease, the symptoms are aggravated, and almost the least motion endangers suffocation.

### *Spina Bifida, or Hydro-rachitis.*

This morbid affection is more commonly known here by the former of these terms, though the latter is thought by many to be the more proper name; the first being taken only from an effect, the other being descriptive of what is deemed the original disease. It is also known by other names, as writers have been severally impressed by the cause, effects, or the appearance of the disease. Ruysch therefore calls it a dropsy, and Bertrandi,* a hernia of the medulla spinalis; the medullary structure being in some instances destroyed, and a spongy substance filling up the cavity of the membrane, and protruding through the bifid spine.

It is remarkable, that this complaint, or malformation, though now every where to be met with, was not described, as I believe, before

* Opere di Ambrogio Bertrandi. Tomo ij. Torino, 1786.

Tulpius wrote, whose observations and cases were first published in the year 1641, and afterwards with some additions, as late as 1716, which is the edition I have seen, and contains an accurate account of the spina bifida.

Since the above period, the disorder has been regularly noticed by various writers; but not being a very common one, and very little having ever been attempted, or proposed for its relief, I judged it sufficient in the earlier editions of this work, barely to notice and describe the complaint, in order to guard against its being mistaken, and an infant's life shortened by rashly opening the tumour. But as various solitary cases and observations are diffused through different medical works, and none of the late writers have methodically collected and arranged them, nor any since Morgagni paid much attention to the subject; I have now been induced to take it up more at large. Having also myself seen the disease about eight or ten times, (under which one child languished seven weeks, and another several months,) as well as conversed with many practitioners who have as often met with it; I have thought, that in a work devoted to the diseases of children, it might be agreeable, if not instructive to the reader, to see all that is of importance of the subject brought into one view.

With this intention, I shall briefly advert to the writers we are obliged to for any account of this congenite derangement; and after considering its nature, cause, and the periods at which it proves fatal, shall state whatever has been pro-

posed, or attempted in a way of palliation or cure.

It is remarkable, that in a disease for which so little can be done, both the earliest and latest writers have agreed so well in their opinion, and description of it; though some, indeed, do little more than mention it, notwithstanding they all appear to have seen the disease. It hath been observed, that it does not seem to have been noticed by any of the ancient writers; and Tulpius himself appears to speak of it as of one he had not long been anywise acquainted with: we accordingly find him saying but little on its precise nature, or cause. Soon after him wrote C. Stalpart Vander Wiel, and Muys,* the one in the year 1682, the other in 1695, and about the same time Bonetus;† but these throw very little light on the subject. Ruysch treats more largely upon it, and calls it a dropsy of the spinal marrow, as the hydrocephalus is of the head, or brain, and with some propriety, as will presently appear. Bidloo,‡ physician to King William the Third, and Salzmannus,§ his cotemporary, have noticed the disease. Rutty‖ gives a good anatomical account of it. Titsingh wrote upon it in 1733.¶ Zechar. Platner** more fully in 1745,

* Praxis Medico-Chirurgica Rationalis.

† Sepulch.

‡ Bidloo Opera Exercit. 7ma.

§ Dissertatio de Quibusdam Tumoribus Tunicatis Externis.

‖ Philosph. Trans. Abr. vol. vij. inter annos 1779, 1783.

¶ De Spina Byfida.

** Platneri Institut. Chirurgicæ.

and Acrell in 1748.* Van Swieten and Morgagni wrote nearly at the same time; the former of whom copies Tulpius and Ruysch, but the latter quotes various other writers, and takes as much pains to investigate this disease as almost any other that he has recorded. Our countryman, Mr. Warner,† was well acquainted with it, and relates an instance of a man living to twenty years of age, though the disorder had induced a palsy of the lower extremities; but not so bad as to disable him from walking. Dr. Monro, in his Treatise on the Dropsy, in 1756, merely names the disease; but Mr. White describes it well, in his surgical cases, written in the same year. Blanchard also mentions it; likewise Monsieur Le Cat‡ in 1765, Gooch in his Surgery in 1771, Ambrose Bertrandi§ in 1786, and Louth‖ as late as 1788; and a little before this, a remarkable case was noticed by the Royal Society of Medicine at Paris: the subject of which is said to have endured the complaint for twenty years, and at length was perfectly recovered from it; and on which I shall presently have occasion to offer some remarks.

By the accounts given by these writers, it appears, that this disease fixes either upon the superior parts of the spine, and is then seated

* Memoires of the Royal Academy of Sciences at Stockholm.

† Surgical Cases, 1750.

‡ Dissertation sur la Sensibilitè de la dure mere, &c.

§ Opere di Ambrogio Bertrandi, tomo ij. Torino.

‖ Nosologia Chirurgica.

upon the last vertebra of the neck, and the first of the back; or else is lower down on the last of the loins, or more commonly, on the os sacrum, and is usually upon the centre, and posterior part of these false vertebræ: but Wepfer* saw one on the right side of the loins.

The skin is sometimes entire, and sometimes ruptured externally at the birth; and in the latter case, I believe, the infant is always still-born,† at least it has been so in all the instances I have met with; though such fœtuses are often full-grown. In this case, the edges are prominent, and the centre is of course depressed, the ulcer very much resembling the form of the human mouth, when the angles of the lips are drawn together, and the middle part is pushed forward.

When the skin is entire, the disease appears in the form of a tumour, varying in size from that of a pea, or even smaller, to that of a half-crown piece; being also more or less elevated. The highest point is usually very thin, and sometimes transparent, from having no true skin; other parts of the tumour are red or livid, having very much the appearance of some cancerous tumours upon the point of ulceration. The surface is generally very soft to the touch, especially in the centre, from which a fluid retires upon pressure, and round the margin of the swelling the bony edges of the spine may be distinct-

* Wepferi Observationes.

† This is not always the case. S. M.

ly felt; a circumstance that ought always to be attended to, as leading to a certain diagnostic. In other cases, no fluctuation is perceptible, but a carneous substance, hard and thick; and such infants cannot endure being laid on the back, but presently become convulsed. Muys mentions an instance of the disease being situated between the scapulæ, in which the skin was not at all discoloured; the deficiency of bone was, therefore, probably very small, as likewise seems to have been the case from the event, as will be mentioned in its place.

The internal appearances are various: suffice it to say, that as the disease takes place during the process of ossification, the internal derangement seems to depend very much upon the period at which the complaint may commence. In general, there is a confusion of nerves, blood-vessels, membranes, and ligaments, together either with a hard flesh-like substance, or a certain portion of discoloured lymph. This is, probably, small at first; but the necessary support of bone being wanting, the lymphatics of the membrane investing the spinal marrow, it has been supposed, continually deposit their contents, enlarging the tumour, and increasing the disease. I saw one instance in a fœtus of about five months growth, where the bone (the os sacrum, as yet indeed, in a cartilaginous state) was complete on the outside, but deficient within; the spinal marrow was also wanting, and there was a considerable quantity of water.

Many children, born with this complaint, do

not seem to have suffered by it while in utero, being healthy, often large, and very strong; but some are otherwise mutilated; it being not uncommon to find one or both the ankles distorted, or to have the lower extremities weak, and sometimes totally paralytic: and there is in others a great deficiency of bone on the upper part of the cranium. The higher up the seat of the spina bifida may be, the greater is usually the injury, and the sooner the infant perishes, unless the aperture of the bone be very small, which, as has been observed, is sometimes the case.

