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Contributors

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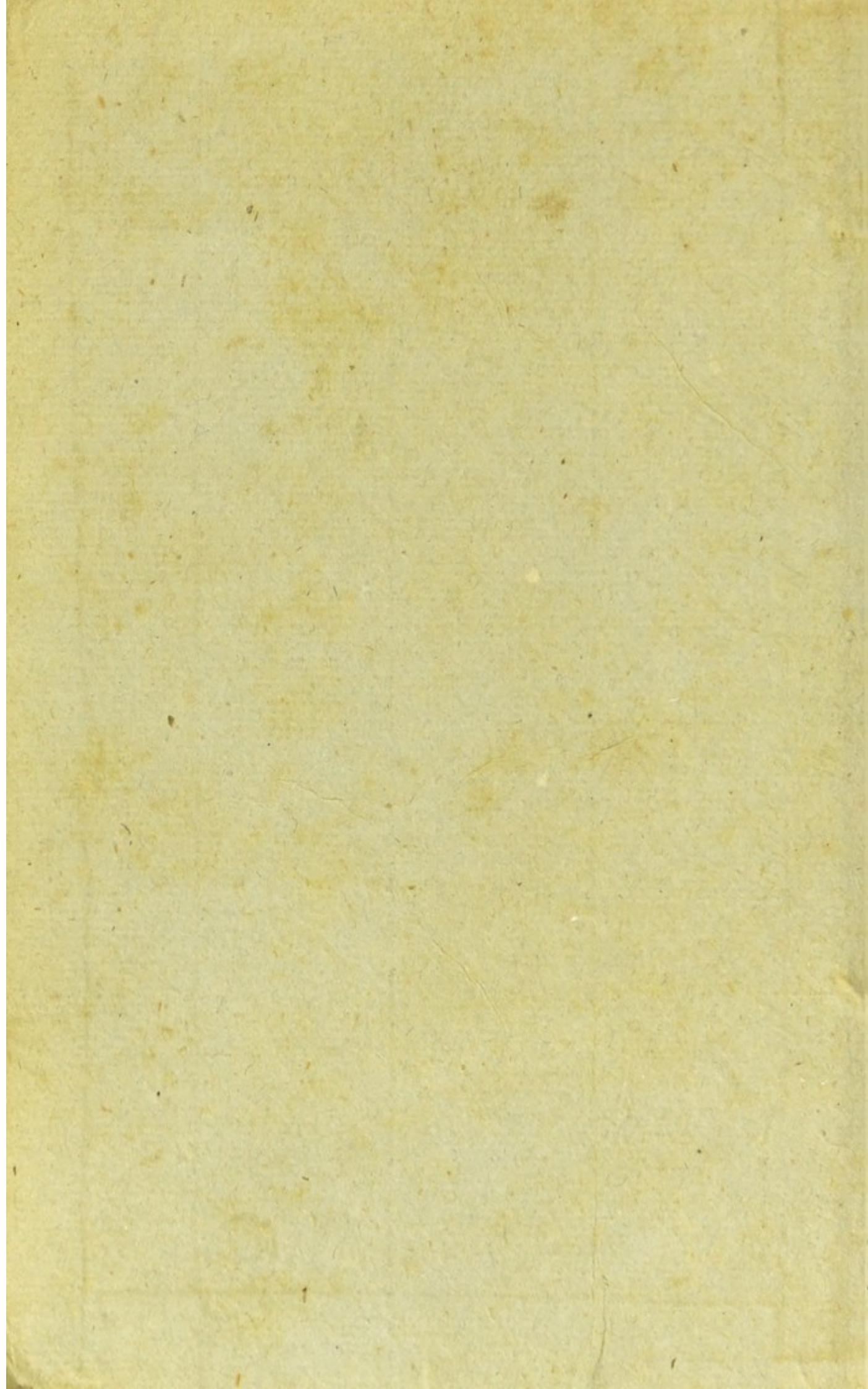
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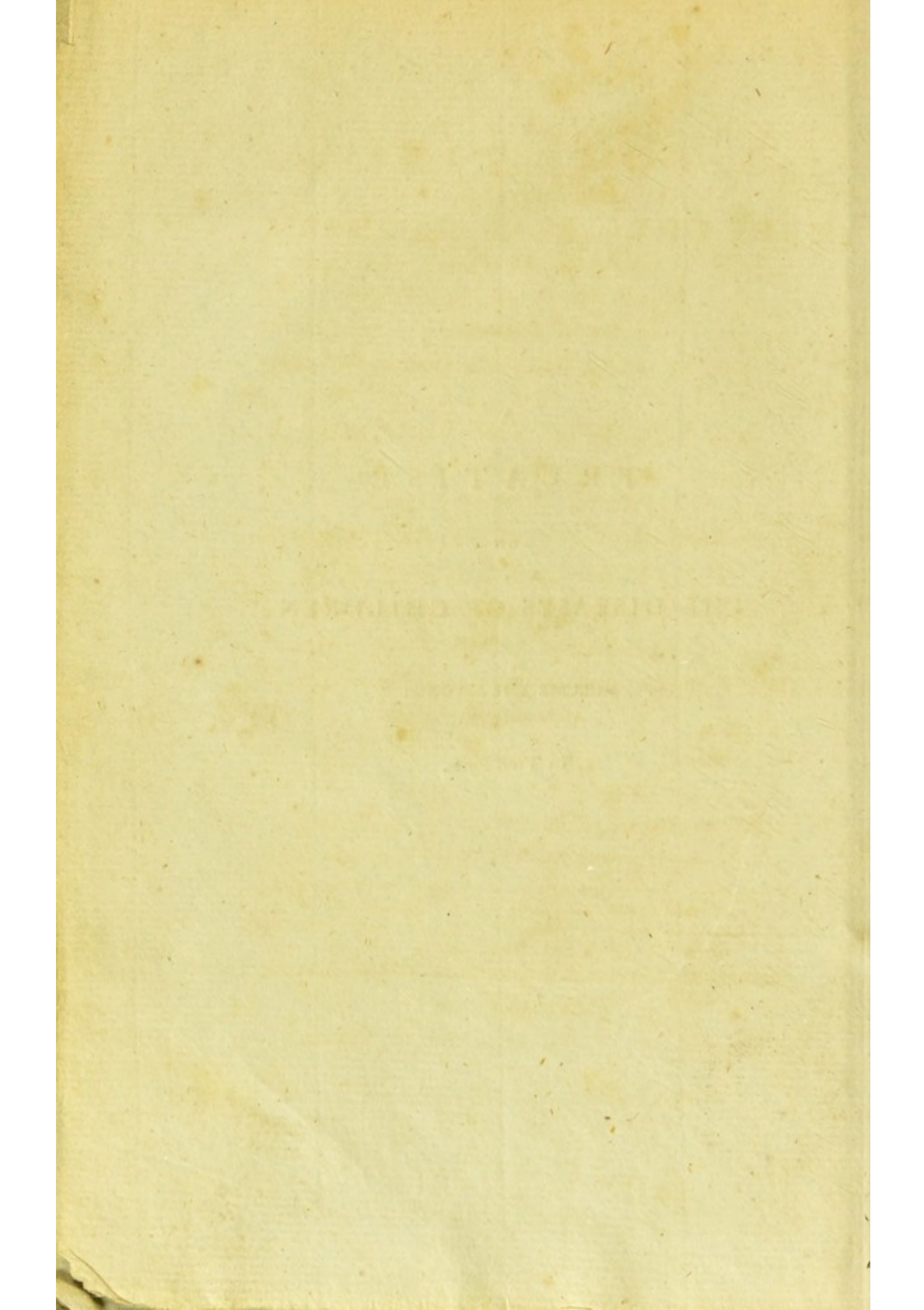
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A
T R E A T I S E
ON
THE DISEASES OF CHILDREN.

VOLUME THE SECOND :

In Two Parts.



A
T R E A T I S E
ON
THE DISEASES OF CHILDREN,
VOLUME THE SECOND;
I N T W O P A R T S :

The first comprehending
All such INFANTILE COMPLAINTS as may fall under
THE
PROVINCE OF THE SURGEON:

Part the second containing
GENERAL DIRECTIONS
FOR THE MANAGEMENT OF INFANTS
FROM THE BIRTH;

Particularly in regard to DRESS, AIR, EXERCISE, and DIET:
WITH AN INTRODUCTION
On the NATURE and PROPERTIES of HUMAN-MILK.

By MICHAEL UNDERWOOD, M. D.

LICENTIATE IN MIDWIFERY
Of the Royal College of Physicians, in London,
And Physician to the British Lying-in Hospital.

A NEW EDITION, REVISED AND ENLARGED.

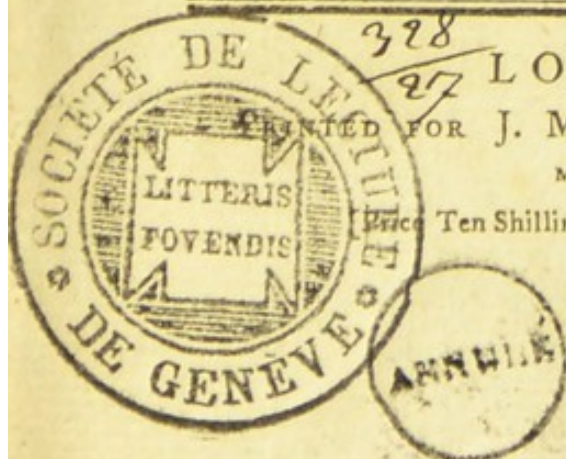
Ornari Res ipsa negat, contenta doceri. MANILL.

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THE DISEASES OF CHILDREN

BY J. M. G. FARRE, M.D.

IN TWO VOLUMES. VOL. II.

LONDON: J. & J. GURLEY, 15, N. B. STREET, 1847.



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BY MICHAEL UNDERWOOD, M.D.

LECTURER IN MEDICINE, ST. GEORGE'S HOSPITAL, LONDON.

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THE DISEASES OF CHILDREN

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DIRECTIONS TO THE BINDER.

The Binder is to place the Introduction on the Nature and Properties of Human-Milk between the Title of the Second Part of the Second Volume, and the subsequent Sheets of the Work.

The Table of different Milks to be placed immediately after the Introduction above mentioned.

THE HISTORY OF THE UNITED STATES

OF THE UNITED STATES OF AMERICA
FROM THE FIRST SETTLEMENTS
TO THE PRESENT TIME
BY
JAMES M. SMITH
OF THE UNIVERSITY OF CHICAGO

INTRODUCTION.

ON THE PROPERTIES

OF

HUMAN-MILK.

IF facts are the basis of sound reasoning, and the source of improvements in science, they will be assiduously cultivated by every investigator of the laws of nature; persuaded that, howsoever misapplied for a season, they must eventually confirm his maxims or correct his mistakes. In this persuasion, the author's attention has been lately awakened by several publications, but especially by some observations upon *Human-milk*, which appeared in the Transactions of the Royal Irish Academy,

VOL. II. B

Academy, for the year 1786*; but did not come to his knowledge till after the publication of the second edition of this work.

SUCH a subject, while it arrests the speculation of the natural philosopher, will further claim the physician's attention in regard to the influence which the diet of infants must ever have on their health, especially that nourishment which Nature herself hath, in every climate, provided for them, at their birth. For it is only from a due acquaintance with this, that Art is likely to supply the fittest substitute when the natural cannot be procured. Nor can the inquiry be deemed superfluous in a treatise embracing both the means of prevention and cure of their diseases, nor form an improper Introduction to this part of the work. And it being Dr. CLARKE's express design to dispute not only some of the supposed constituent parts and properties of *breast-milk*, and especially that of any true curdy principle; but also va-

* Observations on the Properties commonly attributed to *Human-milk*; on the Changes it undergoes in Digestion, and the Diseases supposed to originate from this Source in Infancy.

rious effects conceived to be produced by it in sucking infants, it is the more necessary that some notice should be taken of that work in the present edition. Indeed, the spirit of inquiry manifested in the Essay is truly laudable, and the experiments set on foot are worthy the notice of every practitioner in medicine; not to add, that the establishment of the fact*, whatever it may be, is likely to become of

* DR. RUTTY, indeed, made the like experiments in the year 1762, and Professor YOUNG since, though with a less decided opinion, from similar results: and perhaps it may appear, that the experiments made in consequence of the present inquiry, may now set this matter in its true and proper light.

How to account for the difference of Opinion from the same experiments, or for their seemingly different results, consistently with the honour of those who profess to have made and reported them, with equal attention and integrity, may be less difficult, perhaps, than might be imagined. In regard to the principal point of debate however, I conceive, that some gentlemen have taken certain congelations for true curd, without putting them to the proper test; whilst others, from the like neglect, have overlooked small portions of it, which have been blended with other matters; but especially have too much neglected one obvious, though less common mode of discovering it; or in the

of general use, though practitioners, it is presumed, will not readily agree with Dr. CLARKE in regard to the extent to which he carries his sentiment, any more than in all the inferences he would draw from it.

INDEED, when his Observations fell in my way, I was, from the first, not a little surprised at the confidence with which he opposed a sentiment almost universally adopted; and I determined assiduously to investigate the matter for myself. For this, I knew I had opportunities equal to those of Dr. CLARKE, and I pleased myself with the idea of being, at any rate, a certain gainer; as I should, at least, get at a fact which must in the result be favourable to my general pursuits. I must acknowledge, that I was inclined to suspect the Doctor had been mistaken in toto, until repeated experiments, by various means, and under a variety of circumstances convinced me, that there is certainly much less curd in *human-milk* than had been generally supposed,

few experiments they may have made in that way, have not allowed sufficient time for the curd to form; as will hereafter appear.

and

and that whatever the precise quantity might be, it is not very easily detected by runnets and acids; since in far the greater number of experiments made upon *fresh* milk, not the least could be perceived, though in a few, I seemed to be satisfied at the time, that there was a small portion of true curd*.

SURPRISED as I, indeed, was at the first result of these experiments, threatening the subversion of an idea, which howsoever unfounded, had been but little suspected; no sooner did the spirit of the fact appear to be established, than my wonder not only ceased, but I conceived there was every reason to imagine that *human-milk* should be very much of the nature Dr. CLARKE had supposed; though he should over-rate the result of his experiments, or his inferences be unfounded; as I have since proved to be the case. It may be suspected, indeed, that a partiality for a mode of practice that myself and many others had long taken up, might naturally render me anxious to sup-

* MR. NAVIER long ago, and Dr. FERRIS in his *Harveyan Dissertation*, at Edin. anno 1782, have adopted this sentiment.

port it at any rate, and to accommodate every fact to my prejudices. However this may be, I found that the attempt, in the present instance, required very little pains or application, and terminated in the perfect satisfaction of my own mind; since the like stubborn things (which are met with every day in the treatment of infants) cannot be accounted for but in the way I have all along done; and must evidently demonstrate the existence of an *acid* in the first-passages of infants, of what *nature* soever the food may be on which they are supported. How this attempt was executed is now of very little importance to lay before the reader, since the mode and number of experiments I have since made on *human-milk*, prove to a demonstration the constant presence of curdy or true cheesy principles, and must therefore totally subvert the principal arguments and inferences of Dr. CLARKE, were they much more specious than they are. I shall therefore enter no further into such arguments wherewith a long experience has furnished me, respecting the tendency to acidity in the first-passages of infants, (which became so necessary upon the supposition

fition of there being *no* curdy principles in human-milk,) than the acknowledged small proportion of true curd may seem to demand; though, (as above hinted) these might go far to prove the point, were there even no curd at all to be discovered in *human-milk*. The smallness of its proportion, however, with the resistance it offers to acids, as justly stated by Dr. CLARKE, is still in my opinion as agreeable to reason, as the experiments upon which the sentiment is founded appear to be conclusive.

MANKIND, during infancy, is certainly amongst the most feeble of all animals that are nourished in the like mode by the parent, and is liable to more complaints, especially to disorders of the alimentary canal. It is reasonable, therefore, to conceive, that his aliment should be of the most easy digestion, light, thin, and very nutritious; at once affording as little labour to the stomach as possible, and easily convertible into chyle, or blood. We accordingly find *human-milk*, though very thin, exceedingly nutritious, owing to the great proportion of the fat or buttery part, and of a saccharine whey, with which it abounds. It

is also easier of digestion than most other milks, owing to the smaller quantity of curd it contains* ; which, while it is less nutritious than the other parts, is also much more difficultly digested, or converted into chyle. And this I am now persuaded is really the case ; *human-milk* certainly contains less curd than most other milks ; and the public is much indebted to the researches of Dr. CLARKE, as far as they may have led to the establishment of this fact : but let us be careful that we do not draw as unjust inferences from truth, as have been supposed to arise from error†.

FOR does it follow, that if a theory be some-
wise erroneous, our practice must necessarily be
wrong ? I think not ; being persuaded that ex-
perience, and the closest attention to facts, will
confirm the general mode of practice enforced

* *Asses-milk* appears to have less curdy principles than any other milk I have analyzed.

† I am sorry to find Dr. CLARKE expressing a suspicion that his opinion may not be readily embraced by other physicians. There are, doubtless, many who are glad to collect facts from any quarter, and to entertain truth in every form ; and such will always be open to every well supported inference from them.

in

in the former editions of this work, and in some part before recommended by HARRIS and his followers. Let us, however, consider the arguments and inferences alledged by Dr. CLARKE against the hypothesis of a prevailing acidity in infants, and consequent coagulation of the milk*, which writers on their complaints have uniformly established; and contrary to Dr. CLARKE, conceive to be a principal source of their complaints.

Not that they attribute almost all the diseases and fatality amongst infants to that source *alone*, as Dr. CLARKE has imagined, who does not allow due weight to other co-operative circumstances they mention, considering them merely as predisponent causes; particularly the

* By the term coagulation or curdy matters, made use of in this and other places, it is not meant to assert, that the milk always separates into proper curd, it having been granted, that although it certainly does contain true curd, it is not so readily separated by acids as the curd of quadrupeds is; but as human-milk abounds with an oily or buttery part, it is disposed to jelly or coagulate into a pretty firm mass offensive to the stomachs of infants. And this kind of coagulation also takes place out of the stomach, from an admixture of an acid with human-milk, equally as with cows.

extreme

extreme delicacy of their frame. For it is certainly through this extreme delicacy, that infants sink under complaints, which to adults are commonly little more than inconveniences, and prove in some respects an advantage, by exempting such habits from the more dangerous disorders of athletics*.

THE atony of infants, therefore, whilst it is a predisponent cause, proves likewise an occasion of the severity of their complaints, and of the great fatality attending them; and this fatality arises from disorders of the stomach and alimentary canal, which Dr. CLARKE is disposed to dispute: for how very few infants die in the first months, in whom these parts are not, both at *first and last*, the evident seat of the disease; and with what difficulty are many others preserved from similar complaints, especially children brought up by hand?

BUT I proceed to the particulars stated by Dr. CLARKE; who having pursued this important subject at some length, and given his arguments every due advantage, I hope to be pardoned if in following him through it, I

* *Acidum eructantes non sunt pleuritici.* HIPPOC.

should

should seem diffuse, if not tautological, in purposely stating diversified views of facts, in order more clearly to exhibit their decided result.

THE first Observation of Dr. CLARKE that I shall notice, regards the fact in question, and upon which he grounds his objections both to the concurrent sentiments and practice of writers on the diseases of infants.

“ Women’s milk (says Dr. CLARKE) in an healthy state, contains no coagulable, mucilaginous, or cheesy principles, or that it contains so very little as not to admit of sensible proof.”

COAGULATING principles, unless that term be used in a very precise and limited sense, every nurse must have frequently observed; since large flakes frequently appear in the matters thrown up from the stomach of unhealthy infants. Whether these congelations be owing to some small portions of curd, or cheesy principle the milk certainly contains, (which may possibly be too small to account for their frequency and quantity;) or to an oil, fat, or butter, is not of importance to the fact. For *human-milk* certainly contains a much larger proportion of cream, or fat, than cow’s milk does, as is evident both from the natural, as well as from

from an artificial separation of it by different kinds of acids. And perhaps this, as I shall have occasion to remark, might serve to account for the symptoms of acidity, and the rancid and acid matter so prevalent in infants, and for the various effects of absorbent, alkaline, and lightly cordial remedies, without a reference to any *true curdy principles* in *human-milk*; which it is presumed, however, Dr. CLARKE in this place precisely intends.

I PROCEED, therefore, to observe, that the assertion of Dr. CLARKE as to this great point in question, is, in no view, strictly just; since it is insisted, that there certainly is a portion of true curd in human-milk; which as Dr. YOUNG has remarked, separates spontaneously, to about one sixth part of the quantity usually found in cow's milk. Dr. CLARKE in his remark upon this observation, I know not why, concludes that it is stated as "matter of opinion, and not the result of any experiment." Nothing further, however, is necessary than *to make it*, and to wait a sufficient time for the result; no particular degree of heat, that I know of, being necessary, though so stated by Dr. YOUNG. But whence it is, that neither
runnets,

runnets, acids, nor spirits separate any very sensible quantity of this curd in the course of eight and forty hours, as they constantly do from cow's-milk, and wherefore a much longer time seems to be necessary for its spontaneous separation, I am not chymist enough to offer any opinion, and therefore confine myself to the fact: observing, however, that this peculiarity is, doubtless, to answer some wise purpose, and very probably, may be a principal reason of women's-milk agreeing so much better with infants, than the milk of every other animal; and it is hoped, may in time furnish some very useful practical observations.

DR. CLARKE'S next Observation relates to the time, in which human-milk becomes sour: upon which he remarks thus.

“ IF we find *human-milk* out of the body so very slow in running into an acedent state, does it not afford strong presumptive evidence, that the milk of nurses cannot be so very prone to run into acidity in the stomachs of infants as authors endeavour to persuade us?”

To this it may be replied, that though human-milk, out of the body, does not, indeed,
run

run into an acedcent state so soon as cows milk does, (and for the establishment of this fact we are much indebted to Dr. CLARKE;) yet I think, that *Experience*, (which must be allowed to be full as good evidence as any *Experiments* can be) as fully demonstrates, that like many other milks, and most vegetables, it is much more disposed to occasion acidity in the stomach, than food prepared from pure animal juices. Moreover, it is not usually so slow in acquiring an evident acidity, even out of the body, as might be conceived from some experiments Dr. CLARKE has industriously made, and I doubt not as fairly reported; for at the end of four days, and even sooner, I have sometimes met with it full as sour to the taste as cows milk, kept the same length of time, though this is not usually the case*; and when become putrid (by that test) which I have known it to be in ten days, it was equally so with cows-milk†. And surely it is not imagined,

* Dr. CLARKE also takes notice of a variety in this respect.

† It is worthy of remark, that so far from *human-milk* being usually indisposed to be much changed by long keeping,

imagined, that human, or any other milk, remains on the stomach long enough to become acid from that spontaneous separation of parts which takes place in the dairy; and therefore the question is not so much, in what *time* it will become acid, as to what *degree*, or by what *means*, this change may be effected: and in these respects, it is found to differ little from the milk of quadrupeds.

DR. CLARKE, indeed, speaks of human-milk kept in a phial for more than two years, at the end of which time it was become only moderately acid; whereas I have often found it very sour, according to his own criteria with stained paper, in four or five days; so that one would be led to suspect, that like putrid waters, the

ing, as Dr. CLARKE has observed, it has not only always become putrid before I have thrown it away, but about three quarters of a pint which I kept at the hospital, only a fortnight, for the purpose of collecting the curd by a spontaneous separation, had rendered the room, for more than a week, sensibly offensive to every one who entered it; but was so very fetid when I strained it off, that the matron who assisted me, being less accustomed to putrid effluvia than I have been, was disgusted by it exceedingly.

milk

milk must have depurated itself by some kind of fermentation. And though it was rather ludicrously that this idea first occurred to my mind, I have been since disposed to think, that both human and other milks, when preserved from the air, are capable of such changes; having observed both women's and cows milk, at the end of many weeks, become entirely without taste or odour*. The latter kept on my

* In further vindication of such a sentiment, the author may, at least, offer the following statement; for the accuracy of which the reader's implicit credit is requested. It respects several portions of *human* and *cows* milk, with observations on their changes taken precisely as dated below.

On one portion, preserved in a phial, and well corked, it is remarked—

Human-milk, procured, Nov. 22, 1790.

Nov. 25 Now, rather tart to the *taste*.

26 very four.

27 not fetid to the *taste*.

28 *smells* very fetid.

29 fetid *taste*.

1791, Jan^y. 1 *very* fetid, now.

I examined this milk just before this volume went to the press, (in March 1795, not having noticed it before for near a twelvemonth;) and found it turned of a dirty brown colour, and *smelling* exceedingly *fetid*.

Another

my mantle-piece, over a large fire, has not been fetid at the end of five days, and was by no means more offensively acid to the taste, than I have known human-milk become in four days. And it is further worthy of remark, that out of several parcels of human-milk, preserved under precisely similar circumstances, some became very sour and even putrid to the taste, several days before the others seemed to be at all changed. And as

Another portion of *human* milk, procured within a few days of the above-mentioned, and preserved in a phial, no better corked, did not at this time *smell* at all *fetid*, nor disagreeably *acid*, although it did both, a long time before; was not changed in its colour like the former, but seemed merely to have undergone the natural separation into curd and whey.

A portion of *cows* milk drawn a month after the first-mentioned, I found at this time (March 1795) changed exactly in like manner in its colour, and decidedly more offensively *fetid* in *smell*.

Human-milk drawn a few days after the *cows*, was at the same time found preserving its colour, having only separated into curd and whey, and without the least *acid*, or *putrid smell*, and having no more acid *taste* than *cows-milk* drawn in summer, usually, has on the second day; nor was there any noise nor fermentation to be perceived from hastily drawing out the cork, as there was from both the *human* and *cows* milks which had changed their colour.

this variety occurred under repeated experiments, it may assist in accounting both for the frequency of bowel complaints in some sucking infants which other children are free from, and for the frequent good or bad effects of a change of milk, whether occasional or more permanent : and has not every physician of experience seen infants frequently thrown into tormina immediately after coming from the breast of an unhealthy mother, or one who has but little milk?

IN regard to the means by which this acescency may be produced, we know very well, how very small a portion of the prepared calf's stomach is requisite for making sufficient runnet to separate the curd from a large quantity of milk, and communicate acescency to the whey ; and is it at all improbable, that the infantile gastric juices, assisted by the natural action of the stomach, by surrounding and mixing with the milk in every point, may operate much more powerfully upon it, and dispose it to become so four and curdy*, as to offend that

* It is elsewhere observed, that the separation of the curd from the whey is the natural process of digestion.

organ,

organ, if it should not soon pass into the intestines*; as it is presumed it ought always to do. Moreover, acidity seems to be one of the states into which all animal and vegetable substances naturally, or very frequently run†, in the course of digestion or fermentation, equally constantly with that putridity or fetor which precedes their dissolution, or separation into first principles; and therefore in a certain degree, probably ought to take place in the stomach or small intestines, as the fetor does in

* In proof of the powerful operation of the gastric juices, while in the stomach, I may here advert to the well-known fact of that viscus being frequently found corroded a few hours after death, (as I have myself seen it;) and I imagine, it is generally, though not universally, believed in this day, that the corrosion has taken place subsequent thereto, and that the gastric juices have only acted upon that part, as they would upon any other animal substance divested of the vital principle.

† Perhaps this may not be the proper and natural course of digestion, as Dr. GEORGE FORDYCE has taken great pains to demonstrate; yet are the first-passages in most people so disposed at times, that through indigestion, acid matters are very commonly formed. And it is worthy of remark, that the late Mr. JOHN HUNTER always found the gastric juices lightly acid in every healthy animal that he examined.

the lower bowels. The latter is never so great in infants as it is in older subjects, though adults should for a time live only on a vegetable or milk diet. A principal reason, probably, is, that the bile is weaker in infants; but being at the same time a less powerful corrector of acidity, it is likely, they may be, on that account, more disposed to the latter; and, perhaps, ought to be. Nor can I see, wherefore that very probable evidence of an abundant acidity in the first-passages of infants, arising from the very sour smell, and curdy appearance of both the vomitings and stools of many infants, and the *constant relief* afforded them by a proper use of *absorbent* and *alkaline remedies*, should not have much more weight in the argument, than can be brought against it from experiments made on human-milk, out of the body, and its acknowledged indisposedness to turn sour so soon as cows-milk: for we know, with what extreme caution we ought to apply both chemical and physiological experiments to the explanation of the phenomena of diseases. Not to insist again in this place upon the idea already suggested, that breast-milk is not supposed to remain long enough on the stomach

stomach to separate into curd spontaneously, in the manner of cows-milk kept in a dairy ; it is sufficient to advert to facts, both the smell and curdy appearance mentioned above, and the relief afforded by medicine, being exactly alike in all indisposed sucking-infants, as in children who are brought up by hand, although the latter are, indeed, more frequently afflicted with such bowel complaints. The great difficulty also of adapting food to infants brought up by hand, and the frequent recurrence of all the ordinary symptoms of indigestion, with the relief frequently afforded them by broths, may serve to strengthen the idea of a disposition in the first-passages to generate wind and acidity in the digestion of their food, and to coagulate every kind of aliment capable of coagulation by the gastric juices, especially if not in their most natural or healthy state.

BUT as so much of Dr. CLARKE's argument turns upon there being very little or no *curd* in human-milk, it may be asked, is it, indeed, a certain fact, that the flaky matters brought off the stomachs of infants nourished by cows-milk, is usually *proper curd*, any more than

that ejected by children nourished at the breast? for it is possible it may be the fat, or buttery part, or only a very small portion of proper curd, in the one case as well as the other: and if so, the whole force of the Doctor's arguments, and his consequent objections to the popular plan of treatment may, possibly, fall to the ground; for the symptoms, complaints and remedies, in both cases, it has been said, are the same, and are well accounted for by a supposed prevalent acidity in the first-passages, and a proneness of their contents to be, in some sort, curdled by it*. Of the former I have incontestable proofs in several instances, in the pukings of infants nourished only by breast-milk, which changed blue-paper red, upon being applied to it the moment they were brought off the stomach.