From what has been said, as well as from a similar disease being occasioned by internal injuries of the spine, as mentioned by Le Cat,* it will appear, that the disease, as hinted above, may be owing to some interruption to the process of ossification, and a consequent distention of the membrane investing the spinal marrow from the pressure of the fluid, which in return becomes a further impediment to that process. It is not improbable, however, that this undue secretion of lymph may be oftener the original source of the disease: the water, as an unnatural compression, either preventing the formation, or afterwards destroying a portion of the bony arch intended by nature as a protection to the tender marrow; a part essential to the animal functions. Hence Louth has very properly defined the disease to be, *Aqua in Specu Vertebrarum collecta in*

* Traité de Mouvement Musculaire; de la Sensibilité, de l'Irritabilité, &c. 1765.

*Infante, Vertebras ultimas Columnæ Pondere suo findens et Tumorem prope Os Sacrum constituens;* though it does not, as it has been said, appear always in this part.

It is sometimes a mere local disease, confined within the circumference of the tumour, and at others, the water rises a little higher in the vertebral column; and hence Ruysch has considered this disease has a proper dropsy of the part, as the hydrocephalus is of the head. In some instances again, the column is open from the occiput to the os sacrum, and the water is even found to descend from the fourth ventricle of the brain; the two diseases being then conjoined. These disorders have also sometimes been found to succeed each other; several such instances being related by Wepfer and Morgagni. The latter of these writers relates one of a child of four years of age, where a dropsy of the spine succeeded to a hydrocephalus, which had taken place in consequence of a contusion of the head. The former being opened, the tumour of the head in a little time greatly subsided, and upon pressing that part with a hand, a palish ichor rushed out from the aperture in the os coccygis; a circumstance recorded also in other instances; the above infant, he reports, recovered. In another, upon the consolidating of the spina bifida after an aperture had been made, water in a few days began to form in the head, which afterwards enlarged to a very considerable size. On the other hand, it has been noticed, that there is sometimes no water, but the bony column is

filled up with a carneous substance, or spongy marrow, and the complaint is then termed a hernia of the spinal marrow; agreeable to a similar congenite disease of the head, which has been aptly called a hernia of the brain. In this case, some malformation of the spinal marrow may be considered as the original disease, unless it be supposed, that the proper cause exists in some interruption given to the process of ossification; whereby the medulla being deranged for want of its natural support, is in consequence distempered.

The disease becomes fatal in consequence of the tumour being opened, or the integuments otherwise giving way, which is usually from a little slough, or gangrene, forming upon the thinner parts, which soon spreads wider and deeper, and so opens a way for the escape of the lymph. In a few days afterwards, and usually on the third, the infant dies, unless the parts should soon close again; which has but very rarely happened. A remote cause of the child's death then seems to be the escape of the lymph, which is frequently soon followed by a strong convulsion, in which the little sufferer expires. But where the integuments have remained entire for any length of time, their rupture has been followed by hectic fever and marasmus, in consequence of a profuse drain from the part. But it is more common for the little patient to die either in a few days, or a week or two after birth, and then, probably, from some morbid change taking place in the medulla spinalis, from the ad-

mission of air; which is supposed to be always injurious to internal parts, and more particularly to membranous ones, and therefore must be peculiarly offensive to the spinal marrow and its sensible covering. These parts have, indeed, suffered from the birth, from the nature of the disorder, and it is not therefore to be wondered at, that such infants are more or less convulsed, and appear several times to be dying, before that event actually takes place, and that they are often otherwise ill; though some children appear pretty well till the integuments give way. I remember one child who would not take the breast for twenty-seven days, and was several times thought to be dying; but afterwards taking to it properly, was greatly recruited; appearing, except for this disease, in a promising way, and lived four weeks afterwards. The late Mr. Hunter told me, that he had seen a child living with the disease at the age of eighteen months; and one born at the British Lying-in-Hospital was alive when six years old.

The means of cure that have hitherto been proposed for this dreadful disease, are, opening the tumour, in order to evacuate the water; or pressure, with a view to retain it, and consolidate the parts: neither of which, that I can with any certainty learn, have ever succeeded, unless it be in the instance mentioned by Morgagni, (in which the disease was not congenite;) and the one I have alluded to, reported by the French Royal Society of Medicine. In this, the tumour was opened when the sufferer was twelve years

of age; soon after which the tumour is said to have grown up again; but being ruptured eight years afterwards, by the patient accidentally lying upon it, after it had increased to the size of a child's head, the humour was absorbed, and a firm cicatrix being formed, the patient survived.

From this case, and that occurring some years ago at the hospital: as well as the one reported to me by Mr. Hunter; and one an infant, eighteen months old, in a family of high rank, where the best advice had been sought; I have entertained some doubts whether tumours precisely of the like appearance, are as precisely of the like kind, or whether there be in them all a deficiency of bone; it having been the opinion of several of the first physicians and surgeons in repeated consultations, that the case in this infant was not precisely the spina bifida.* If a mistake in this respect may have been made by the reporter in the Royal Society of Medicine in Paris, no inference can be drawn of any probable success attending the evacuation of the fluid, or a firm pressure made on the tumour. The means, how-

* The above account was drawn up in a preceding edition, in 1811; ever since which, it has been determined in every consultation to leave the matter to nature. The child is still living (1819), and in perfect health and good spirits, and runs about, and climbs up a chair or sopha as pleasantly as the rest of the children; but the tumour is greatly increased in size and hardness, while the only uneasiness the child seems to sustain, is that it does not appear to sit down so pleasantly as the others.

ever, do not always seem to have been employed with proper discrimination; since the very possibility of their succeeding will depend upon the size, and other circumstances of the tumour; for the aperture can never be advisable where the tumour is large, and the consequent internal derangement of parts is considerable; nor pressure where the water is found communicating with the ventricles of the brain.

The size of the tumour, it has been noted, is various, and agreeably thereto must be the possible chance of recovery, as well as the probable duration of the disease, where it proves ultimately fatal. This, indeed, is more frequently within three days after birth, or if the infant survives much beyond that time, it will be owing to the resistance of the integuments; young children seldom survive the third day after the water begins to be freely evacuated. This, together with the matter of fact, where the tumour has been opened, furnish a sufficient caution against artificially letting out the water. Muys * records a case of this kind, in which a child had lived to be three years of age, but the tumour being then opened, a great discharge of water was kept up, which induced a hectic fever, and the child sunk at the end of three weeks; and a case related by Wepfer equally forbids the indiscriminate use of pressure. In this, an aperture, made by a surgeon, from whence three ounces of water had issued, being healed up in conse-

* Praxis Medico Chirurgica Rationalis, 1695.

quence of firm pressure, an immense hydrocephalus formed by the end of the fourth week after birth. And Van Swieten, who copies the case, justly observes, that if nature cannot get relief in such cases, by letting out the water at so distant a part from the head, no benefit can be derived from any means that may necessarily occasion an accumulation in the brain itself.

In such instances as the above, it is probable, that the source of the disease has been in the head, the water having made its way from the fourth ventricle of the brain; nature ever attempting to relieve the oppressed, and especially more noble parts. But in other cases it should seem, that the disease has commenced in the loins, and the secretion being great, and the resistance below considerable, (possibly from the ossification being far advanced,) the water has ascended to the head.* But by dissection after death, it appears, that the water has more commonly been confined to the spine alone, and then has not been in great quantity.

It must be in the latter case only, as well as where the tumour, and deficiency of bone are inconsiderable, that any benefit can be expected from puncture and bandage, as Mr. Abernethy has lately ventured to propose. But from several objections which have been noticed above, arising from circumstances which Mr. Abernethy does not seem to be aware of, and which cannot be always previously ascertained, I should not think that

* See Opere di Ambrogio Bertrandi, tom. ii.

parents would readily consent to the experiment, or that surgeons can have much to offer as an inducement to it; especially as the want of success must necessarily hasten the death of the infant. These considerations, I imagine, have made surgeons in this country cautious of making any attempts, and have induced me to state, as I have done, the result as given by foreigners.