For the like certain detection of true curd, I endeavoured for some time together to make

* That the acid of the stomach is capable of forming *proper curd* I have no doubt, as I have now by me, preserved in spirits, a portion of above an inch in length, and half an inch in thickness, which was many years ago puked up by an infant I was attending; but whether the child was brought up by hand, or not, I do not now at all recollect.

experiments at the hospital, upon the pukings of infants nourished only at the breast; but either the nurses there did not attend sufficiently to it, or the quantity they could preserve was always too small, or too much blended with other matters to ascertain, with precision, whether they contained any true curd or not. But a short time ago an opportunity presented in private practice, in an infant who I was well assured was nourished only by the breast. Having sucked very plentifully, the child became sick, and throwing up a mouthful of strong curd, I took up a lump of it, about the size of a nutmeg, which adhered together firmly, and was pretty free from other matters; leaving behind in the basin a larger quantity divided into small portions, and too much entangled with a viscid phlegm to answer my purpose. The portion I took out, together with some slimy matter adhering to it, weighed twenty grains, and when separated from every thing that could be squeezed from it, or evaporated, exhibited one grain of hard, caseous matter, which exposed to the flame of a candle, burned, and smelt like coarse cheese; but being before divested of all its oil or butter,

was incapable of being melted. And according to similar experiments made upon human-curd, dried in different degrees, I imagine that the above mentioned portion, previous to its being reduced to the consistence of hard cheese, might contain six or eight grains of soft curd.

I THINK this may be considered as a decisive proof, that the gastric juice can separate curd from breast-milk in the stomach of infants, and I believe is no uncommon thing*; nor
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* By this I mean, as I have elsewhere remarked, that in the ordinary course of digestion, the thicker parts are always separated from the whey; but as breast-milk abounds with oil or butter, the viscid matters thrown up often appear more like clotted-cream than true curd; nevertheless, either from the milk remaining for an undue time in the stomach; or from an excess of acidity; or perhaps other circumstances concerned in digestion not always known to us, the separation of the component parts becomes more compleat, and true curd appears. How far this may be owing to infants being in an ill-state of health, to fever in particular; or simply to weak digestive powers, and a depraved state of the gastric juice, time and attention to their complaints may possibly discover: but at present I am inclined to think, that the gastric juices, (which are at all times lightly acid,) always pos-
sels

was it long before I met with another instance equally satisfactory. This infant at eight months old was attacked with severe peripneumonic symptoms, which were at that time epidemic among children; and several times threw up curdy matters soon after taking the breast, which was its only nourishment. The nurse twice preserved the cloth upon which they had been received, from which I scraped them, and after properly pressing and drying them, I found, that about the one third part turned out to be pure caseous matter, burning in a candle, and insoluble like the former; and in this hard and dry form, weighed a grain and a half.

Now, if by the above, and other arguments and facts, it should appear, that human-milk, from whatever cause, does actually become four and curdy, in different ways, and that infants are frequently injured by it; the less disposed thereto it may naturally be, the more we may, indeed, be led to admire the wisdom of Pro-

less this property, as they certainly do of separating the curdy part of *cow's* milk, if it happen to stay a sufficient time on the stomach. This we also know to be the case with many adults.

vidence,

vidence, that Women's milk should, in that respect, differ from the milk of many other animals; yet mere presumptive evidence against its frequently turning sour, in the stomach of infants, cannot invalidate the fact.

Dr. CLARKE himself, indeed, seems to be aware that there may be reasons for such a supposition, and therefore says,

“ IN the adult state, we know that there are few morbid causes less noxious to the human body than acidity, and few more subject to the controul of medicine.”

THIS position, though in a certain sense, a very fair one, is not wholly so, when taken with all the inferences which Dr. CLARKE would deduce from it: for if the acidity be very great, and the cause permanent, (as is sometimes the case) though alkalis may be administered in sufficient quantity to neutralize the acid, the acidity returns again, and prevails even for years, in spite of the use of every kind of alkali, of columba-root, bark, steel and other tonics, unless the state of the stomach be changed by them, and the digestive powers strengthened. Indigestion naturally produces acidity, and is increased by it,
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as we see in many pregnant women, and in various affections of the stomach, particularly when it is diseased in a morbid way.—A gentleman who died of a scirrhus in the stomach, which I afterwards examined, was tormented for the last six months of his life, with an incessant acidity, which though often relieved, especially at the beginning, by magnesia, aqua kali, natron ppt. and other similar remedies, was never for one hour entirely removed; so that he spat up acid matters all the day long, and died after a very tedious illness, perfectly emaciated, though he took a sufficient quantity of food of different kinds.

Dr. CLARKE goes on to make further concessions.

“BUT granting (says he) such acidity to prevail in infants, we are in possession of many harmless medicines (called absorbents) capable of neutralizing acids, and thus forming innocent *compounds*.”

WE have, indeed, many *useful*, but no *certain*, or effectual remedies in such cases, either for infants or adults; for, comparatively light as the evils of a disposition to acidity most certainly are, when it is light or transient, it becomes

becomes even in adults a source of manifold infirmities, when depending upon some permanent cause, as has been above stated, which cannot fail occasioning an almost daily return of every troublesome symptom. A viscid phlegm also, instead of a harmless compound, often results from the alkaline remedies and natural acid, which though insipid, is very indigestible; and at other times, a more offensive acrid matter is formed in the stomach of many adults, and is with difficulty got rid of where the digestion is weak; and is continually adding to the complaint. Every practitioner must have met with many such cases; and from one more immediately under my eye, whereby I was for a long time witness to the effects of an atonic state of the stomach, I can speak very confidently to this point. This patient was of a spare, and delicate habit, very sober, and remarkably free from almost every complaint, but those immediately arising from a weak stomach. This sensible organ, however, was easily put out of order, especially by vegetables, milk, and similar things disposed to generate wind or acescency in their digestion, and was at such times loaded with acidity;

acidity ; which though often corrected by alkalis and absorbents, the stomach would, at other times, eject matters in so very acrid a state as would instantly render the fauces of a deep scarlet hue, produce foreness of the throat, falling of the palatum molle, excessive hoarseness, and some difficulty in swallowing, which would remain for many hours. After long vomiting, a bitter matter would come up, sometimes of a light, at others, of a deep green colour ; but rarely yellow, though evidently bilious. Sometimes, upon taking alkalis and absorbents previously to vomiting, the acid would be neutralized, at others, no quantity would render the juices bland ; but instead of an acid, an heavy, acrid, and most viscid phlegm would be ejected, inflaming or flaying the fauces, in the manner just mentioned, and in this state no kind of medicine had any good effect ; though previous to the *acid* matter being changed into this *acrid* state, alkalis and absorbents very frequently prevented vomiting ; which, however, nothing could do after the contents of the stomach lost their *acidity*, and became *acrid* : so far were they from being usually converted into a *harmless compound*.

compound. It was only after being many years tormented in this way, and having daily recourse to alkaline and absorbent remedies, to columba and bark, joined with steel, and other powerful tonics, with exercise and a scrupulous attention to his diet, that he was sensible of any abiding amendment; though from the great benefit he at length received, by a strict adherence to such a plan, it may be presumed he had no morbid affection of the stomach, though that had been often suspected.

EXCESS of acidity, and an acrid, ropy phlegm are, indeed, the well known attendants on an imperfect digestion, and will recur in many adults, feed on whatever they may*; though

* I conceive, that this habitual acid affords a too great, and improper stimulus to the glands of the stomach, exciting both a superabundant and morbid secretion. By this means, the gastric juice is oftentimes rendered exceedingly viscid, (in the manner of the secretion from SNEIDER's membrane from the stimulus of a cold) or afterwards becomes thus tenacious from mixing with the acid, and ill-digested contents of the stomach. This seems probable, from the vast quantities of this viscid and acrid matter which, it has been observed, people long vexed with acidity will sometimes throw off the stomach for hours together, and frequently for several successive days.

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the evil must, doubtless, be increased by certain kinds of aliments ; and of that class are those administered to infants. If adults, therefore, of a similar habit to that just now stated, though in the end often restored to perfect health, may continue for a long time greatly tormented, whilst the most powerful correctors of acidity, and known tonics are had recourse to ; and if improper food be occasionally received into the stomach, their complaints will at such times be greatly exasperated ; wherefore should it be supposed, that delicate infants must always be restored, if the breast-milk, as well as other nutriments on which they may feed, be confessedly, to a certain degree, disposed to add to the complaint ? And can it be urged from any experiments made on human-milk, or will Dr. CLARKE or others affirm, that it is so utterly unlike every other milk, and even so much more ant-acid than animal food, that it has nothing in it likely to become sour (save in very weakly children) by an admixture with the gastric juice ?

I now proceed to Dr. CLARKE's remarks respecting the green colour sometimes observed
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in infants stools. Dr. CLARKE doubts of the existence of the supposed predominant acid, of which that colour has been imagined to afford some evidence, because, he says, common acids do not give that tinge to the bile, and that only mineral acids turn the bile of a green colour.

BUT as *some* kinds of acids can produce this effect, it cannot surely be proved, that the natural acid of the stomach and bowels cannot effect the like; especially when it is considered, that in adult persons affected with dyspepsia, *bitter* matters of a *green* colour are frequently ejected after very acid vomitings, as it has just now been remarked. And though as Dr. CLARKE observes in a quotation from SYDENHAM, "porraceous matters are ejected by children who have been over-purged or vomited, and by healthy adult persons when sea-sick," yet the like appearances under such circumstances can scarcely destroy the conclusion; since all such violent agitations of the chylopoëtic viscera, by disordering and perverting their due and natural action, upon which the sane state of their secretions indubitably depends, may sufficiently account

account for the sudden forming of acid, acrid, or any other unnatural and unhealthy gastric juice, as well as for the vomiting up of bile, which in its passage will certainly be mixed with it, and be somewise changed from its natural colour. And, indeed, SYDENHAM's reasoning upon this subject, a little further on, is of a similar kind, though expressing himself in the language of that day, he attributes this foreign, or morbid secretion, to a confusion of the animal spirits; which, indeed, for any thing I know, may be a remote cause of it. Upon the whole, therefore, the prevalently sour smell of some infants stools, which Dr. CLARKE thinks so very nugatory an argument, seems to afford much better evidence of the presence of an acid, than his arguments can be against the change of colour by such a mean. Moreover, I may affirm, that the *green* stools of sucking infants, and even some stools that are of a bright *yellow* colour, do certainly contain an acid, having detected it under repeated experiments made with blue paper, the instant the stools have come away; however it might turn out in the experiments made by Dr. CLARKE. And I may therefore, possibly, be

allowed in my turn, to express some surprise at the confident manner in which Dr. CLARKE has taken upon him to dispute the fact.

BUT Dr. CLARKE observes further, that, "Those writers who have laid the greatest stress on such appearances in infancy, do not pretend to apply the information to be derived from thence to the treatment of the diseases of adults."

I, PROBABLY, do not fully comprehend the import of this observation; for the information, *mutatis mutandis*, is most certainly applicable, and the complaints of each arising from acidity capable of cure or relief, in the same way, viz. by alkalis, tonics, and aromatics, with a well adjusted diet. I have intimated, that the doctrine is *partially* applicable, because the bile of adults being more exalted and acrid, or otherwise stronger, (if I may so speak) may not upon meeting with the like acid, change their stools just to the same colour of those of infants; nevertheless, the stools of adult persons, tormented with acidity, especially under peculiar aggravations, are of a much *paler* colour, than those of people of much stronger digestive powers. And here
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it may not be improper to consider the very material circumstance of the very different diet to which adults are addicted, as well as the medicines they may take, which, it is well known, often affect the colour and smell both of the stools and urine in the course of a few hours, as the stools of infants (though ever so green before) are changed in their colour upon taking of rhubarb; while the diet of infants being perfectly simple, the contents of the bowels are likely to acquire no other colour than that of the bile itself, (as is actually the case in a healthy child) or such as through their accidental property may be chemically induced by the admixture. Not to add, that the urine in healthy adults is usually of a much deeper colour than that of infants, and is also not unfrequently occasioned by a certain diet as well as by medicines; and varies with them. And perhaps it may be from a similar natural tendency to a very *dark* colour, that we find the first stools of new-born infants are not truly green, though often of a *greenish black*; nevertheless, there is sufficient acidity in their gastric juices to occasion the stools voided previous to infants taking any kind

of food, to tinge blue paper red, (as I have found by careful experiments) though such stools contain a very large proportion of bile.

DOCTOR CLARKE goes on to say,

“ UPON the whole, I hope it will appear probable to the generality of readers, that predominant acidity in the first-passages, is by no means so general, as to be considered as the only, or even principal source of infantile disorders ; that such a morbid cause may now and then occur in infancy, as in adult age, from a weakness of the stomach, costiveness, or improper food, can admit of no doubt.”

THIS inference is surely far from being made out from all that has been advanced.—But let us consider of what the arguments consist. “ Human-milk out of the body, does not turn acid so soon as cows-milk does,” (but cows-milk requires twenty-four hours or more ;)
“ nor the common acids curdling the milk of quadrupeds produce scarce any sensible curd from human-milk ; that only mineral acids will tinge the bile of a green colour ; and that in the adult state few morbid causes are less noxious than acidity, or more under the controul of medicine.” To conclude from hence,
that

that acidity in the first-passages ought not to be considered as so general a cause of infantile complaints, or to be of such dangerous consequence as it may usually have been imagined, does not appear to me to be perfectly founded; nor to be evidence sufficient to subvert the arguments and evidence adduced in support of that sentiment, in connexion with the acknowledged atony of infants. It is true, indeed, that *ex nihilo nihil fit*.—If there be no curdy principles in human-milk, no species of acid in the stomach can bring curd out of it; yet may the combination of an acid and milk offend the stomach otherwise. It has been observed, that all common vegetables, and even bread, are often very imperfectly digested by adult persons whose stomachs are overcharged with acidity, yet is no part of such aliment necessarily converted into any thing like *true curd*; though the stomach in all such persons is as certainly offended by the *curdling* of cows-milk.

NEVERTHELESS, I have hinted long ago*, that simple acidity may not, in the first instance,

* In the very first edition of the subsequent Tract.

be necessarily so injurious as some writers have contended, and that infants suffer more severely from an acrid matter, (less capable of correction by absorbents, than by aromatics,) which though it originate from a predominant acid, generally becomes so very offensive in conjunction with some other cause, be that a peculiar atony, or otherwise; robust children being always far less disordered. Upon the whole, however, I am persuaded, that acidity is eventually a frequent source of mischief, and that because it is so constant a consequence, and further aggravation, of indigestion, in such adults as have what is called a weak stomach. And if the stomach or digestion of infants be naturally weak, why should we not expect to find them peculiarly liable to acidity and its consequences? the state of the stomach being certainly the grand source of general good, or bad health, at every age. And, indeed, were I to say no more than that infants, in proportion to the greater weakness of their digestion, must be more disposed to acidity than adults, (with many of whom a vegetable, or milk diet *always* disagrees,) it were saying a great deal towards subverting the
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the whole that has been advanced by Dr. CLARKE against its prevalency being a principal source of their complaints.

DR. CLARKE concludes by observing, that “the young of all the ruminant animals, fed on milk of a much more acescent nature, suffer no inconvenience from this source.” To such laconic arguments, I think it might be fairly replied, that many ruminant animals can eat, and digest, *bones*; and hop about likewise when their own bones are broken or dislocated, without manifest injury, or much expression of pain. And in this view I might adduce the remark, made elsewhere*, on the rank which animals severally hold in the scale of beings. It being very evident, that besides the ground of comparative health and disease arising from the bulk and strength of various animals, there is that of their several ranks in that scale, commencing with man, the head, and extending from the invaluable sheep, the cow, or the horse, to the lowest of our domestic animals and reptiles; the more noble and useful (from whatever cause) being, I believe,

* Vol. I—pages, 14, 15, *Note*.

uniformly subject to the most and severest disorders. Thus the fragile worm daily survives some kinds of injuries, which the sturdy ox could not; while the delicate infant would sink under that, which the lamb could with safety endure.—But what should we learn, on the present occasion, by pursuing such comparisons? “Man (said one) is not a fly”—no, nor yet a tyger.—Such arguments, at the best, are very equivocal, and one might be set against another without end. We do not, for instance, suspect that quadrupeds in a state of pregnancy, are afflicted with acidity or heart-burn any more than their young are from the curdy principles of the milk by which they are nourished; but we are certain, that many breeding women are tormented with such complaints for a great length of time, feed on whatever they may. It is confessed also, that the milk of quadrupeds abounds with cheefy principles, and that human-milk contains a far less proportion; (or according to our author, none :) Here then is a glaring disparity in the very point in question; and from which the inference drawn by Dr. CLARKE, (were even his experiments conclusive) does not seem more natural than the
observation

observation already advanced on the wisdom of Providence in abating of that quality in human-milk, because a greater propensity to acidity must, from the atony of infants, render such a quality peculiarly noxious to them.

It has been observed, however, that I can myself no longer entertain any doubt of the *existence* of this quality in breast-milk, though it may vary in its quantity and consistence; nor hesitate to insist, that the result of my experiments on human-milk, and infantile greenstools, (which it has been said, do stain blue paper, red) completely overturns all that Dr. CLARKE has advanced, to the entire satisfaction of my own mind: but as our contradictory assertions, (as to facts) cannot satisfy those who have not made the like experiments, I have submitted the matter in a way of fair argument, and appeal to the discernment of the reader.

SINCE these observations on Dr. CLARKE's Essay were drawn up, I have, however, been able to adduce a testimony which I conceive will not generally be disputed, and with which many of my readers may possibly have been
well

well acquainted before I was. Had I met with it sooner, it would, probably, have saved me a great deal of trouble; but the *Histoire et Mémoires de la Société Royale de Médecine*, anno 1790, might not perhaps have fallen in my way to this day, if my good friend DR. ANDRY of *Paris* had not made me a present of it; though long after I had compleated my experiments on human-milk. It were needless in this place to quote, in detail, the experiments there recorded; it must be sufficient to give tables of their result*, and to say that they correspond exactly with my own, referring to the volume itself for an ample account of the modes of investigation, further properties, and component parts of various milks there specified, demonstrated by numberless experiments, and upon multiplied authorities.

To sum up the whole, then, upon Dr. CLARKE'S own principles, and forbearing for the present to insist either upon my own experiments, or others, it may be fairly urged, that, in disorders of the first-passages, the matters ejected both by vomiting and stools are fre-

* See the annexed Table.

quently

quently flaky, coagulated, or curdy ; that they have a sensibly sour smell ; and that the stools are often of a green colour, very numerous, and attended with griping pains. That these symptoms and complaints are removed by such remedies as are allowed to correct acidity in other instances, or are mitigated in a greater or less degree, as long as such medicines remain in, and are acting on the stomach and bowels, and mixing with their contents. That, moreover, every kind of aliment which during its digestion is alike peculiarly disposed to produce acidity, both in the adult and infant states, always increases the above symptoms ; breast-milk, however, (from a healthy nurse) the peculiar food of infants, being less commonly found hurtful to them, because more thin, and lighter on the stomach than most other food, and having less of that true curd found in most other milks. But whenever human-milk happens to disagree, the symptoms are exactly the same as in infants brought up by hand ; though in other instances, a recourse to it frequently proves a remedy, for children whose bowels have been disordered from being previously nourished by the spoon.

And

And though this fact may, indeed, fairly prove it to be far less disposed to turn curdy and acid than cows milk, and farinaceous substances; yet the circumstance of sucking children being often afflicted in precisely the same manner, and relieved by the same medicines with children brought up by hand, equally demonstrates the cause of their complaints to be exactly similar; and that human-milk, when mixed with the gastric juice, is disposed to turn acid, and its component parts to separate improperly, or, perhaps, too hastily, as in adults whose digestion is bad. And that on these accounts, the milk becomes curdy and acid, occasioning indigestion and wind, which jointly irritate the nervous coat of the stomach and bowels, and produce complaints that endanger the infant's life, unless remedied by the known correctors of acidity. It may be added, that a disposition to these complaints often continues as long as infants remain at the breast, or live on any other milk diet, but are diminished as soon as they take freely of animal food; and that this change does not depend merely on their more advanced age, but on the alteration of diet, is pretty evident from the
like

like advantages being often obtained by allowing them a little broth, once or more every day, at a much earlier age.

SUCH then are the facts in regard to diet, the alvine discharges, and complaints of the first-passages during infancy ; and such are the effects of certain medicines known to correct or abate acidity ; and to what shall they be attributed, or what can be more naturally inferred from the whole, than that there certainly is an aciescent tendency in the gastric juices of infants, (useful, no doubt, upon the whole,) and a quality in *every kind of milk* disposing it to be curdled or coagulated, and become acrid by the admixture ? To these observations might be added that of infants being so very rarely attacked with fever, however severe or continued their pains, or other complaints may be ; and though many good reasons might, doubtless, be given for this exemption, yet none can exclude, the well known aphorism of the father of physic, before quoted, nor be more appropriate to the occasion than that maxim, “ *acidum eructantes non sunt pleuritici.*”

I HAVE

I HAVE no desire to enter into a formal dispute with any man, much less to contend for mere opinions irrelative to practical truth; but should any persons be determined to dispute both the inferences and facts I have advanced, let them, at least, tell us *what* it is that so uniformly acts as an acid might be expected to do, curdling or thickening the contents of the stomach, offending the bowels, producing green and four-smelling stools, with other symptoms of indigestion recurring so uniformly in delicate infants: effects which nothing could ever be contrived totally to prevent, nor can any thing so uniformly relieve as *ant-acids* or absorbents. May it not justly be presumed to be something not easily distinguished from what we term an *acid* in atonic adults? How much less injurious, however, this disposition may be, than that tendency to putrescency prevailing in the latter, induced by a very different diet, and a more exalted bile necessary to digest it, may be fairly presumed; and upon which I have already given my own sentiments at large, even in a former edition of this work. It may, however, be just noticed in this place, that it might, possibly, be fairly urged, that
infants

infants must, therefore, either be exempt from their share of the infirmities of human nature, or be peculiarly liable to disorders arising from acidity in the first-passages, which are confessedly amongst the slightest evils, and at the same time a probable occasion of their escaping those of a more dangerous tendency.

I CONCLUDE, therefore, with observing, that indebted as the Public is, and particularly gratified as I am, by the pains and researches of Dr. CLARKE, I cannot but insist, that his inductions are neither supported by experiments, nor the arguments he has advanced : neither is it, perhaps, perfectly certain what essential difference there may be between every possible combination with human-milk out of the body, and its natural mixture with the gastric juice in the stomach of an infant. What changes the temperature and action of that viscus, whether mechanical, or chymical, may be capable of producing, cannot for certain, be either proved or disproved from mere speculation ; so that whatever opinion we may form, must remain very problematical, any further than matter of fact may discover their operation, in the different stages of digestion, both in atonic and athletic subjects.

subjects. But in fine, whether under all, or any particular circumstances, any of the gastric juices be precisely what chemists would term an acid; or whether the offensive matters, under an imperfect digestion, be usually of the nature of curd, butter, or phlegm; or whatever theory Dr. CLARKE, or others, may from his researches be justified in advancing, at some future period, cannot weaken the force of any fair inference from facts. The author of this work, indeed, ardently wishes, that a practical improvement may be made of every discovery; but of whatever kind they may be, it does not seem likely from the above impartial statements, that the treatment of *infantile* disorders recommended by him, and in many particulars very generally adopted for the last half century, will undergo any essential alteration*.

* Dr. CLARKE concludes with expressing a hope, that a system of practice more rational than the present may be struck out.—What has been the precise mode of practice, or its success in *Ireland*, I can guess only from Dr. CLARKE's statement in regard to the *Dublin Lying-in Hospital*; where, passing by those years in which an epidemic is said to have
raged

raged amongst the children, the number of deaths has ever been far beyond the average in the *British Lying-in Hospital*, in *London*, where the old plan of treatment is pursued.

IN support of this assertion I submit the following statement of the two hospitals, (and it is presumed, not an unfair one,) being copied from the printed accounts of that in *Dublin*, and from certain outlines drawn up, on another occasion by Dr. CLARKE himself; and contrasted by corresponding extracts from the *British Lying-in Hospital*, subsequent to those quoted by the Doctor*.

AND first, from his own statement, it appears, that in the old *Lying-in hospital* in *Dublin*†, (reckoning from its first institution, when, probably, the furniture was new, and there existed no peculiar remote causes of disease) out of 3,746 infants 241 died, within the month; that is, between six and seven in every hundred: but that in the *British Lying-in hospital*, (a very old and ill-contrived edifice) the Doctor reports, (reckoning likewise from its first institution) only 146 died, out of 3,611; which is only as four to the hundred.

AFTER this period the endemic commenced‡, and the fatality greatly increased; the Doctor then remarks, that after proper means were taken to remove the remote causes of that fatal disease, only 419 infants died out of 8,033 births; that is, from five to six in every hundred.

* For their perfect accuracy, it is not to be expected we should either of us be answerable, as much must depend upon the report of inferior officers; but on my own part, no wilful or known misstatement is offered.

† See *Transactions of the Royal Irish Academy*, anno 1789.

‡ See *Nine-days-disease*, vol. 1. pages 166, 167.

It appears from the printed accounts of the hospital, that this period is taken from the year 1783 to 1788, inclusive. But, the like accounts of the *British Lying-in* hospital, during the very same years, report that, out of 3,374 children born there, only 95 died; which is under three in each hundred.

BUT to render these calculations more immediately applicable to Dr. CLARKE's observations on the treatment of infants, I shall to these six years, add the *Dublin* printed account of the three succeeding ones, thereby increasing the above period to nine. During these years, the number of deaths was, indeed, amazingly decreased, so that the endemic, especially during the three last, seems to have entirely given way; and it being also during this period, that Dr. CLARKE had taken up his new theory both of the nature of *human-milk*, and the early diseases of infants, a comparison of the number of deaths in the two hospitals, and any inference from it, will be brought to a fair issue. It appears then, that from the year 1783 to 1791, 12,688 children were born in the *Dublin Lying-in* hospital, out of which, 593 died; which is, as $4\frac{2}{3}$ in an hundred. But, in the *British Lying-in* hospital, during the same years, 5,233 children being born, only 112 died; which is but little more than two in each hundred. In the last of the above years (as well as during many former ones) only two children died in the *British Lying-in* hospital, out of 627 born there; and in the year before that, no more than five, out of 630, which number also was not exceeded in several preceding years *; and

* So that the number of infants dying in the *British Lying-in* hospital under three weeks old, is usually far less than that of *still-born* children, as
Dr.

and seems to prove almost to demonstration, that the entire management of infants in that hospital, as well as the practice of the present day, must be rational and judicious; and is far from calling for a total subversion of the principles by which they have been always regulated.

I ADD, that in the *British Lying-in hospital*, from the year 1757, (being that in which the hospital in *Dublin* was instituted,) to the year 1791, the average of children's deaths has been *under three* in the hundred†; but that, in the hospital in *Dublin*, during the seven *most successful years* it ever experienced, (either previous, or subsequent to the endemic) the average is *above four*; though the mothers, usually, remain there only a fortnight, but those in the *British Lying-in hospital*, three weeks, and sometimes a month.

I HAVE been at the pains of stating this average, in the two hospitals, at different periods, that the reader might be competent to judge, *cæteris paribus*, of the probable better practice; and may see for himself, that, if the management

Dr. CLARKE seems to notice with some surprize, in regard to one of the *London* hospitals he has occasion to mention, but as it, indeed, ought to be every where, at that early period.—If small things may be compared with great, it may be added here, that speaking from memory, I have reason to think, that I have not lost more than three infants during the month in my private practice, during the last five years; which is much below the average of still-born children, that has fallen to my lot, and of which I have an exact register.

† It appears from the hospital register, that during the last five and twenty years, the average of deaths has been considerably lessened, and also that a smaller proportion of infants has died in the last ten, than at any period since the first institution of the Charity; and it may, perhaps, be fairly conjectured, through improvements made in the management of infants, which was not formerly so fully consigned to Physicians.

52 *On the* PROPERTIES of HUMAN-MILK.

of new-born infants, or the treatment of their disorders, has been of late anywise influenced in *Dublin*, by Dr. CLARKE's new theory, it has not, hitherto, to say the least of it, any great claim to the practitioner's attention, on the score of its success.

A

TREATISE,

Ec. Ec. Ec.

PART I.

HAVING already considered all the more important diseases falling under the immediate province of the *Physician*, there remain only a few anomalous matters in his department; which having some relation to other complaints now to be noticed, may be suitably arranged in this part of the work. These will be classed relatively to other matters, having here a principal regard to the disorders falling under the province of the *Surgeon*, with others that may be said to

be of a mixed kind ; but should be all familiar to every Accoucheur. Of these last, more especially, not a few may very well fall under the care of another class of readers ; their nature and treatment, it has been already noticed, being in this edition rendered more obvious and intelligible. To the *Diseases* will follow suitable *Directions* to Parents and others, for the general *Management of Infants* in every article of importance to their health ; to which particulars the *second part* of this volume is wholly devoted.—The first complaints I shall mention relate to *Contagious Eruptions* ; beginning with those of the Head.

TINEA, or SCALD-HEAD.

THE Scald-head 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 infectious, especially amongst children, at schools, or other places where they mix freely together, exchange

change 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 some considerable experience, I may venture to say, that being usually a mere complaint of the skin, it may be most successfully treated by topical applications. This 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 may sometimes be required, though I think 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 disease.

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 be frequently cured by an ointment made of equal parts of sulphur, flour of mustard, and powder of staves-acre, mixed up with lard or butter; 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 his body be 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 of the aqua kali puri, and the scabs anointed with the unguent. hydrargyri nitrati in the place of the sulphur ointment and calx of mercury; the former being

ing 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 asked, 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 apparent severity. It consists only 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 the common unguentum picæ and 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. 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,

deed, prove a kindness in the end; but must be repeated till all the hairs be taken out: after which new hair will rise free from scabs, which is a sufficient 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.

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 flower of sulphur, or of some mild mercurial preparation, with the common decoction of the woods, or the Lisbon diet-drink. 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-plaister. In a few instances, the topical use of the unguent. hydrargyri mitius has a wonderful efficacy. This remedy should, however, be cautiously applied, and instead of being forcibly rubbed in, like other topical remedies, should be only spread lightly, and very thin on the scalp:
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the body should at the same time be carefully kept open.—In the spurious tinea particularly, it may be prudent to open an issue, or fix a seton in the nape of the neck.

SCURFYNESS *of the* HEAD.

SOME infants early contract a scurfyness on the head, which increases as they grow up, becoming likewise very thick, and itching exceedingly. It can scarcely be termed a disease, and is only worthy of mention with 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, I believe that 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

with a little cream till they begin to loosen, or with a little arquebuse water if they are too moist; at the same time, carefully avoiding taking cold on the part.

SCABIES *or* ITCH.