Since this statement in former editions, Mr. Abernethy has ventured to make the experiment; and though he is led to think, that the attempt is at least proved to be harmless, I can, by no means, alter my opinion; and have, therefore, suffered my former observations to remain. Mr. Abernethy acquaints us, that "the tumour was punctured every fourth day, for six weeks, during which time the child continued unaffected. No contraction, however, of the integuments took place; and at this time one of the punctures did not heal, but permitted the fluid to ooze out. The discharge gradually changed from a limpid to a puriform appearance, and in a few days the child died. This case (he adds) is interesting, though unsuccessful; as it shows, that the attempt at a cure may, at least, be made without hazard." I should, however, rather conclude that the last aperture not healing up, and the child dying a few days after, serves to confirm the prognostic I had ventured to make, not only of the probable inutility of the puncture, but of the hazard. The collection of the water, if it be in any instances the first occasion of the disease, is not the whole of the evil; there being disease in the mem-

brane, and generally of the bone, to which the admission of air, cannot be harmless*: while the puncture cannot prevent a re-accumulation of the fluid.

From the general report of authors therefore, as well as the result of my own experience, it should seem, that little relief can, in general, be expected anywise from art. Some discrimination of cases, however, should be made, and perhaps this will refer principally to the absence of any symptoms indicative of water in the head, and to the size of the tumour, on whatever part of the spine it may be; but the lower down on the os sacrum, the more favourable. As to the first of these, the usual symptoms of compression of the brain do not indeed present themselves, and it is probably owing to the relief which that part receives from the descent of the water to the parts below. The presence of water in the head may, nevertheless, sometimes be discovered, it being reported by Morgagni, that upon pressing the tumour, the rising up of water has been felt by a hand placed on the fontanelle; and that from a firm pressure, the water has again forcibly descended into the tumour on the spine.

In the abscence, however, of every symptom leading to the suspicion of water in the head, and when the tumour on the spine, especially if low down on the sacrum, is very small, (for it has

* This sentiment, however, has lately been controverted, and some decisive experiments thought to be adduced in opposition to it, by Dr. Haighton, in a paper on the Cæsarean operation, in the Medical Records and Researches. An. 1798.

been met with of the size of a vetch seed;*) a firm compress, and sprinkling the part with astringent powders, or the use of similar fomentations, may be had recourse to, as recommended by Acrell,† and also by Ruysch, who says he has seen ten cases. Acrell was led to this opinion from some children having lived for several years with this complaint. In such cases only, I imagine, can the attempt with any propriety be made; as otherwise, the tumour will, probably, be only ruptured the sooner by the bandage, and, in consequence, the life of the infant be shortened.

There is not, however, the like objection to the use of an astringent, or cold embrocation, or more especially to drying powders, such as bolus armen. pulv. catechu, aluminis, and such like; which may be sprinkled on the part as occasion may require, to prevent the oozing of the lymph, by forming a kind of crust over the pellucid surface. Such applications may also have a tendency to retard the rupture of the integuments, and thereby prolong the life of the child; which is generally all that art can effect; and I have myself, indeed, no further experience of their efficacy in the true spina bifida; although I have known such means, as well as excision of the parts, effect a cure in cases very similar in form

* See Ruysch.

† Memoirs of the Royal Academy of Sciences at Stockholm. Anno 1748.

and appearance to this fatal complaint,* but without any deficiency of bone.

In regard to bandage, I have been informed that Dr. Hunter in his lectures, at one time, used to caution against the attempt, from his own experience of its hastening, as he thought, the rupture of the integuments; but whether the trial had been made in the fittest case as here described, I could get no information.

Should the size or figure of the head, however, be from such management affected, or the infant manifest any increase of pain; or if convulsions, coma, or other bad symptom should supervene, the bandage ought to be taken off, and the mildest application be substituted in place of the astringents. In this view, a bread and milk, or saturnine poultice, may be had recourse to, which is the modern practice whenever the tumour is large from the birth, and is, probably, in such cases, the fittest application that can be made use of; as it will sit easy on the part, and by forming a soft cushion, as it were, for the tender skin to rest upon, will in so far dispose it to be preserved entire as long as possible; the life of the child, it having been noticed, in almost every case, depending entirely upon that circumstance.†

* See Parenchymatous Tumours, in the next chapter.

† In the second volume of the Medico-Chirurgical Transactions, Sir Astley Cooper has related several cases, in which puncturing the tumour with a needle, and afterwards employing pressure, has cured the patients. S. M.

## *Parenchymatous Tumours.*

The resemblance which some of these bear to the last mentioned disorder renders them worthy of particular notice, being not always easily distinguished from it. They appear on different parts of the spine, but more commonly near the neck, or the os sacrum; are accounted *marks*, and are often of a morbid nature, and it is imagined would not unfrequently prove fatal if left to themselves. As I design, however, treating only of such as will admit of some remedy, I shall mention only two.

The first is a tumour on some of the vertebræ, usually of the neck, or the first of the back; it is of a sublivid hue, unequal, internally spongy, and very vascular. I saw one of this kind some years ago, in consultation with the late Sir Cæsar Hawkins, who advised to preserve the skin unbroken, as long as it should be possible, which he feared was all that could be done for it; and to this end recommended the free use of the compound water of acetated litharge. It was then about the size of a crown piece, and not raised very much above the level of the surrounding parts. The tumour, however, increased, and the skin not long afterwards gave way, and the child became ill; in consequence of which, the late Dr. Hunter was desired to give his opinion, who advised the extirpation of the tumour as the only chance of preserving the child's life; but the

father disapproved of the operation. The part soon began to bleed a good deal at times; in order to suppress which, as well as to lessen the tumour, which was now considerably more prominent, I sprinkled it with the following powder.

℞. Bol. Armen. Pulv. Catechu. ā ʒij.
Alumin. rup. ʒj. Misce.

Over this, compresses, wetted as above, were applied frequently through the day. These would sometimes adhere for several days, owing to the blood and powder forming a sort of paste, till a fresh oozing from the vessels loosened them; at which time the bleeding returned, and the applications were repeated; by the continuance of which, however, for seven or eight weeks, and compression with a piece of thin lead, the vessels gradually shrunk, and the discharge being dried up, the part was happily skinned over, and the child recovered its health.

I have seen another tumour of this kind, which was treated in a different manner. It was seated on the last vertebra of the back, and was apprehended to be the true spina bifida: but as no margin of bone could be distinctly felt, nor the tumour, by pressure, be made to recede, I hoped it might be otherwise, and ventured to advise taking it off. This was accordingly done when the child was about eight days old, and though a good deal of blood was lost in the operation, from a deep-seated artery, the sore at the end of the month was perfectly healed, and the child soon afterwards became as healthy as any other in the family.

*Hepartomphalos, and Hernia Ventralis.*

The congenite ventral hernia, in which, from a deficiency of muscular integuments and skin, some of the abdominal viscera, and not unfrequently the liver is protruded, is very often met with in abortions in the earlier months; though less commonly in the full-grown fœtus. I have never seen it in living children, unless in that instance of it termed hepartomphalos, which is the more immediate subject of this chapter, and will be clearly exemplified in the annexed case.