THIS disorder so commonly known and easy of treatment, is mentioned chiefly for the sake of introducing a caution to some readers, against popular washes and girdles; which are generally either useless or hazardous. Such are often had recourse to in order to avoid the unpleasant smell of the brimstone ointment; which, however, rarely fails to cure the genuine itch. There is, indeed, a spurious kind, (as of the scald-head) which is far less, or often nowise contagious, but is more difficult of cure than the genuine. Should the brimstone ointment, therefore, fail, sulphur should be administered inwardly, and sometimes mercurials; which may likewise be added to the ointment, and in a few weeks, at most, will not fail of removing the complaint.

It

It is common to administer at the same time some alterative diet-drink.

HERPES MILIARIS, *or* SHINGLES;
(RINGWORM.)

THE Herpes miliaris, and the Shingles are distinguished by some writers, but I can see no good reason for it; and M. AURELIUS SEVERINUS, and others, have esteemed them to be the same disorder.

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 constantly 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 shingles makes

makes its appearance. It is, however, often a blemish; as it frequently attacks the hands and face, and especially the forehead. It is amongst the vulgar errors, I believe, that when it appears on the breast or loins, if it should extend round the whole body, it would prove fatal. This form of the disease is termed *zona herpetica*.

THE herpes miliaris is also by many distinguished from the ring-worm, (but perhaps needlessly;) the former being always supposed to arise from an affection of the system, and to be preceded by shivering, or sickness at the stomach. They are certainly both very easily cured, and probably would alike disappear of themselves. The herpes yields very readily to stimulating and astringent remedies. Ink therefore, (as it contains an infusion of galls) has been a common, though inelegant application, and may serve very well where better forms are not at hand: it is sometimes made into a paste with flower of mustard. 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 zink and lard: but the
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unguent. hydrarg. nitrati is preferable to most others. The use of a flesh-brush is a good prophylactic, or preventive, in habits accustomed to the complaint.

Should the shingles spread and become sore, it should be treated as directed below.

HERPES EXEDENS, *or* SERPIGO.

THIS is a malignant species of the above complaint, but is generally local. It is mentioned only as having relation to the former, being 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. After this, the parts should be washed with saponaceous

* 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.

lotions,

lotions, and lastly, with strong solutions of vitriol. Should these fail, the ung. hydrarg. nitrati 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.

OPHTHALMIA, *or* INFLAMMATION *of the* EYES.

THE eyes of new-born infants are very apt to be inflamed during the first three or four days after birth, especially 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 usually of very little consequence, and generally disappears of itself, upon merely keeping the head warm, or by washing the eyes with a little rose-water. Should the inflammation continue

tinue many days, or perhaps seem to increase, three or four drops of the water of acetated litharge, 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. But there is an inflammation to which infants are liable, that sometimes continues a long while, and therefore calls for further attention. I do not allude to that redness on the eye, known by the name of fugillation, or blood-shot, which will often remain a long time, return, and disappear again, without the least injury to the child; nor to the watery eye, which will sometimes continue for many months, and even for years. But that which I here intend, is accompanied with the true appearances of ophthalmia, or inflammation of the white of the eye, 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.

I HAVE nothing out of the common way to recommend for it *; nor does it require much to be done, unless it prove tedious, as it has been said it sometimes does, in which case the parts behind the ears should be made sore, in the way I have before described, 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 eye-water before recommended. If the child be inclined to a frequent return of it for years, as I have known even 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 as much fresh butter 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.

* For a more full account of the treatment of *ophthalmias*, see *Surgical Tracts*, 2nd Edition.

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 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 successively attempted, until the head has been shaved, and an oil'd-filk cap applied over the whole scalp. This never fails to procure a great discharge from the head, and I have known it remove the complaint in two or three days.

BUT there is a far more formidable inflammation, which has of late years been called the purulent ophthalmia, 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 sometimes not only destroys the sight, but dissolves 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 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 older children: scarifications also of the tunica conjunctiva of the eye-lids, (which generally falls out upon their being opened;) blisters to the back, nape of the neck, and behind the ears, are often essentially necessary. It is afterwards expedient, in many cases, 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 plaister to these parts, and afterwards dressing them
with

with the ceratum spermaceti, or other mild ointment. The edges of the eye-lids should be kept constantly greazed throughout the day, especially in 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 compound water of acetated litharge, 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.

It should ever be remembered, that in the beginning of the complaint the taking away of blood is often not to be dispensed with, (unless the child be very young, or otherwise weak) nor to be sparingly done. If the child be three or four years old, the application of one leech to the temple or neck, will have no good effect, though often repeated: two, three, or even more, according to the strength of the

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child,

child, should be put on at a time, and a blister soon afterwards ; which, at this age, will often do more to conquer the inflammation, than most other means put together, if had recourse to in time.

THROUGHOUT the complaint, astringent and stimulating applications are to be made use of, being not only far preferable to other means, but so necessary, that should emollient poultices, and merely cooling collyria be, at any time, depended upon, the event were likely to be fatal. What may be the very best remedy, it may not be very easy to determine, having for some years succeeded, and in a reasonable time, by different means. 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 dram of the aqua camphorata of *Bates'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

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 nitrati, 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, and to add a little camphor.

It has been said, that where this inflammation has not been properly treated from the beginning, the eye is sometimes exceedingly injured by it, so that even the eye will burst. At other times, the cornea becomes much thickened, and the pupil more or less opaque by means of one or more specks which the inflammation has occasioned. It should be remarked however, that we sometimes meet with an agreeable surprize at the decline of this for-

* This tincture and ointment are usually a very speedy remedy for the sore-eye induced by the small-pox, and measles; a complaint under almost every other mode of treatment very tedious of cure.

midable 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 being confined by the cicatrice, the patient has recovered his sight. On the other hand, the cornea 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 some permanent inflammations, 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 could only be successfully treated by its specific remedy, in one form or other.—Every practitioner will be very careful how he takes up such an opinion in particular instances*; however,

* The *French* physicians seem too much inclined to regard the purulent ophthalmia in this view, being a very common symptom, amongst others truly venereal, in many infants

however, it is right to 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 alteratives will have any lasting effect.

THOUGH it is not my 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

infants in the *Hotel-Dieu*, *l'Hospice de Salpêtrière*, *Vaugirard*, and *des Enfants trouvés*; but when this species of ophthalmy appears alone, the case should not be hastily concluded to be venereal, however violent the ophthalmy may be.

agree

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.

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, trial may be made of a solution of the hydrargyr. muriatus, one grain being put into four ounces of water, and the ointment of nitrated litharge be applied in the manner before recommended,

recommended, and like the 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 been born with a cataract in one or both eyes, or totally deprived of sight by the gutta serena. I shall therefore speak of the two diseases together, and the rather because the same remedies are here accommodated to both.

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.*

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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 vapor with spirit. ammon. compos.* conveyed to the eyes by means of a tube properly adapted; or by brushing the eyes and the adjacent parts, several times a day, with soft and smooth brushes, which are properly constructed by *Messrs. Ayliffe and Gee*, in *Wardour-street*.

SOMEWHAT agreeable to this idea is the plan since recommended by Mr. WARE in his late treatise on certain disorders of the eye; and like many other important discoveries, was the effect of accident. Upon this he happily improved, having succeeded in several instances of incipient cataract when the consequence of external injuries, by exciting a transient inflammation. The application he has employed to this end has been ether, either by

* 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.

itself,

itself, or diluted with a third or fourth part of a weak solution of hydrarg. muriatus, 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 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 certainly 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 hemorrhage from the nose. In imitation of this, the like discharge has been lately artificially procured by wounding the internal vessels of the nostrils; but without apparent good effect. Mr. WARE in the above mentioned treatise confirms this 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
turbith

turbith mineral with about a dram of the pulvis sternutatorius, or in place of that, the glycirrhiza, or saccharum commune. To these brief observations I have only to add, that I have lately seen a gentleman of near sixty years of age, for whom I had been consulted about three years before, who some time after having been let blood in the above mentioned way, and made trial of electricity without any apparent advantage, has recovered from a gutta serena of near two years standing, under the use only of a common collyrium; which as I cannot conceive to have had any share in the cure, conspires with a few similar instances to hold out ground of encouragement to other sufferers, sufficient to prevent despair, under this melancholy disease.

I SAY nothing in relation to the cure of the cataract by a surgical operation, either by extraction or depression, except it be, that neither of them is adviseable for infants unfortunately born with the disease, till they have attained to five or six years of age.—How far the medical reader may at any time be disposed to make trial of the means for the dissipation of the cataract hinted by Mr. WARE, will, probably,

bably, depend upon some further information with which he may favour the public. In the mean time surgical readers will do well to consult the above mentioned treatise for some very excellent practical observations on the mode of extracting the opaque crystalline.

The STITHE, or STYE.

THE stithe is a small inflamed tumour on the edge of the eye-lids, 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, or forms matter, of a thick, or cheefy 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 eye-lids; and the matter being inclosed in a hard cyst, or bag, 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.

ALL that is necessary to prevent the returns of this temporary blemish, which greatly
weaken

weaken the eye, is to touch the little abscess, as soon as it breaks, with the caustic called *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 fisthes are small, or hang by a very narrow base, they may be safely cut off, or be 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. Should it arise from indurated wax, it will be proper to syringe the ears
with

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 I have found very frequently successful.

Rx. Olei amygd. ʒss Ol. Succini rectific. gtt. xx Spir. Camphorat. ʒss. Tinct. Castor. ʒj misce et instill. guttas iv vel vj calefact. aur. affect. noctè et manè.

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 ether, 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. I have, however, lately fallen upon a method that has been universally successful by very simple means, consisting only in adapting an entire covering to the ear, made of any adhesive plaister spread upon thin

VOL. II. G leather,

leather, so as compleatly to exclude the external air. The plaister 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 it not unfrequently happens, that the cause of deafness lies in the auditory nerve; and to such cases also, electricity is particularly adapted, either through the meatus auditorius externus, or the Eustachian tube, as lately recommended by Mr. BLIZARD. 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 perfectly, especially females; one fortunate instance of which happened very lately.

CANKER *of the* MOUTH.

THIS is chiefly a complaint of children, being rarely met with in adults; is often talked
of

of by nurfes, and is ufually as trifling as any. It has, indeed, been faid by fome writers to prevail very much in *England* and *Ireland*, and to be often a ferious complaint. Such a diforder, if it really be canker, may be treated as under the next article ; but the common canker is rarely troublefome to cure, except it be amongft very poor people, where a great number of children are crouded together.

It fometimes makes its appearance in the month, at others, about the time of teething ; and frequently at the age of fix or feven years, when children are fhedding their firft teeth, and the fecond are making their way through the gums, which are covered with little foul fores, extending fometimes to the infide of the lips and cheeks. It feldom requires more attention than was mentioned under the article of dentition, any mild aftringent application, and keeping the body open, ufually effecting a cure ; or if it does not, and the complaint makes its appearance at the time of teething, it will generally go away as foon as the teeth are come through.

THE worft fpecies of this complaint that I have happened to fee, has been during the fecond

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 sores, and small apertures will be formed, communicating from one part to another, accompanied with an oozing of a fetid, and sometimes purulent discharge.

If the stumps of the decayed teeth can, in this case, be easily 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.

R. Bol. Armen.

Gum. Myrrhæ

Cort. Peruv. pulv.

Cremor. Tartari āā ʒi.

Mel. Rosæ q. s. misce, ft. Pasta.

R. 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

IF no considerable change for the better should take place, in a week or ten days, a dram of alum may be substituted in the place of one of the drying 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 belly 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.

It appears to attack children from two, to six or eight years of age; usually 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 appearance 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; and only such as correct putrescency, and support the strength, appear to be of any use. A few drops of the muriatic acid, therefore, taken inwardly, in an infusion of red rose leaves, 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.

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 the parent, and sometimes perplexed medical men. Of this kind are affections of the breasts in female children, 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

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instances,

instances, sharp points may be felt, which are very painful when pressed. The hardness is at the bottom of the breast, 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. 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 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 removed the complaint. Yet no evil consequence, in any instance under my eye has ever ensued, in patients at the above mentioned age; nor have I heard of any from other practitioners, though it has been seriously apprehended.

THE result of the whole has shewn, that the remote cause of the complaint has originated
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in an irritability of habit, in connexion with that distention of the parts, which at a certain age, nature always promotes; and accordingly is found taking place at the time, or some months after the pain and hardness have been noticed.

THE design of this chapter being to hold forth encouragement to parents and others, from the probable harmless nature of the complaint, it were needless to point out the means, that on different occasions, have been, sometimes perhaps 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.

ABSCESS *in the* HYPOCHONDRIUM, *or* LOWER
BELLY.

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,
and

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 to the touch.

THE intentions of CURE are directed to the pain, fever, and state of the bowels. To these ends the antiphlogistic, or cooling 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, oil of almonds 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 a decoction of white-poppy heads, 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 suppuration being between

tween the muscles and the peritoneum, there will not be much discolouration of the skin, as is 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 cavity of the belly, 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.

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, or slow inflammation, and is often occasioned by bruises, strains, or
lying

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, only for the sake of warning parents of the danger of so insidious a complaint, and just marking the outlines of a practice which has proved the ofteneft successful; the limits of this work constraining me to be brief on surgical cases.

A SLIGHT lameness and shortning 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 tenderness about the origin of the psoas muscle, manifest upon a careful examination of the parts.

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THE first indication is to procure a resolution, if possible, upon the approach of these first symptoms, and before those of a hectic nature supervene ; but unfortunately, they are too often over-looked, or mistaken in the beginning.

WITH a view to a resolution of the inflammation, recourse should be had to bleeding by leeches, and cupping ; and 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, it has been lately said, 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 very large, one or more setons should be employed, in order to prevent the matter being

ing 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 an injustice to the public not to notice, that a more important improvement has been made by Mr. ABERNETHY, which I believe is 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 little 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.

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.

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.

MORBUS COXARIS.

A very similar, and equally dangerous disease with the above, 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

and the abscess always gives way near the region of the joint. The preceding symptoms and treatment, 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 the disease occurs from infancy to manhood, and often derives its origin from trifling accidents. It is mistaken for rheumatism and sciatica in adults, and in children, for indolence, accidents, and worms.

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 doth 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 has been said, that it is often at its first appearance mistaken for other disorders, accordingly,

ingly, 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.

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 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*.

† See A short account of his life, by Mr. EARLE.

* For a full account of these abscesses, readers are referred to a Treatise lately published by Mr. E. FORD.

ABSCCESS *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.

WHITE SWELLING *of the* JOINTS.

I SHALL be equally brief also on this article, the disease being well known by every surgeon,
and

and entirely above the management of parents ; my intention in naming it being only to mention from experience a few remedies for this dangerous complaint, that have been found successful, in young subjects, if had recourse to in good time, and before any 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. In a few instances that I have known, electricity has had an immediate, and wonderful good effect, even where the joint has been considerably enlarged, the pain very great, and the child incapable of straightning the limb.

PALSY *of the* LOWER EXTREMITIES *with* CUR-
VATURE *of the* SPINE.