In the true hepartomphalos, however, there is, possibly, no actual deficiency of the muscular or ligamentous integuments, and still more probably not of the skin; but, as the term strictly implies, some part of the liver forms a congenite hernia of the navel. The liver, while very small, is, as I conceive, somewise drawn down by the vessels of the umbilicus which enter it, possibly by some action of the fœtus; or, (as it has lately been said by Lassus on the umbilical hernia) the liver is preternaturally large and heavy, through its receiving an undue proportion of blood from the vena umbilicalis, and is thereby protruded at the muscular ring in the linea alba, and falls into the funis umbilicalis, which it dilates and distempers. This disease is a very rare one, I believe, in living children, and I had met with no written account of it, until Dr. Combe put into my hands a Thesis de Hepartomphaloce Congenita, by Francisc. Henricus Rockholtz, printed anno 1768.

The case there related corresponds exactly with the one I met with, and both the infants survived the disease; but some months afterwards, dying of other complaints, and their bodies being carefully examined, the fact is established, and demonstrates the powers of the animal machine, in removing obstacles to its well doing, that might be thought insurmountable.

The subject of the present case being born in the neighbourhood of the British Lying-in Hospital, was brought there for the advice of the physicians on a day when I was in attendance. The child was then eight days old, and the nurse informed me that the tumour still remained of the exact size it had acquired when the infant came into the world; but that previous to the binding it down tight, the skin had seemed to be thinner, but was even at that time discoloured, though it had a kind of transparency, as if it contained a fluid; and that the next day it turned black.

The dry funis was now appending from the centre of the tumour, which was as large as a good sized china orange; was black; and the skin, as I thought, in a sphacelated state.

Whether this tumour contained the liver, or any of the intestines, I could not at all determine; or whether it might be a mere parenchymatous enlargement of the funis umbilicalis, of which I had lately seen an uncommon instance of about one third of this size; but in that, the enlargement commenced about three or four inches from the belly.

I had little doubt, however, from the size and colour of the tumour, that in the present instance the infant would die in a few days, or at least, soon after the integuments should give way, as it appeared highly probable there would then be an opening into the cavity of the abdomen. I directed nothing, therefore, but a bread and milk poultice, and this merely in the view to its being a soft cushion for the tumour to rest upon, which did not, however, appear to be very sensible, though the infant cried much upon being moved, as if it were thereby put to pain.

Four days afterwards the child was brought again to the hospital. There was then but little change in the appearance of the tumour, nor much discharge from it: and the child having taken kindly to the breast, had a healthy appearance: so that, save from the suspicion arising from the nature of the tumour, it seemed very likely to live. Half an ounce of the decoction of bark was directed to be given it three times a day.

I did not see the infant again for three weeks; and it was then near five weeks old. I now learned that the child had thriven so well, the parents were satisfied it was likely to live; and that the funis had fallen off on the fifteenth day without being followed by any unpleasant symptom. That the tumour had burst about a week after the funis came off, from which time the swelling had sensibly subsided as the discharge kept up; and that at the end of the month the discoloured integuments all sloughed off, and left a superficial sore of the size of a small teacup, to use the mother's expression.

The poultice was directed to be continued until I should see the infant again, which was about a week afterwards. There was then an oblong, benign ulcer, about the size of a sixpence, and disposed to heal up. I now desired the poultice might be left off, and only to apply a bit of cerat. è lapide calamin. and moderate compress. By these means the sore was healed when the infant was eight weeks old; soon after which I saw the child in perfect health.

The integuments at this time had not the usual appearance of the navel, but were, on the contrary, thin and a little elevated, but without any thing like an umbilical hernia. The scar was not larger than a sixpence, and was not precisely in the middle of the abdomen, but a little on the left side of the point from which the funis naturally rises.

From the disagreeable appearance of this case when the infant was first presented at the hospital, such a termination was very pleasant to us, as it leads to encouragement concerning other obscure diseases; and manifests what unexpected things nature is capable of effecting, even at this early period, when not interrupted by any improper treatment.

The infant fell a sacrifice, about six months after birth, to another disease; in consequence of which its body was afterwards carefully examined by Dr. Marshall. Dr. Combe happening to hear of it, was present, and informed me that there could be no doubt of the liver having occasioned

the tumour we had seen; there being yet a sensible depression remaining, evidently marking the stricture made upon it by the linea alba and recti muscles, which had included about one third of its left lobe. Since the former impression of this work, I have met with another instance of the hepartomphalos, in a full-grown, but still-born fœtus; the complaint being also ascertained by an examination of the parts.

Whence it should come to pass, that infants should not only be born alive with, but survive the hepartomphalos, rather than the common ventral congenite hernia; or than they would do a large congenite exomphalos of the intestine, may be worthy of inquiry in this place. And the reason probably may be, that in the hernia ventralis congenita, whether from the protrusion of the liver, or any other of the abdominal viscera, there must be a deficiency of the muscular and other coverings of the abdomen, and therefore nothing to support, or defend the protruded organs so essential to life, but the thin peritoneal expansion. But that, in the former, there is, perhaps, no actual loss of substance, but a mere dilatation of the parts; the liver being at the same time defended by the strong expansion of the funis umbilicalis, which does not give way after birth, until nature has had sufficient time to withdraw that viscus into the cavity of the abdomen. This, it is imagined, is effected not only by the removal of the first cause of its descent, but also by that respiration which takes place immedi-

ately on the birth, and is further assisted by the ligament by which the liver is attached to the diaphragm : and by means of which it is mechanically drawn up, during every expiration.

*On the Hare-Lip, and other External Blemishes, or Disorders, supposed to be Marks of the Mother.*

Though it be beyond the present purpose to treat in detail on surgical operations, I shall beg leave to notice a circumstance or two relative to that for the hare-lip, as I already have in a few others, which frequent opportunities of comparing the different success attending them have furnished. I shall afterwards advert to some other equally common blemishes, in a view to assisting the younger part of my readers to combat the unhappy prejudices of mothers in relation to marking their children. This, unfortunately for themselves, they are always disposed to attribute to a violent impression from the sight of some disagreeable object, or to a disappointment in something they may have longed for during their pregnancy. And I have chosen this place for such observations as I have to offer on this head, because the hare-lip, and some other blemishes remaining to be noticed, bear that resemblance to objects around us, which is wanting in those before-mentioned.

The repeated experience of every attentive observer, has uniformly militated against the tor-

menting suspicion alluded to; but still it prevails, though only to the injury of those who ought, for their own sake, to be persuaded to the contrary. Every man long in business, has known many instances of mothers, tormenting themselves for six or seven months, in the painful apprehension of discovering some sad blemish in the child, (and on this account have trembled to look on it when it has come into the world) which has afterwards proved to to be as perfect as they could have wished, and as the more dispassionate amongst their friends have all along ventured to foretel. On the other hand, where children have been born with some real blemish, it has not been suspected by the mother,* unless now and then in a most

* Among several instances of such blemishes in children born in the British Lying-in Hospital, we have had some remarkable ones of the entire ignorance of any supposed cause. In one, the infant was more marked than almost any one I have ever seen: but I shall notice only that the eyelids, part of the nose and temple, and the greater part of one of the cheeks, were as black as ink, and exactly resembled a dry gangrene of the parts. In another instance, the extremities were uncommonly ill-formed, not unlike those of aquatics; but the mothers of these infants had gone on to their full time, without having received any fright they could recollect, or suspecting anything amiss in their children.

These children, however, were really so disfigured, that a lively imagination, with a mind strongly impressed, might not only have conceived in them a great resemblance to many objects, but it is more than probable, that the parents must have actually noticed not a few such, during the period of gestation. Where any such deformity, therefore, may actually have taken place, practitioners may argue the point with their patients, and endeavour to persuade them that such sights have not been the

Mrs Durley's Mother, a very respectable Lady from the neighbourhood of Belfast, called upon me May 2. 1827 to ask my Advice about her Daughter and the account she gave me was to this Effect— that Mrs Durley had borne two or three Children, healthy & perfect; that in a subsequent Pregnancy she had taken a great Dislike to Hares, which could not be overcome by any Arguments; that when she was taken in Labour, which occurred before its time, the Child was born with a Hare Lip; that in a subsequent ~~Labour~~ Pregnancy though great Care was taken to prevent Mrs D. from seeing or hearing of Hares, the Opinion was predominant in her Mind that she should again have a Child marked in a similar manner; that her Labour was premature & the Child was again marked with the Hare Lip and otherwise greatly disfigured; that in a third Pregnancy another Child was born greatly disfigured and premature; and that Mrs D. is now again about 2 Months pregnant. As under these

Circumstances there was evidently much morbid affection either local or general or both. I recommended much attention to the general Health and recommended as Medicine a Decoction of Bark with Conserve of Roses effecting thereby both to act upon the Body and the Mind.—

May 17. 1827.

timid person, (who has always bred in fear on account of one disagreeable object or other she has seen) or else, the blemish has turned out to be something perfectly irrelative to it. And here it ought to be noticed, that where a child has really been marked, and the mother has insisted on her having seen, and been frightened by an object which the blemish has resembled, it has, (to the best of my knowledge at least) appeared always to be an after-thought, by which the supposed occasion of it has been discovered; and has not been taken notice of before-hand; whilst other women have borne children considerably disfigured, who have recollected no alarm nor disappointment whatever. It is, however, the furthest from my thoughts to upbraid the sufferer on this painful occasion. I wish only to obviate the influence of a sentiment that I take to be

true cause of it, and that such objects, therefore, cannot contribute to the production of the like appearances another time. In this view, I cannot help observing, that a few years ago a lady of rank acquainted me, that she had passed almost the whole term of gestation in the apprehension of her infant being born with a hare-lip, on account of her having been daily met by a labourer working in her own grounds, who had such a blemish. In this instance, the imagination seemed to have done its utmost; as the lady conceived she met with this man oftener than any other, and that she could not avoid him, walk whichsoever way she might; and in consequence had his image continually before her, either in reality or in recollection; and being kept under a continual alarm by it, in the end declined walking at all in the garden.—After the opinion I have advanced, it may be needless to add, that her child was born free from the apprehended, or any other blemish.

without foundation—a sentiment that has originated in ignorance, and to which nothing but length of time and prescription could have given a sanction.

That there are blemishes which bear a resemblance to various objects around us, daily experience has proved; though the precise occasion of them is not, perhaps, understood. The like deviations from the ordinary course is observed, not only in various other animals,* and that not unfrequently, but also in the vegetable kingdom; in which the supposed influence can have no place. Thus, fruits are often joined together and discoloured, having excrescences, and odd shapes, offering strange representations resembling animals, as well as anomalous irregularities, similar to those found on the bodies of infants; all, doubtless, proceeding from the established laws of motion, though not well understood by us.

In regard to various discolourations in the skin of infants, fancied to resemble fruits, and like them becoming of a deeper red in summer, it may, however, be in point to observe, that the epidermis is, in such kind of marks, frequently altogether wanting, and if not, is always thinner than on other parts. The small blood-vessels being also more numerous, or nearer the surface, the discolouration of the skin becomes a natural consequence; nor can it be any wonder that this discolouration should be greater in summer than

* See Mr. John Hunter on the Free Martin.

in winter, the cutaneous vessels being then more turgid with blood. The like change takes place in every mark on the face, when the person either cries, or is made angry, or when by any other means the blood is made suddenly to ascend to or rest longer than usual in the superior parts. All such appearances are, therefore, very easily accounted for, without supposing them the consequence of the parent having longed for such fruits as ripen, or grow red, in the summer months. We observe also similar changes in adults from long continued severe exercise, or hard-drinking; many people, before of a fair complexion, suddenly acquiring a red face, or have the nose both discoloured or mishaped.

The laws of motion will also equally account for the mutilation, and want of parts, the growth of which is somewise interrupted: it being well known, that the several members and parts of the body are not all formed or unfolded at once, but are pushed forward in their turn after some established law of nature, and organical matter. If, therefore, a due proportion of nourishment be withheld from any part, its proportionate growth is suppressed, or its formation entirely prevented. The like process takes place in flowers: — thus, if a rose-bud, for instance, be blighted, some of its leaves are found curled up, and the flower turns out ill-shaped; or perhaps it is so much injured, and the bud so far withered, that only a few leaves appear, the rest being never completely formed, or unfolded. Hence, the hare-lip; the two sides of the face, which

are said to be formed separately, being hereby prevented from growing together;* the upper lip is, at least, one of the last parts that come into coalition. For the like reason it is, that infants come into the world with large ventral herniæ, the muscular parietes, and especially the skin being one of the last processes in the embryo.† But whatsoever may be the weight of these observations, there is certainly nothing that we know of in a fright or longing, that can produce such a change in organized matter, nor can operate in the manner that has been supposed, much less at such different periods; but there is on the other hand, every thing against such an hypothesis; which has accordingly always given way in enlightened ages.

It is well observed by Dr. Blondel, that were a due catalogue drawn up of all the irregularities, discovered at the birth, that are supposed to proceed from the mother's imagination, they would appear to be the same over and over again, with no great difference, and very capable of being reduced into certain classes. Does not this intimate, that they proceed from the laws of motion, and the structure of the organs? There are besides many considerable deformities, which are never referred to the imagination, viz. the irregular conformation of the viscera, &c. Is the whole empire of the microcosm so divided be-

* For further remarks on this subject, the reader is referred to a paper written by Mr. Lucas, of Leeds, in the Memoirs of the Medical Society of London, vol. iv.

† Harvey, Exer. 56 and 69.

tween Nature and the Imagination, that one rules within, and the other governs the outward parts?

The fœtus is also a distinct individuum; it has the circulation of the blood independent on the mother; its own genus nervosum; a separate secretion of juices, and all the functions of animal economy in itself. On this account, we see a feeble mother bearing a very strong and lusty child, et vicé versà; the mother being to her infant, what the earth is to a plant: the latter being strong may not be injured by being moved into a very different soil: or being tender, may, or may not, be benefited by it.

Children have likewise diseases of their own while in utero, such as cataract and gutta serena, varices, aneurisms, hydrocephalus; they are born blind, deaf, &c.

The instance so often adduced from the sacred historian in opposition to such arguments,* is by no means, in point: for without adverting to the very peculiar physical circumstances in that transaction, which are wanting in ordinary instances, it is sufficient to observe, that there was therein an evident supernatural interposition. Should any one in this sceptical age doubt of this, he has only to make a similar experiment, the result of which will, probably, have more weight than ten thousand arguments.† As matter of

* Genesis, chap. 30, ver. 37-42.

† Though I have ventured to say this, it is probable, there was also a coincidence of circumstances, although not in the

fact, therefore, as before observed, does not at all countenance, but directly contradict the hypothesis, there is good ground for married women being argued out of such fears, and delivered from that painful conflict for weeks and months together which so many of them endure. It will give me great pleasure if any thing I have advanced on the suhject, should answer so desirable an end; whilst reason, philosophy, experience, and every thing on which we ought to depend, conspire to support such an attempt.*

Amongst the various marks resembling some of the objects around us, that called the *Hare-lip* is the most common; a blemish therefore too well known to require a formal description. It is sufficient to observe, that it is of two kinds; the simple, wherein the upper lip only is divided, either wholly or in part, with some loss of substance; and the complex, in which the fissure of the lip is double: in some instances, the portion between the fissures is likewise too small to fill up the cavity, and in some it adheres to the very tip of the nose; and in a few instances, both lips

manner vulgarly conceived of.—For many critical and satisfactory remarks, however, on the above passage of holy writ, the more curious reader may consult a learned tract, on the Strength of the Imagination in Pregnant Women, written by Dr. Blondel, a Member of the College of Physicians, Anno 1727.