THIS complaint has been of late years so thoroughly announced, that it should seem unnecessary to enter into a minute detail 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 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

vious to the debility taking place: but this is not universally the case; though it is, indeed, probable, there may be some predisposing cause, without which no common strain would induce so much mischief in a part continually disposed 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,

ties, 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 properest 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, and consists only of a large issue or seton placed on each side the curve, at such a distance as may prevent their bursting into one. Where the curvature comprehends three or more vertebræ, or joints, the seton may be preferable to an issue, but if the latter be on any account elected, I should advise its being made by the knife rather than a caustic; not only as being less painful, but also for the very effect Mr. POTT
has

has disapproved of, I mean, the consequent inflammation before there has been time for suppuration to take place. It may, indeed, be doubted, whether the benefit derived from the issue may not arise rather from the inflammation and stimulus produced on the surface, than from the discharge, to which, nevertheless, Mr. POTT solely attributes the cure*. In a recent

* IT has been a common idea, that the discharge furnished by an ulcerated surface is the source of all the benefit that may be derived from abscesses, unless blistered surfaces be an exception; in regard to which, physicians have usually considered the stimulus produced by the cantharides as the chief mean of benefit, especially in cases of great local pain and inflammation. It is, indeed, matter of some surprise, that thinking men have not more generally adopted the like idea in regard to other inflamed surfaces, whether induced by natural or artificial means. It should surely seem, that *that* state of the system, or of the parts, by which suppuration is induced, is more likely to be the occasion of benefit, than the discharge of a large portion of the richest animal juices, which is but the consequence of the other. Thus, in most critical abscesses, the fever is found to abate as soon as the external inflammation takes place, and the patient instead of being afterwards benefited by a copious discharge is not unfrequently hurried by it into a fatal marasmus, when the abscess has been large, or improperly seated. There may be

recent case, however, and a very unpromising one, in an infant ten months old, a very sensible relief was afforded as soon as the inflammation took place, and before any suppuration appeared; and though the child had been many months a cripple, with loss of health and appetite, unable to support its head, and the sternum very much distorted, the relief was so great in one week after the incisions were made, as left no room to doubt of a perfect recovery; which accordingly took place a short time afterwards, without any deformity remaining. Had Mr. POTT advanced any other reasons for the preference given to the caustic, or merely asserted such preference, I should readily have submitted to the great experience he has had in this dreadful complaint; but though I may very possibly be mistaken in my reasoning, it appeared a duty just to state it, as well as to notice this instance in point, in a disease of so much importance.

other instances, indeed, in which the suppuration, and even the great quantity of the discharge, may be beneficial to the system; but it is probable, that this is not in general the case, and much less in the present instance, which is attended with symptoms of general debility.

THE

THE issues should be kept open till the patient perfectly recovers the use of his legs, or even a while longer, at least one issue, which ought not to be dried up till the patient can walk firmly alone, and shall have recovered all the height which he may have lost in consequence of that stooping which the disorder had induced.

IN addition to the use of these means Mr. POTT has suggested those of cold-bathing, frictions, and the bark, or such like; but I have myself never seen any benefit from any thing where the issues have failed, which I have found efficacious where no other remedy has been made use of. After the recovery, however, if the patient be of a scrofulous habit, sea-bathing is peculiarly indicated.

THE *moxa* has been successfully made use of in one instance, by Mr. GIMÈS*, 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 a repetition of the caustic might have proved equally beneficial.

* *Jour. de Med. Fev. 1788.*

DEBILITY *of the* LOWER EXTREMITIES.

THE disorder intended here is not noticed by any medical writer within the compass of my reading, or is not so described as to ascertain the disease. It is not a common disorder any where, I believe, and seems to occur seldom in *London* than in some other parts. 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; and I have myself never had 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.

It 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 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

served is a debility of the lower extremities, which gradually become more infirm, and after a few weeks are unable to support the body. There are no signs of worms, or other foulness of the bowels, therefore mercurial purges have not been of any 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 to the legs and thighs, have been chiefly depended upon ; though there is no appearance of an enlargement of any of the vertebræ, or joints of the back, nor of suppuration in the external parts, and therefore no resemblance to the inflammation of the intevertebral 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

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 some very long illness, and has continued a year, or more; during 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*.

Disco-

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

pected 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 as yet, I have said, I am not able to state their certain effects.

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 in this work.

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

doubted by some practitioners, as well as their unpleasant appearance been 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 to the cure of the complaint. The only care required, is, that the irons be made as light as possible, and be properly adapted,
and

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 made by Mr. JONES appear to be the best.

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.

BUT if the injury extend to the hip and contiguous bones, it will not be manifest at the time, and 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.

PARON-

PARONYCHIA, or WHITLOW.

MANY young people are 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 therefore introduced here chiefly with the design of recommending a prophylactic, or mean of prevention, 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, may be felt.

Take of Camphorated spirit, four ounces,
Water of acetated Litharge, two drams,
Tincture of opium, half an ounce.
Mix them together.

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 suffering

* See PRINCIPLES of *Surgery*, by Mr. PEARSON.

the matter, gradually, to make its own way to the surface ; which is likewise always attended with much mischief to the parts.

I SHALL only add, that in the commencement of the tumour and pain, nothing can be more improper than the recourse so commonly had to a bread and milk poultice ; instead of which, one made with the water of acetated litharge is abundantly preferable.

FURUNCULUS *or* BOIL.

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. 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-plaister) and a bit of yellow or black basilicon put every day into the hollow, as soon as the boil breaks, it will be properly digested, and
the

the core, as it is called, be brought out. It is sometimes for the want of this, that another boil forms in the neighbouring parts, or the child is teased with sore eyes, or some humour, as it is termed, on the skin.

Two or three doses of purging physic should be taken as soon as the boil is healed.

CHILBLAINS.

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

cially 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 should be turned black, which they often will, when they are what is called frost-bitten, the patient, especially if a young child, must be confined to the bed, as long as the weather is severe, and the parts continue discoloured. But my intention is to treat chiefly of flighter attacks; on the first appearance of which, known by the heat, itching, redness, and swelling of the heels, toes, or fingers, country people apply warm wood-ashes between cloths, or rub the parts with mustard and brandy, which if done in time will frequently both prevent their breaking into sores, and entirely remove the complaint. For the like purpose, rubbing the parts with a soft brush, or soaking them in warm water in which a hot poker has been two or three times quenched, and afterwards rubbing them with soap, or salt and onions, are good remedies; or embrocating them with the soap-liniment, or with camphorated spirit, to two ounces of which

which may be added a tea-spoonful of the water of acetated litharge. But I have for some years, experienced the good effects of far simpler means than any of these, and which I have hitherto never found equalled by any of the warmer remedies; and is nothing more than the cerate of spermaceti spread on a large piece of thick, doubled lint, to be applied as soon as the extremities begin to itch, or be painful: or if this should not very soon be of use, both embrocating, and covering the parts with compreffes wrung out of the aqua ammoniæ acitataë, 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, oil'd-filk gloves, which is the best preventive both of chilbains and of chopped hands, that has been hitherto known. But if the feet are usually the affected parts, the heels only may be co-

vered by a piece of washing-leather, and over this a piece of oil'd-filk, secured round the insteps, and worn day and night during the cold months; and should be taken off only for the purpose of 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 in grown people, at the end of *September*.

AFTER having attended great numbers in this complaint, I am satisfied that this kind of sore requires applications somewhat more invigorating, being a species of mortification; 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

long after the breaking up of a hard frost, whilst they have 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 myrrhe; 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 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 are 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 is required.

For some years past, I have had strong proofs of the good effects of electricity in chilblains, both as a remedy and a prophylactic, or preventive, especially in very old people, many of whom are afflicted with them every winter.

BURNS *and* SCALDS.

BURNS 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, ink, 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; carefully avoiding the use of olive-oil, too frequently had recourse to. As soon as it is possible to send to an apothecary, the following should be procured, and used in like manner.

Lime-water, a pint, brandy, two ounces, water of acetated litharge, half an ounce.—Where ice can be conveniently applied, and renewed day and night, it will be found one of the best early remedies in very bad cases.

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 TURNER'S cerate, and green ointment of elder; 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

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.

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 takes some time in dissolving, and as it requires a certain proportion of boiling water, the lotion cannot be made cool enough for immediate use by the addition of the proper quantity of cold water. A remedy, therefore, more convenient, and perhaps more efficacious, which if not always in the house, may in every large town be speedily procured, may be made of olive-oil, cold water and ley of kali. 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

* Two table spoonsful contain about an ounce.

† A tea-spoon contains about a dram.

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. Should a person be scalded all over, and be immediately put up to the chin in a cold-bath of this kind, and the head, at the same time, be frequently immersed, or well washed with the liquor, I believe very little injury would ensue.—Whatever sores may be formed, should be treated afterwards according to the foregoing directions.

LUXATIONS *and* FRACTURES.

INFANTS are not only liable to these misfortunes by a fall from the lap, but the bones, or joints, may be sometimes 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 nothing 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

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, indeed, never known the accident happen. Should it, however, take place, either at this age, or in older children through some violence, 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 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 perhaps happen more frequently. The bones are yet but little more than gristle, and if strained beyond a certain degree, are easily bent, or even broken. The former is very readily restored, but I shall
be

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 leg; 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 adhesive, or of the soap-plaister, 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 apposed 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,

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 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

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 is 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 easily be 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

though they may 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*, or little bridle, that adheres to the under part of the tongue. The child will suffer so very little, however, in the operation, that when it is carefully done, it will be attended with 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 scissars. 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,

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 edition, as well as describe an instrument contrived for suppressing the bleeding.

SUFFOCATION *from* SWALLOWING *the* POINT
of the TONGUE, *and* HEMORRHAGE.

THE occasion of this accident has been mentioned: it is therefore only necessary here to notice the 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 attributed by those, who are strangers to the complaint. The infant appears greatly agitated; the face turns black; and unless these symptoms soon

VOL. II. K disappear,

disappear, the child goes off in a convulsion. But if they are presently removed, the infant is as suddenly well; but they generally return again, and have in several instances proved fatal.

Mr. PETIT * has perhaps the credit of discovering the true cause of the complaint. The remedy consists in nothing more than 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 hemorrhage. The means consist only of a piece of ivory, in the form of a short

* *Memoires de L'Académie des Sciences.*

fork ;

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.

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 ; but it is not worthy of notice, as an infantile disorder, under that class of complaints. It occurs pretty commonly, indeed, in infancy, but seldom requires much attention, as it frequently 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, it indicates a necessity for having recourse to the absorbent powders. Should it, however, con-

tinue for a length of time, the labdanum plaister 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 surprize, 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 only 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-spoonful of vinegar seldom or never fails in the accidental hiccough of youth, or of very old people.

SNEEZING.

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. 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 has already been spoken of as 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 been attended to by any writer of reputation, nor leave such readers at a loss, who being unacquainted with the distinction between mere symptoms and diseases, might at any time be needlessly alarmed by it. 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. It may, how-

ever, in conjunction with other causes, give rise to the following complaint in older children.

BLEEDING *of the Nose.*

I MEET with this complaint also amongst old writers, and 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 hemorrhage 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, or fulness of blood, 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, and to compress the nostril from
which

which the hemorrhage flows ; also to apply some thing cold to the upper part of the back, and confine the patient as much as may be to an upright posture. Should these little remedies fail, the head may be bathed with cold vinegar and water, and the nostrils be stopped up with doffils of lint, which upon urgent occasions must be dipped in warmed oil of turpentine, or other styptic liquor, and must extend to the posterior aperture. The last means will almost always succeed ; but if otherwise, some blood should be taken from the arm, if the pulse does not forbid ; the feet be bathed in warm water, and the body kept open by manna, and cream of tartar ; and the patient should live for a long time pretty much upon whey, vegetables and milk, at least, he should not dine wholly upon animal food.—In the intermediate days of purging, the testaceous powders, and tincture of catechu may be taken ; and in some instances the bark will be proper.

HEMORRHAGE *from the* NAVEL.

THE navel of new-born infants is liable to several disorders, some of which are of considerable importance ; but I speak in this chapter only of the slighter ones. Of these, one is an oozing of blood from the part, after an unkindly separation of the cord, and is owing to the shooting up of a soft fungus, which prevents the skin from covering the divided vessels in the manner it otherwise does. This rawness, however, is not always attended with hemorrhage, as will be noticed in the next chapter, but when it is so, the bleeding has sometimes continued for several months, and in some instances, in such quantity as to prove alarming to the friends of the child, lest it should in the end be injurious to its health. The little vessel from whence the 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

bleeding for a time ; but it has always returned. Nothing further, however, is necessary, than to adapt a proper compress, and secure it by a sticking plaister and bandage ; which should be continued for two or three weeks ; or it may, probably, be restrained merely by a small dossil of lint, and cross strips of sticking plaister applied in the manner directed for the rupture at this part : but I have not had an opportunity of trying it since I have been acquainted with that mode of applying them.

THERE is, indeed, another kind of hemorrhage 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,

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 rarely been mentioned by writers, nor probably have all the affections to which it is liable been known to them.

THE separation of the cord is the work of nature, whose operations are usually performed in the best manner, nor is it 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

disposed 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, as will be noticed in a subsequent chapter, a disposition to a rupture at the navel. 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 compound water of acetated

tated litharge, or of a decoction of the bark ; and the raw part touched, now and then, with the argentum nitratum, blue vitriol, or pulvis lapid. 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, and then has usually dried up suddenly ; until which time the infant has seldom thriven well. In some recent instances, however, I have enclosed the raw part in a ligature, when it has not been too much retracted within the hollow of the navel ; and this method has removed the complaint in a couple of days.

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 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 but one, that I have known any thing of, having proved fatal, not so much from the local affection, or tender age
of

Unkindly Separation of the Umbilical Cord. 89

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, lately 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.

UNKINDLY SEPARATION *of the* UMBILICAL
CORD.

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.

sistance. 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.

THE infant was born at the hospital, and the funis tied in the ordinary manner, about three inches from the child's belly. 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 afterwards 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 poor woman being called to a place as wet-nurse

to

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.

HERNIÆ, *or* RUPTURES.

RUPTURES may take place in different parts, but they usually appear at the navel, or the groin. The rupture at the navel 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 navel-hernia 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 hemorrhage of this part, by adapting a pyramidical compress, made of round pieces of good sticking-plaister, spread upon thin leather, with pieces of card placed between them ; or what is more easily prepared,
and

and is adapted to poor people, a piece of beeswax 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 waste ; 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 Mr. SQUIRE's elastic bandage, which if this rupture be complicated with the ventral, or belly hernia, becomes the more necessary ; and fitting 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, without the help of a surgeon, and generally in three or four months. A short time, however, before the present edition went to the press, Mr. KELSON, an ingenious surgeon at Seven-Oaks, informed me that he has long been in the habit of bringing the parts together by means of three or four strips of adhesive plaister, applied star-wise, across the navel, which he renews once in a fortnight ; and assures

fures me that this method generally succeeds, in a short time. I have had yet only four opportunities of making trial of it, and all too recently to decide on its effect. But the contrivance appearing to me simple and well adapted, has induced me to announce it; and should it be found generally to effect a cure, it will be convenient at least to the lower class of people, and such as live at a distance from steel-truss makers; to whom a recourse is sometimes ultimately necessary.—It has been said, that 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 navel-string; on which account, nurses ought to be particularly careful in such instances, and keep the part more than ordinarily confined.

RUPTURES at the groin are of more consequence, yet may be safely left without a bandage, especially as the cold-bath alone generally cures them when they happen to children before they go alone. In early infancy, there is likewise some difficulty in retaining the truss on the part, and it is continually liable to be wetted. Should a rupture, however, be very large, and the infant unusually fretful and cry-

ing, recourse may be had to a steel-truss; to which it will be necessary to pay some attention, lest it slip out of its place, or the rupture fall down, and be bruised 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 as improved by Mr. SQUIRE, 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. It will be sufficient 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 appearances of tumour and heat be discovered, the assistance of a good surgeon should be immediately sought, who

who will need no directions from this work. But if such help be at a great distance, a purging clyster with oil may in the mean time be thrown up; and a proper dose of castor-oil, or of the purging salt be immediately taken, with a few drops of laudanum, suitable to the age of the child. When stools have been procured, a poultice of bread and milk, or of the acituated water of litharge be applied to the part, only very moderately warm.

HYDROCELE, *or* WATERY-RUPTURE.

THIS is a distention of the scrotum of a nature simlar to the hydrocele of adults, and when it falls to the share of infants, I believe usually appears at the birth. It is frequently mistaken by midwives and nurses for a common rupture, who therefore advise a linen bandage to be applied in the ordinary manner. It is, however, easily distinguished from that complaint, by the tumour being transparent; without pain; and from not retiring upon pressure, nor being increased by the crying of the infant.

I HAVE said it more commonly makes its appearance at the birth, and that the tumour does not

retire upon pressure, because I think I have lately seen some 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 above mentioned, 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 greatly diminished. There was, nevertheless, near a table spoonful (as I imagine) of water in the scrotum, which from this time was distended in different degrees, as the water happened to retire, more or less, through the rings of the muscles, which I apprehend must have been preternaturally open; though no portion of the caul, nor intestine, I believe, ever descended. The complaint, however, disap-

* Mr. *Le Febvre de Villebrune* met with it in a child of twenty-two months old.

peared 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 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 water of acetated ammonia 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 lately 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 gotten 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, *or* WINDY-RUPTURE.

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

pound 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 that parents should consult some medical person, whenever they suspect a rupture.

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, or attempts of the nurse to force the testicles into the scrotum. If any thing of this kind should be necessary, it ought to be done by ano-

ther hand. 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. 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 embrocations and cooling poultices, made of the compound water of acetated litharge.

TUMEFACATION of the PREPUCE.

THIS little complaint, like the hydrocele, arises from extravasated water, and is a partial anasarca, or dropsy of the skin, and if it be not attended with inflammation, nor owing to a stone sticking in the passage, as it sometimes is, it never proves of any consequence, and is mentioned chiefly because it is always alarming to parents. It is sometimes preceded by a
copious

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.

THE part may be washed frequently with the compound water of acetated litharge, 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 falling down of the internal coat of the lower bowels, (this coat 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,

els, 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, or needing; 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 by an astringent lotion. To this end, a compress of cotton, or soft tow, wrung out of the dregs of red wine, to which may be added a few drops of the water of acetated litharge, 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

expedient to have the part supported at such times, by a servant placing a finger on each side the gut: but this caution 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 become necessary. These may be made of a decoction of oak-bark, which must sometimes be rendered more powerful, by the addition of a little 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 the *aq. lithargyri acitatae*, with five or ten of the *tinct. 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 impediment to the re-ascent of the bowel.

CHILDREN

CHILDREN affected with this complaint should always 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. GOOCH'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 female infants have sometimes such a discharge from the vagina a few days after birth, which appears to be of no 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 discharge, resembling the genuine

ine 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.

THIS is also no uncommon complaint in children of three or four 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 compound water of acetated litharge, 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 acitatae, spread upon linen, or lint.

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,

are, indeed, instances of little girls, not more than six years old, being injured, and it is 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*.

Dis-

* Induced by motives of humanity, I hope I may be permitted to add a word or two more on this subject, to professional readers; whose prudence and information 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 tumour and other appearances of violence offered, about the furca, and in other instances, with an abscess in the labia, that had the patient

DISCHARGES with the worst appearances are frequently removed in eight or ten days, merely by the treatment above recommended; but I have 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 may 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 a decoction of the bark, with balsam. copaibæ, ovi vitel. solutum; which is also an admirable medicine in the fluor albus of adults.

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.

*Of 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 some suitable antidote against the bite, or sting of venomous insects, particularly the wasp, gnat, and other flies; especially as they happen frequently to children in the country at a distance from medical help, and often alarm parents exceedingly. 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 a 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 eye-lid, the inside of the lip, or ear, very troublesome symptoms
may

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,

Of camphorated spirit, a table-spoonful,
Of distilled vinegar, and of laudanum,
each a tea-spoonful;

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, I believe, 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 half an hour at a time, every three or four hours, as long as may be necessary.—For the highly venomous 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.

UNDER the painful impressions of an awful accident that happened in my own family, some years ago, at the time I was engaged in this part of the work, (though I thank God, the alarm terminated happily,) I cannot avoid dropping a few words on the envenomed bite of *morbidly* ENRAGED ANIMALS. It is not 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: since dwelling long on this unpleasant subject would ill accord with a tract of this kind. Nor is it my design to propose
any

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, and seldom falling in the way of any but medical people, (who are often consulted too late) 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 both; which if duly and timely effected, cannot fail to prevent every evil apprehended†. But whenever 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

† Since the former edition 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.

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*.

It may not be superfluous to subjoin the judicious directions of the faculty in *Paris*, lately 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 flaver as much as possible.

LET the wounded flesh be then instantly cut out with a sharp instrument, or cauterised with hot iron, or with spirit of nitre, or vitriol, commonly known by the name of aqua fortis, and oil of vitriol.

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.

* See *Histoire et Memoires de la Société royale de Medecine*. Année 1783. 2^{de} partie.—TISSOT. DR. LAYARD, &c.

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, or dread of water, makes its appearance.

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, become really infected. Fortunately, the clothes sometimes prove a defence, by wiping 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 effects attending 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.

I SHOULD here close the account of Diseases, did I not meet with several others recorded by ancient writers, which it may therefore be proper just to mention. They are noticed in the

* Indeed, a very recent, and well-known, melancholy instance of the uncertainty, and destructive nature of this dreadful poison, might sufficiently caution every one from neglecting any suspicious case, or trusting to inadequate remedies.

works of *Rhazes*, *Paulus*, *Oetius*, *Fabricius ab Aquapendente*, *Celsus*, *Primerose*, and a few less ancient writers. Of some of the diseases there mentioned, I 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. Among the diseases recorded by these writers are, *Lentes*, *Hispiditas*, *Achores*, *Favus*, *Pforophthalmia*, *Impetigo*, *Ranulæ* or *Batrachos*, *Seriasis*, *Paristh-mia*, *Parulis*, *Instatio*, *Crinones*, *Malum Pilare*, *Phthiriasis*, *Hydroa*, *Macies*.

THE six first are affections of the skin, or of the eye-lids. *Achores* and *Favus* are a sort of *Crusta-lactea*, or milk-blotches, 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 honey-comb, has been by some termed *Achores*, when the discharge has been unusually acrimonious. *Pforophthalmia* is con-

fin'd to the eye-lids, and is so named by CÆTIUS, 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 included 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 in infants, and indeed is mostly an endemic complaint. I have seen it, however, in this country, in adults, of the size of the largest walnut, and it then becomes very troublesome, both in speaking and deglutition. When large 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

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 *σῆσις*, *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 often-times to mortify within three days; but if it should not, the child, it is said, will recover*. I have never met with any thing 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 brain appearing as if in a state of mortification, and smelling exceedingly fetid. *Paristh-mia* is an inflammation of the tonsils, or throat, but is certainly not common in this country;

* Perhaps *Hippocrates* may allude to this disease, *Aph.* 50. sect. vii. "Quibus cerebrum fideratum est, intra tres dies interiunt, si vero hos superaverint, sani sunt."

it is hinted by HIPPOCRATES in his book *de Dentitione*. *Parulis*, a complaint described by PAULUS as a painful tumour about the gums; RHazes calls it a blister in the mouth. *Inflatio* is a distention of the skin from wind or water after a child has been reduced by long illness. *Crinones*, or *Grubbs*, is little known as a disease, I believe, in *Europe*. It is, probably, 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 by 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 com-

* ASTRUC. LIEUTARD. PEACHY.

plaint 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 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 a few drops of the *aqua kali pp^t*. two or three times a day, in a cup of *sassafras-tea*, or milk and water.

A com-

A COMPLAINT sometimes confounded with the former, is that called *Morbum pilare*, and is supposed to be spoken of by HILDANUS, as sadly tormenting one of his own children. It is also mentioned by PAREY; 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 pediculofus*, 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 the hair to 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 be ineffectual, a very
small

small quantity of the calx hydrargyri alba may be joined with it. Some people have strongly recommended an ointment made of parsley-seeds 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 lactentium*, 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 shall have occasion to notice more at large, in the second part of this work. This disorder is, however, a true atrophy, or marasmus, from whatever particular 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.

I HAVE now gone through all that have been usually ranked amongst the disorders of in-

* See HARRIS.

fants,

fants, 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 compleatness 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 about the heart.

IMPERFECT CLOSURE *of the* FORAMEN OVALE,
and CANALIS ARTERIOSUS; *with other* PRÆ-
TERNATURAL CONFORMATIONS *of the* HEART.

THESE morbid deviations appearing in different parts†, have in all the same tendency, viz.

* Should the intelligent reader recollect any disorders of consequence that are overlooked, or conceive there are any material mistakes in the description or treatment of others, and would be at the pains of making the author acquainted with them, his strictures will be thankfully received, and duly noticed, should the author live to accomplish the intention hinted in the preface.

† See *Morgagni, Epis. 17. Art. 12. Lond. Med. Journal* page 4. and *Med. Observ. & Inq. vol. vi.*

in

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 unborn-fetus. 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; 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 attempting 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, in the two latter instances, 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

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 navel-string*; 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 fetus. 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 diffi-

* 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.

culty 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 vessels, auricles, or ventricles, or wherefoever 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. These take place soon after

birth, and the discolouration is increased, and attended with difficulty of breathing, as often as the child is any wise agitated, who is not at all relieved by procuring stools, by the warm-bath, or any other mean 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 sink very soon under the complaint, of which I have seen one instance only a few months since; but if the aperture be in the inferior parts of the heart, infants may survive for months, or even for years. A recent instance of which, with an accurate account of the disease, is recorded in the third vol. of the *Medical Transactions* of the College. 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 furcharged 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

fore the patient sinks under the disease, the symptoms are aggravated, and almost the least motion endangers suffocation.

ENCEPHALOCÉLE, or HERNIA of the BRAIN.

MANY infants come into the world with various parts imperfectly formed, as well as the heart, 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, such fetuses fall under the class of Monsters, and being never 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 *Monf. Ferrand* for an accurate description of this complaint, given in the 5th volume of the *Memoires de L'Académie royale de Chirurgie*.

THE Encephalocèle 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 futures, 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 *Monf. Ferrand*; and no more resembles the true encephalocle, 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

by the tumour not retiring upon pressure, nor being attended with any pulsation.

THE Encephalocoele is, indeed, easily distinguished from them both, 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 adapt a rational and effectual remedy, which consists only 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 will fill up the vacancy 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

pression 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 new-born infants, which it were improper entirely to pass over. One kind is occasioned by long compression in the birth, is of different sizes, and the skin is always discoloured; but these tumours seldom require much attention, as they frequently disappear in a few hours. If large, it is common to bathe, or foment them 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 having been conceived of by many. On the other hand, 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
discrim-

discrimination, however, is sufficiently obvious, such assistance being required 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 Encephalocoele, 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 ap-

pearance, 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 most easy 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 compleatly, until the end of the month. In some instances, it begins to lessen in six or eight 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 vinegar, crude sal ammoniac and camphorated spirit should be made use of, with a gentle compression of the part, as well as keeping the bowels properly open.

LYM-

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,

pated, and will be noticed below after the Spina Byfida, to which likewise they bear a considerable resemblance.

SPINA BYFIDA, 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 dropfy, and BERTRANDI*, a hernia of the spinal marrow; the medullary structure being in some instances destroyed, and a spongy substance filling up the cavity of the membrane, and protruding through the byfid spine.

It is remarkable, that this complaint, or malformation, though now every where to be met with, was not described, as I believe, be-

* *Opere di Ambrogio Bertrandi. Tomo ij. Torino 1786.*

fore 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 byfida.

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 my former editions of the present 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 having methodically collected and arranged them, nor any since MORTGAGNI 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 ma-

* *Tulpæ Observationes Medicinæ.*

ny 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 on 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 proposed, 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

VANDER WIEL, and MUYS¹, the one in the year 1682, the other in 1695, and about the same time BONETUS²; but these throw very little light on the subject. RUYSCH treats more largely upon it, and it has been noticed, calls it a dropfy of the spinal marrow, as the hydrocephalus is of the head, or brain, and with some propriety, as will presently appear. BIDLOO³, physician to King WILLIAM the third, and SALZMANNUS⁴, his cotemporary, have noticed the disease. RUTTY⁵ gives a good anatomical account of it. TITSINGH wrote upon it in 1733⁶. ZECHAR. PLATNER⁷ more fully in 1745, and ACRELL⁸ in 1748. VAN SWIETEN and MORTGAGNI wrote, it is well known, nearly at the same time; the former of whom copies TULPIUS and RUYSCH, but the latter quotes

¹ *Praxis Medico-Chirurgica rationalis.*

² *Sepulch.*

³ *Bidloo Opera Exercit. 7^{ma}.*

⁴ *Dissertatio de quibusdam tumoribus tunicatis externis.*

⁵ *Philosoph. Transf. Abr. vol. vij. inter annos 1779, 1783.*

⁶ *De Spina Byfda.*

⁷ *Platneri Institut. Chirurgicæ.*

⁸ *Memoirs of the Royal Academy of Sciences, at Stockholm.*

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, (as he terms it) of the lower extremities; but not so bad as to disable him from walking. Dr. MONRO, in his treatise on the dropfy, 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.

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 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 sa-

* *Surgical Cases*, 1750.

† *Dissertation sur la Sensibilité de la dure mere*, &c.

‡ *Opere di Ambrogio Bertrandi Tomo ij*, Torino.

§ *Nesologia Chirurgica*.

crum, 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 that I have met with; though such fetuses 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 an 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

* *Wepferi Observationes.*

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 distinctly 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. MUYSH 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 water, or lymph. This is, probably, small at first;

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 fetus of about five months growth, where the bone (the os sacrum, as yet, indeed, in a cartilaginous state) was compleat 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 the womb, 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, as is sometimes the case.

FROM what has been said, as well as from a similar disease being occasioned by internal in-

juries 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 distension 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 by 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, LAUTH has very properly defined the disease to be, *Aqua in Specu Vertebrarum collecta in Infante, Vertebrae 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,

* *Traité de Mouvement musculaire; de la Sensibilité, de L'irritabilité, &c.* 1765.

and

and at others, the water rises a little higher in the vertebral column; and hence RUYSCH has considered this disease as a proper dropfy 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 MORTGAGNI. The latter of these writers relates one of a child of four years of age, where a dropfy of the spine succeeded to an 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 byfida 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; agreeably 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, it has been said, 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

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 then gradually brought on 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 admission of air; which is known 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 this disease at the age of eighteen months.

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 MORTGAGNI ; but in this, the disease was not congenite. The means, however, 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 adviseable 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, it has been said, seldom surviving 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. At the same time, 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 consequence of firm pressure, an immense hydrocephalus formed by the

* *Praxis Medico-chirurgica rationalis*, 1695.

end of the fourth week after birth. And VAN SWEETEN, 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.

* See *Opere di Ambrogio Bertrandi*, tom. ij.

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, nor can be always previously ascertained, I should not think that 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. It is on this account, I imagine, that surgeons in this country have been cautious of making any attempts, and has induced me to state, as I have done, the result as given by foreigners.