* Mr. Lawrence has published a very instructive and elaborate paper, on the subject of deviations from the ordinary formation of parts, in the fifth volume of the Medico-Chirurgical Transactions. S. M.

are affected; the upper jaw, also, with the palate of the mouth, and even the uvula are sometimes divided. It would be beside my purpose to treat of the manner in which this deformity and defection is to be remedied, especially as that must vary considerably in different cases; I shall confine myself to speaking only of the time in which it ought to be attempted.

Various considerations contribute to make the distressed parent solicitous to have this blemish removed soon after the infant is born, or at furthest before the month shall be expired. On this account, I am convinced, the operation has sometimes been prematurely performed, contrary to the better judgment of the operator, and the child has thereby fallen a sacrifice; whilst others have received much less benefit than they would have done had the operation been postponed for a reasonable time. Where the blemish is very trifling indeed, and the operation simple, it may, in many cases, be done with safety in the course of the month, or a little after; and if the child be able to suck, which is not always the case, there are even some advantages in performing it sooner. For as the child will not be able to suck for two days at least after the operation, it will with difficulty be kept tolerably quiet by the spoon after it has been once put to the breast; but as infants need but very little nourishment for the first days after birth, and generally sleep a good deal, if the operation be done twenty-four hours after the child is born, it will be in a condition to suck by the time it requires much nourishment, and the

mother's breast is prepared to furnish it. But in the complex hare-lip the case is exceedingly different, the longer the operation is postponed, the better it is likely to succeed; and it should be deferred till the child shall be, at least, four or five months old. By this time, also, the infant will have got over the period in which it is peculiarly liable to several painful and dangerous complaints; will be thoroughly weaned from its hankering after the breast, and have learned to feed contentedly with the spoon; by which children with this kind of hare-lip are obliged to be supported, they being generally unable to suck. At this period likewise, the parts will have acquired such a size as will admit of handling them to greater advantage, as well as a degree of firmness necessary to retain the needles; for the want of which, though the operation may appear to have been favourably performed, the needles will sometimes break out, and the deformity be but little removed, or perhaps sometimes increased.

I have once seen another blemish of the mouth, in a child born at the hospital, which required a similar operation. In this infant, the mouth was much wider on one side than on the other, and appeared as if it had been divided far into the cheek, which occasioned a very awkward appearance; but as it was capable of being remedied in the same manner as the hare-lip, I shall only observe, that when I withdrew the pins on the third day, the parts adhered very firmly, and the child left the hospital at the usual time.

## *Discoloured Spots.*

Amongst other blemishes that may require surgical assistance, are those which women are wont more especially to call marks; being spots, more or less elevated above the surrounding skin, and of various forms and colours. These may fal on any parts of the body, but are very little regarded except when found on some uncovered part, especially the face, where, perhaps, this kind is most commonly met with.

These, however, vary so much in shape, size, and in some other more important circumstances, that it were nugatory to attempt to point out the precise operation adapted to many of them. Suffice it to say, that in some, excision of the discoloured and elevated parts, or destroying them by caustic, is the only remedy; in others, compression alone is sufficient; and in a few, compression, together with slight puncture and caustic will be called for; though in the lips particularly, compression alone will frequently be sufficient, if proper attention be paid to it. In some parts of the face, as the cheeks, lips, the nose, and near the eyes, the knife or lancet must be had recourse to with caution; though whenever made use of, it will be necessary to carry them full as deep, and far, as the distempered vessels may happen to extend, or the operation will not be completely successful. It is indeed sometimes necessary to repeat it; and it would, in many instances, be

better to do so, than to risk, in the first operation, destroying any sound parts unnecessarily, by which the scar might be extended. Where great caution has been found necessary, it will sometimes happen, that though the blemish may seem to have been fully removed, the redness and tumour will after some months return; but even here, as a touch with the argentum nitratum, after lightly scarifying the parts, or at most, the carrying the lancet a little deeper than at first, will perfect the cure, it were pity it should be neglected, distressing as the idea of a second operation must be to the parents of the infant. In some instances, however, the recurring elevation as well as discolouration of the part, when slight, have gradually subsided without a second operation; which it may therefore be proper to defer for a few months: an instance of which I once saw, where a second operation had been advised by the late Mr. Hunter. From the very great advantages derived from these means, in some very unpromising cases that I have been witness to, I have been led to offer these remarks; and not doubting that other practitioners have seen the like, I wish to impress the idea of consulting some skilful surgeon upon every great blemish; persuaded that many parents will, in the event, have occasion to be thankful for such consultation.

### *Tumours and Superfluous Parts.*

A different kind of blemish consists in little tumours and superfluous parts without any discolouration of the surface. The former lie more or less deep under the skin, and consist of extravasated lymph, hardened fat, or indurated glands. Some of these likewise may be effaced merely by compression, while others can be removed only by caustic or excision. Pendulous parts sometimes adhere only by a small base, like a thread, and may then be removed by only passing a tight ligature round them. But should any even adhere more firmly, and be only a small joint, such as a finger or a toe, it were better to have it taken off on the first days; as the vessels will then bleed but little, and the gristles by which such joints are usually connected are not yet become bony. But should the part be more completely formed, it may be necessary to delay the operation awhile longer, that by discovering which of the duplicates may take the lead, the more promising one may be preserved; which is not always to be known with certainty at the birth.

### *Unusual Figures of the Parts.*

I notice these trifling blemishes with a peculiar satisfaction, from experience that nature

alone is able to remedy them in certain instances wherein I had previously conceived that some considerable recourse to art would be necessary. These blemishes more commonly occur in some parts about the head, particularly of the ears and nose. The latter of these is certainly of the more importance; and is sometimes turned greatly on one side, with one of the nostrils open very largely, and the other compressed. Suffice it to say, that after trying what might be done by plaster, bandage, and other contrivances, nature alone, by the force of the circulating juices, has brought the parts, in the course of a few weeks, into their proper form.

### *Blemishes after Birth.*

Before I quit this part of the subject, it will be proper to notice other maculæ that arise after the infant is born; but these are not very common. They consist of small red, or black spots, about the face, and I believe are disposed to increase in size, and should therefore be early removed by the point of a lancet, as may then be easily done.

Besides the aforementioned derangements met with at the birth, there are others of far greater importance, some of which demand an operation as the only chance for preserving the life of the infant. Such are imperforations of the vagina, the anus, and the urethra.

## *Imperforate Vagina.*

The vagina is sometimes imperforate on the external, at others only in the more internal parts; and is in different degrees. The latter more commonly relates only to the hymen, which requiring an operation to be performed about the age of puberty, I shall do no more than barely mention here, especially as it requires only a simple, or crucial incision, and to preserve the orifice open. Where the imperforation is in the substance of the vagina itself, I have never found an operation to be of any use, though I have known it attempted, in the adult, with great address and resolution.

I have never met with the external parts totally imperforate, there being always a small opening at the meatus urinarius; but I have found the aperture to the vagina so very small as to require a little operation, which is mighty easily done with the point of a lancet, there being always a raphè, or line, directing the extent nature has seemed originally to intend; which being cut through, requires only that the parts be kept asunder for a few days, by a bit of fine lint.

This has been the usual mode of remedying this defect; but I have, for some years, altogether rejected the assistance of the lancet, the parts being very easily separated by the fingers even in children of several years old. It is not

improbable that the like method might succeed, though the operation should be neglected till the time of puberty, the parts seeming rather to adhere in consequence of some very slight inflammation, than to have been originally illformed. A mere oozing of blood is perceived in consequence of this mode of separating the labia, which in the present instance, at least, seems preferable to incision, and may possibly afford less pain to the infant, as well as be less unpleasant in idea to its parents.

It is in this instance peculiarly important, that practitioners in midwifery, and others attending at the birth, should examine infants very attentively in regard to this complaint, which may be otherwise overlooked; the defect proving no obstacle to the natural excretions. I have met with several instances* of it in children from

* In these cases the malformation was probably of recent date. In the great majority of instances of vaginal closure, which have fallen under my observation, I have been quite satisfied, that the membrane closing up the parts, was not congenital, but adventitious, arising from excoriation of the labia, and ending in the adhesion of the inflamed parts. In one case the inflammatory adhesion had completely closed up the parts for more than twenty-four hours, during which time, the child had not passed a single drop of urine. This was the only case in which I ever found it necessary to use a scalpel, for the purpose of dividing the parts. In other cases, there is one small opening, at least, into which a probe may be passed, and the adhering edges are easily broken down by it. This closure has been absurdly mistaken for an imperforate hymen. *Mr. Howship* in his *Observations in Surgery and Morbid Anatomy*, gives an accurate history of the closure of the labia.

three to six years old, in whom the complaint was but newly discovered, and it has been, in others, neglected to the time of puberty, and even of marriage, and must then prove of serious consequence, and may even be attended with hazard:* though I met with one instance in which nature alone overcame it in the hour of labour.

The rectum likewise is sometimes found opening into the vagina; a case that affords but little prospect of relief. It should, however, be attempted; but the kind of operation must depend so much upon circumstances, that it cannot be here pointed out with any precision.

## *Imperforate Anus.*

The anus is sometimes closed only by a thin membrane, so that the day after birth the meconium may be distinctly felt, and in a manner seen shining through it. Zuingerus† reports such a case, which was relieved by only a slight puncture with a lancet, and passing the point of a finger into the bowel, for two or three days afterwards—a bougie would be a more proper instrument.

But more commonly the imperforate anus is a melancholy case, as it seldom allows of an effec-

* See Henrici a Mornishen Observationes Medico-Chirurgicæ. *Dresdæ*, 1691.

† Theodor. Zuingerus, *Basilcæ*. 1722.

tual remedy, the gut often terminating in a cul de sac so high up as not to be reached; it is not, however, always to be despaired of, though no fluctuation of the intestinal contents should be felt for two or three days after the infant is born.

Though this sad defect is not very uncommon, I remember only two cases of the kind in live-born children at the British Lying-in-Hospital.* One of these it fell to my lot to attend, and I happened to succeed, contrary, indeed, to all expectation, and after the child had puked up a great quantity of meconium; and not only the belly, but also the face was become exceedingly tumid, and the eyes had not been opened for some time.

* It has fallen to my lot to have seen ten or twelve cases of imperforate rectum in infants at the birth. In several of these cases it was found very difficult to prevail upon the parents to allow of an operation, and in two instances, the operation was absolutely forbidden. In several of these cases the delay of the operation appeared to be the principal cause of its failure. But I attribute the failure more frequently to the mode of operating, which was, generally by passing a trocar, sometimes of too small a size, into the rectum; this never failed to give a temporary relief to the symptoms, by procuring an evacuation of the meconium, but the aperture could seldom be kept properly open, though bougies and sponge tents were used to preserve a passage. In one instance of this kind, the child lived six months, and then died, with an immensely distended abdomen.

In two cases a perfect cure was effected; these children were both operated upon by the late Mr. Chevalier, who with a scalpel made a very free incision through the integuments, till he distinctly felt the fluctuation of meconium in the rectum; he then carried his instrument through the membranous expansion, or pouch, in which, in these cases, the rectum generally

The manner of doing this operation must, in different cases, depend so much on the discretion of the operator, that I shall do no more than describe that which I made use of in the instance alluded to; and this may, possibly be acceptable, as the operation is not often performed with success. It may be previously observed, that it ought to be postponed as long as it safely can, that the depending part of the bowel may be distended, and pushed as low down as possible; the reason for which is sufficiently obvious: and to this delay I am much inclined to attribute the success with which it was followed in the operation I performed.

This was not determined upon by my colleagues till the third day. A longitudinal incision was then made, of about half an inch, above and below the part where the anus ought to have been, which was marked by a little excrescence; a small bistoury was afterwards thrust up in the usual direction of the bowel for more than an inch. No meconium following this puncture, I examined carefully with my finger, and feeling something like the fluctuation meconium would make, I introduced a trocar, and withdrawing my finger, I carried up the instrument in such a direction as to avoid injuring the bladder, or forcing the point against the os coccygis, for near

terminates; taking care, effectually, to divide it by a crucial incision; thus completely destroying its valvular structure. Both these children recovered without difficulty, and possessed the faculty of retaining, or expelling, the fæces, nearly as well as if no malformation had ever existed. One of them is now fifteen years of age. S. M.

an inch further; making allowance, however, for the yielding of the parts, which might be somewhat forced up by the trocar. The instrument having now passed forwards without that resistance it had hitherto met with, gave me the sensation of having entered a cavity; when withdrawing the trocar, we had the satisfaction of finding the meconium running out at the canula. The child was now put into a warm-bath up to the waist, and in a few minutes, having voided a considerable quantity of meconium, it opened its eyes, looked cheerfully about it, and fell into a pleasant sleep before it was taken out of the bath.

A piece of bougie was occasionally introduced, and sometimes left in the part, for a few hours, for the first fortnight; after which, the child recovered fast, and at the usual time was taken from the hospital in pretty good health, though it had been much reduced by a bad thrush, which unfortunately made its appearance soon after the operation; but it always voided its stools perfectly well.*

* A very curious case of imperforate rectum is recorded in the *Memoirs of the Life and Writings of the late Dr. Lettsom*, published by my friend Mr. Pettigrew. Sir T. G. Cullum, in one of his letters (letter 30,) mentions a child, "who lived fifty-four days with an imperforate rectum. Notwithstanding the child lived so long, the intestines were not mortified, nor scarcely inflamed. The fæces quite liquid, of a good colour, and not the least appearance of meconium."

## *Imperforate Penis.*

The imperforate penis is not quite so common a case; but is not unfrequently suspected when the aperture of the passage is merely stopped up by a little mucus; and should therefore be examined in good time. In this case washing the part with warm milk and water, or at most, a little assistance with a small probe, or any such blunt-pointed instrument, will be sufficient to open the passage. But it is evident, if the urethra be wanting, no operation can be undertaken: it is, however, more commonly found open a certain way, and often as far as the basis of the glans, and sometimes near to its extremity; in which last instance, it is necessary only to make a small aperture with a lancet, or a fine trocar, and to keep the part open by the occasional introduction of a slender bougie. The more common complaint of this part, however, is that of the urinary passage terminating by a small aperture at a little distance below the glans, and, sometimes, on one side of it. In these cases, the precise circumstances must determine the propriety of any operation; which, if not judiciously managed, may render the case worse than it was. I recollect two, indeed, in which I was able to do considerable service, one of which, was in the presence of the late Sir Cæsar Hawkins, and the other of the late Dr. Hunter; in the latter, the

urine was discharged from one side of the penis, and pretty low down, which was very happily remedied.

There are other mal-formations of this part, by which it is drawn downwards, or to one side; the peculiar circumstances of which must point out the nature of the operation most likely to afford relief. This will generally consist in a simple incision of the skin where it may happen to be too tight or short, and keeping the divided edges at a distance from each other, till the whole sore shall be healed; or sometimes by dividing the upper part of the prepuce, as in the paraphymosis.

### *The Ears Imperforate.*

I have likewise known the ears to be imperforate, a case that admits of no remedy; but the external appearance may sometimes be improved, when the helix is turned forwards over the tragus, covering that part which ought to lead to the internal ear; but in these cases, I have always found the concha, and meatus auditorius, totally obliterated.

### *Squinting.*

Another, and a very common blemish, is that called squinting, which is sometimes contracted by very young infants, and may then frequently

be remedied, especially if confined to one eye; but if a child be born with this deformity, or if it be consequent to fits, it is not so likely to be removed. The means I have to recommend are indeed very simple. A very important one, however, is to apply a piece of sticking-plaster spread on some bright-coloured silk, in such a position, either on the temple, or nose, conformably to the side on which the eye is distorted, as may attract it the contrary way. In order to keep up this allurement, the colour of the silk ought to be varied from time to time, as well as its situation, placing it a little higher or lower, both for the sake of change, that the skin may not be fretted, as well as to answer any other end, that a due observation on its effects may point out. Besides this, the child ought always to be placed with that side towards the light from which the eye is distorted; and for the like reason, its parents, nurse, play-things, and every other object that can attract its notice, should as constantly as possible be on the same side, that the child may have every inducement its age and circumstances will allow, to draw the eye the right way, and by early habit counteract a muscular action that is not yet become permanent.

Another method more proper for older children, is covering the eyes with ogles, which are glasses fixed in a little case, such as many people wear when they ride on horseback. They must be so placed that the child can see no object but by turning the eyes to the sides from which they are distorted. Or an opake covering of a similar

form may be worn, with only a very small aperture in the centre, by which the child will be obliged to look straight forward. It is scarcely necessary to add, that these contrivances must be worn constantly till the bad habit shall be overcome.

Where the cast is confined to one eye, it has been recommended to cover the other; whereby the infant will, in a little time, acquire the habit of directing the affected one more properly. After this, the sound eye should be gradually uncovered, so as to admit the light by degrees. The child it is said, will by this means very soon be enabled to direct both eyes properly to the same object.

To this end, likewise, such children may be made to look at their own eyes in a mirror for a few minutes several times in a day; but with the precaution that each eye be directed to that which corresponds with it in the glass; contriving, somewise, to render this remedy a kind of amusement. I shall only add on this head, that children who are inclined to squint ought not to be exposed to a very strong light nor learn to read very young.

Infants are liable indeed to innumerable blemishes; but as I mean to treat only of such as call for medical attention, and admit of some remedy, I shall mention only two or three more, which are very common, and with them close what I have to say on their complaints.

*Vari and Valgi.*

These are distortions of the feet, and differ only with respect to the side to which the foot is turned; in the former, the soles of the feet being turned inwards, and in the latter outwards: the curative intention is therefore alike in both. The complaint is sometimes very trifling, and seems to have been owing only to some cramped position of the feet in utero; and in that case, disappears before the end of the month. In other instances, there is evidently a contraction, if not accurtation, of the tendons, which calls for considerable attention. The remedy, however, is obvious enough, and frequently consists only in the proper application of a roller and pasteboard splints, so as gradually to bring the foot to its natural position; and in proportion as it inclines thereto, increasing the force and tightening the roller every two or three days.

There is also another very common distortion of the feet, in which they are turned upwards towards the instep: but the mode of treatment is alike in them all, and the cure will usually be effected in a reasonable time. The like easy means, therefore, will generally be sufficient to remedy a contraction of the joints of the fingers, and various awkward positions of the toes, with which some infants come into the world.

All these complaints may, nevertheless, be sometimes more considerable, and in such case,

especially if neglected for many months, or even years, as they sometimes are, require the assistance of some steel instrument, or irons, (as they are called) which are properly contrived for these and other distortions, as of the knees, &c. by Messrs. Kebble, Sheldrake, and other truss-makers; who seldom fail of bringing the parts into a more natural form, even in the worst cases, whenever the complaint may be thought worthy of the time and attention that may be required. But a less troublesome contrivance, and therefore better adapted to some country places, is a shoe made of tin, and lined with leather, as invented by Mr. White, of Manchester. This must be well adapted to the foot, and a part of the leg, and be properly secured by strings.

Other imperfections might be noticed, either remediable by obvious means, to be adapted, according to particular circumstances, by the persons attending; or such as happily remedy themselves in a little time. Among the former I shall, however, mention one, which being new to other gentlemen, who were consulted as well as myself, its favourable termination afforded peculiar satisfaction.

The subject of this, besides a slight degree of varus in one foot, had a contraction of the leg and thigh on that side; so that the heel and foot were drawn back towards the nates, and the knee drawn up to the abdomen. In this position the infant seemed to be easy, but to suffer great pain when the limbs were forced into the same extended position with the others: for it never

stretched them out itself for upwards of three weeks. Two or three consultations were held during the month, and it was thought by one gentleman, that the glutæi muscles were a little swollen; but this fulness was not very evident. Oily embrocations, a blister, leeches, and the semicupium were had recourse to, of which, the two latter were probably the most useful; but it was not until they had been several times employed, that the infant was observed to straighten the limb, and at first, only now and then; but a few days afterwards it moved it as freely as the other.*

---

As a matter of curiosity and novelty to the young reader, I shall close this part of my subject with briefly noticing certain peculiarities respecting the eyes and hair; (some of which have likewise been laid to the charge of the imagination.) The latter sometimes changes more than once to opposite colours: hair, for instance, of an unusually light colour, has, at the age of three or four years, changed in a short time to a very dark brown; and the child, in consequence, not been recognized by those who had not seen it for

* When the presentation of the child at the birth is that of the *Nates*, such a contraction of the limbs as that above described is very common, and yields in a few days to moderate friction. S. M.

several months. I have seen as great an alteration take place in the opposite respect, which is certainly less common, and in one family in all the children; the hair from a very dark colour becoming exceedingly light, and in one, very white, while under two years of age. And the mother of these children was herself born with very dark hair, which, when she was about five years old, became very white (as her own mother informed me) and is now again changed to full as dark a colour as at her birth. Accounts of a similar change in the colour of the eyes are, I believe, not well founded; at least, I have never noticed it myself, nor heard of any such change upon good authority; though the eyes of infants have been thought to become darker than they were conceived to be at the birth. But there are instances of infants born with the eyes of different colours, as well as the hair on the head; and in both, the colour is permanent. Sometimes, only one lock of the hair has varied from the rest; but I have seen two instances of the one half being red, (as it is termed) and the other half, in one instance, black, and in the other, white. In the latter, the white part was exceedingly bright, soft, and of a silky texture, unlike that of hair, but feeling like undressed, or raw silk, and no wise differing from that of the Albino,* of this,

* As a matter of like curiosity, may be added, a brief account of the Albino.

This name is given by the Italians to children whose heads are covered with a peculiar white hair of a very soft texture;

likewise, I have known two instances in this country, the other children of the same parents, having the one, brown, and the other, black hair.

not uncommonly met with about the Italian side of the Alps, and likewise in Switzerland.

The hair is whiter than that of any old people, or of any quadruped, as well as much softer; it, indeed, resembles silk more than hair, and retains this texture through life. What is further remarkable, is, that all children born with this kind of hair, have eyes of as singular a colour, and that is, a pale red, or pink, which extends as well to the pupil, as over the iris. It may be remarked, by way of analogy, that some quadrupeds amongst us, of a breed originally foreign, whose hair is perfectly white, have always eyes either of a fine blue, or of a pink colour; but in the Albino they are always reddish, which, like the hair, is subject to no change.

THE END.

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