FROM the general report of authors, therefore, as well as the result of my own experience, very 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 probable, owing to the relief

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 MORTGAGNI, 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 there, the water has again forcibly descended into the tumour on the spine.

IN the absence, 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 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: but the tumour in such instances, I apprehend, has been very small, and the children died whenever it has come

* See Ruysch.

† *Memoires of the Royal Academy of Sciences at Stockholm, Anno 1748.*

to the size it has more commonly acquired at the birth. 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 byfida, although I have known such means, as well as excision of the parts, effect a cure in cases very similar in form and appearance to this fatal complaint*, but without any deficiency of bone.

* See *Parenchymatous Tumours* in the next Chapter.

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 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 fit 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 generally conceived, always depending upon that circumstance.

PAREN-

PARENCHYMATOUS TUMOURS.

THE resemblance which some of these bear to the last mentioned disorder, render 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 to 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,

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 for 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;

R. 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

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 lately 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 part of the bone could be felt, nor the tumour, by pressure, be made to recede, I hoped it might be otherwise, and ventured to advise taking it off, as the only chance the infant had for its life. 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

quently the liver, is protruded, is very often met with in abortions in the earlier months; though less commonly in the full grown fetus. 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, there is, possibly, no actual deficiency of the muscular or ligamentous integuments, and much less 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 somewise drawn down by the vessels of the umbilicus which enter it, (possibly by some action of the fetus;) is protruded at the muscular ring in the linea alba, and falls into the umbilical cord; 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 hepartomphaloccele congenita*, by FRANCISC. HENRICUS ROCKHOLTZ, printed anno 1768.

THE case there related corresponds so exactly with the one I met with, and both the infants surviving 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

thy 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 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 that 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 four weeks, the discoloured integuments all sloughed off, and left a superficial sore of the size of a small tea-cup, 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 six-pence, 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 six-pence, 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 unfortunate infant, it has been said, fell a sacrifice about six months after birth, to another disease ; in consequence of which its body was afterwards carefully examined by Dr. MARSHAL. Dr. COMBE happening to hear of it, was present, and informed me, that there could be no doubt of the liver having occasioned

sioned 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.

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 dilation 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 ab-

domen. 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 immediately 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 successive expiration.

On the HARE-LIP, and other EXTERNAL BLEMISHES, or DISORDERS, supposed to be MARKS of the MOTHER.

THOUGH it be somewhat beyond the present purpose, to treat precisely on any surgical *Operation*, I shall beg leave to notice a circumstance or two relative to that for the *bare-lip*, which frequent opportunities of comparing the different success attending it, have furnished. I shall afterwards advert to some other equally common blemishes, if it were only for the sake of adding my testimony to that of a late writer*, who has in an able manner, though not

* Dr. HUGH SMITH.

with equal success, combated 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 *bare-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 tormenting suspicion alluded to, but still it prevails, though only to the injury of those who ought, for their own sakes, to be persuaded to the contrary. Every man long in business has known many instances of affectionate mothers, (for this needless distress falls only to the lot of such) who have tormented themselves for six or seven months together, 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 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 never been suspected by the mother*, unless now and then in a most 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

* Among several instances of such blemishes, 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 only notice, that the eye-lids, 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 a recent instance, the extremities were uncommonly ill-formed ; but the mothers of these infants had gone on to their full time, without having received any fright they could recollect, or suspecting any thing amiss in their children.

I should not, indeed, have ventured, even in a note, to have particularized such deformities, but on account of their
aptness,

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

aptness, and in the hope of preventing rather than creating fears and suspicions, in women of peculiar sensibility. For these children 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, I only wish Ladies to be persuaded, that such sights have not been the true cause of it, nor can such objects, therefore, contribute to the production of the like appearances another time.—In this view, I cannot help observing, that only a short time 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 this man oftener than any other, and that she could not avoid him walk whichever 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 the child was born free from the apprehended, or any other blemish.

has

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.—It is, however, the furthest from my thoughts to upbraid the sufferer on this painful occasion, or to tax any with a wilful giving way to suspicions, into which, I am persuaded, their feelings alone insidiously betray them. I wish only to obviate the influence of a sentiment that I take to be without sufficient foundation, 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 true 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 unmean-

unmeaning 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 false skin (so called) 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 in winter; the 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 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,

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 and mis-shaped.

THE laws of motion will also equally account for the mutilation, or want of parts, the growth of which is somewise interrupted; it being well known to anatomists, (and other readers ought in a view to this subject to be apprized of it,) 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, or of motion. If therefore a due proportion of nourishment be withheld from any part, its proportionate growth is suppressed, or its formation entirely prevented. Hence the hare-lip; the two sides of the face, which are said to be formed separately, being hereby prevented from growing together*. But whatsoever may be

* For further remarks on this subject, medical readers are referred to a Paper written by Mr. LUCAS of Leeds, in the *Memoirs of the Medical Society of London*, Vol. IV.

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.

THE instance so often adduced from the sacred historian * is, by no means, in point: for without adverting to the very peculiar natural 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 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 fact therefore, as before

* *Genesis*, Ch. 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 manner vulgarly conceived of.—For many critical and satisfactory remarks, however, on the above passage of holy writ,

fore observed, does not at all countenance, but directly contradict the hypothesis, there is the strongest reason for married women arguing themselves out of such fears, instead of reasoning themselves into them, and suffering a painful conflict for weeks, and months together. It will give me great pleasure if any thing I have advanced on the subject, 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

writ, (but unfit for quotation here) the more curious reader may consult a learned, anonymous tract, on the *Strength of the Imagination in pregnant-women*, written by a member of the College of Physicians, *Anno 1727*.

instances,

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. The upper jaw also, with the palate of the mouth, and even the uvula are sometimes divided. It would be beside my purpose, in this place, 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 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

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 take the breast 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, and the longer the operation is postponed, the better it is likely to succeed, and should, at least, be deferred till the child shall be four or five months old; the good effects of which I have lately seen in a child born at the Lying-in hospital. 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;

spoon ; by which children with this kind of hare-lip are obliged to be supported, they being always unable to suck. At this period likewise, the parts will have acquired a degree of firmness necessary to retain the needles, (as well as size that will admit of handling them to greater advantage ;) 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 that side 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.

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 fall 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. 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 compleatly successful. It is, indeed, some-
times

times necessary to repeat it; and it will be better to do so, than to destroy 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. 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 others 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 the advice.

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 may be effaced merely by compression, and others removed only by caustic or excision. Other blemishes consist of pendulous parts, and may 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 gristle 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.

BESIDE

BESIDE these, there are blemishes 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.

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,

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which

which being cut through, requires only to be kept apart for a few days, by a bit of fine lint.

THIS has been the usual mode of remedying this defection: but from a hint of Dr. DENMAN's, I have lately rejected the assistance of the lancet, as the parts may be 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 ill-formed. 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 defection proving no obstacle to the natural excretions. I have met with several instances of
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it in children from 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*.

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.

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, one should think, would be every way as proper.

* See Henrici a Mornishen *Observationes Medico-Chirurgicæ. Dresdæ, 1691.*

† Theodor. Zuingerus. *Basileæ, 1722.*

BUT more commonly the imperforate anus is a melancholy case, as it seldom allows of an effectual 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 defection is not very uncommon, I remember but one case of the kind in the *Lying-in* hospital, and in that 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.

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, however, that it ought to be postponed
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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 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 it against the os coccygis, for near 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
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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.

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

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;

fide; 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 little sore shall be healed; or sometimes by dividing the upper part of the prepuce, as in the periphimosis; which I have found successful in a late instance.

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, or outer circle, 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.

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 it be consequent to fits, it is not so likely to be removed. The means I
have

have to recommend are, indeed, very simple. A very important one, however, is to apply a piece of sticking-plaister spread on some bright-coloured silk, in such a position, either on the temple, or the nose, agreeably to the side on which the eye is distorted, as may draw it the contrary way. In order to keep up this attraction, 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 is 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
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are glaffes fixed in a little cafe, fuch as many people wear when they ride on horfe-back. They muft be fo placed, that the child can fee no object but by turning the eyes to the fides from which they are diftorted. Or, an opaque covering of a fimilar form may be worn, with only a very fmall aperture in the centre, by which the child will be obliged to look ftrait forward. It is fcarcely neceffary to add, that thefe contrivances muft be worn constantly, till the bad habit fhall be overcome.

To this end likewise, fuch children may be made to look at their own eyes in a mirror for a few minutes, feveral times in a day; but with the precaution that each eye be directed to that which corresponds with it in the glafs. I fhall only add on this head, that children who are inclined to fquint ought not to learn to read very young.

INFANTS are liable, indeed, to many other blemifhes; but as I mean to treat only of fuch as call for medical attention, and admit of fome remedy, I fhall mention only two or three more, which are very common, and with them clofe what I have to fay 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 the womb, 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 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, to which no particular name, I believe, has been given, in which they are
turned

turned upward 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. Addison, Sheldrake*, and other truss-makers; who seldom fail of bringing the parts into a more natural form, even in the worst cases, whenever parents may think the complaint worthy of the time and attention that may be required.

THE END OF THE DISEASES.

DISEASES OF CHILDREN,

PART THE SECOND:

CONTAINING

FAMILIAR DIRECTIONS ADAPTED TO THE

NURSERY,

AND

The General MANAGEMENT of INFANTS
from the Birth;

WITH

AN INTRODUCTION

ON

The NATURE and PROPERTIES of HUMAN-MILK.

*“ La Mere veut que son Enfans soit heureux, qu’il le soit des
“ aprésent, en cela elle a raison; quand elle se trompe sur le
“ Moyens, il faut l’eclairer.”*

ROUSSEAU.

THE HISTORY OF THE

REIGN OF

CHARLES

THE FIRST

OF GREAT BRITAIN

BY

JOHN HUME

ESQ.

OF THE

BAR

AT

THE

COURT

OF

SCOTLAND

IN

THE

YEAR

1701

GENERAL DIRECTIONS

FOR THE

Proper MANAGEMENT of INFANTS
from the Birth.

WHATEVER Splendour the actual Treatment of Diseases may reflect on the Science of Medicine, it, by no means, comprehends the whole of its Province : for Prevention being in every case preferable to Remedies, the medical Art would be more imperfect than other Sciences, were it devoted only to the latter. In the Management of Infants more especially, such a variety of other articles occurs subject to medical direction, that this little work would be peculiarly incomplete if confined merely to the Cure of Disorders. In a view, therefore, to such miscellaneous matters, and certain recurring affections too trifling to be ranked as Diseases,

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this Second Part is annexed ; and it is hoped, may contain every thing on which the most vigilant Parent can wish for information, without tiring her by enlarging upon trifles. In all matters of importance a becoming firmness has been adopted, but I have not equally insisted upon others, wherein the Manners of a refined age cannot comply, nor have urged any peculiar modes which the Generality may not adopt. Should any opinion be more obstinately maintained, it is, probably, in relation to the Aliment most adapted to new-born children : and this it may be proper to discuss, previously to entering upon their general Management, by considering the case of Infants intended to be reared without the Breast, or brought up, as it is called, *by hand*.

BUT it would carry me altogether beyond the limits I have assigned to this Second Part, were I to enter so far into the investigation of the subject, as to set forth all the improprieties of that mode of training up infants from the birth. And I am glad to find by some very recent examples among persons of rank, that there is somewhat less occasion for it, than there appeared to be some years ago. It would be unpardonable,

pardonable, 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 have it, and even be suckled 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 parts of the irrational creation is qualified for it, and by instinct it 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 the common 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 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 milk*.

BUT not only is the breast-milk the only natural†, and most proper food for infants, but suck-

* *Essay on the Management and Nursing of Children, &c. Liverpool 1781.*

THIS work did not fall in my way till the present edition was going to the press, or I should, probably, have quoted it frequently. For, however I may differ from the author in some points, his mode of reasoning is so fair and accurate, and so strictly adhering to the dictates of Nature, that it must delight every one that is wise, or humble enough to tread in her steps. “Aware,” as he observes, “that whatever forms may, by artifice, be intruded upon her, and she compelled to assume, to enlarge or contract her bias and inclination, 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.”

† 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

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suckling also conduces 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 on to make the attempt, have gone on with it for 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, where the natural constitution, alone,

is buried with her : experience (one would hope) having demonstrated 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.

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 as a nurse, where no other reason, independent of that situation, forbids it.

THUS, besides the advantages derived to infants, it appears there are others resulting to the mother herself, 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-fores, and that “these had either no nipples,
“ or

“ or former fore 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, generally, 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, if duly credited, one should hope, might tend to induce ladies of rank to set the example, by performing this kindest and most pleasant office, at least during their confinement. But it would be 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, and urged upon parents, that tyrant, Fashion, has prevailed over the good sense and natural feelings of many, whose maternal affection can be, in no other instance, suspected.

It

It is with great pleasure, nevertheless, that I have to observe in the present edition 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 hath purposely endowed them.—But in this age of dissipation, there are yet some, against whom a heavier complaint may be brought, who not only refuse to give nourishment to their tender and helpless offspring, but whilst they, unnecessarily, commit this charge to a stranger, give up every other charge with it; and seldom visit the nursery, or superintend those they have set over it. It is from hence, that so many errors in point of diet, air, clothing, &c. &c. have insensibly crept into the houses even of some, whose rank in the world would otherwise have secured to their children every advantage that art, and a due attention to nature could point out.

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 a physician, I mean, the sacrifice

crifice 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 the breast. Indeed, no attention of the nurse can duly compensate this loss ; and only the most common substitutes for it can, in their forlorn circumstances, be allowed them. This becomes a source of evil, that, I fear, is not usually thought of, and proves eventually the sacrifice of many infants every year ; a matter of much importance, indeed, to the public, as well as to the families immediately concerned. It is true, indeed, ladies of rank frequently do all in their power to counteract this too natural, and fatal consequence, by a careful attention to the forsaken infant ; not only insisting upon a proper breast being provided for it, but regarding it as a kind of foster-child : so that, after generously preserving it through infancy by their charity and attention, they frequently follow it with their protection and kindness through life. Such charity, indeed, adds a lustre to elevated rank ; though perhaps, much less than this, from some people, would be short of
their

their duty. But it is not every family that is in a situation to adopt this conduct ; though I am sorry to add, that too many who are not, nevertheless, greedily adopt the fashions, and mimic the manners of the great, by more criminally and needlessly refusing to suckle, and abandoning that tender charge with which nature herself has intrusted them.

It gives me real concern to find occasion for such unpleasant reflections 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 such neglect does exist, whether in regard to suckling, or superintending the management of their children*, and does not
arise

* This seems to be the case at present in both regards, amongst the lower class of people in *France* : and that nation is therefore 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

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

arise from want of health, or from some equally warrantable objection, it can be charged only on the 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 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 æra,) 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 a general complaint on this head, and that the evil is annually dimi-

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.

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nishing: 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 means 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 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

and safely through all their operations. Many quadrupeds, fish, 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 naturally endowed. 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 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.

observation. It is this will be our aim in the work before us, wherever danger and deviation are connected; assured, that the experience of the most judicious and successful among parents and practitioners, will applaud the design, and confirm the generality of our observations.

To this end, let us imagine an infant just born*, who, doubtless, at this moment, calls
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* No convenient place offering in the former parts of this work, for a few hints relative to infants apparently *still-born*, I wish here to suggest the result of an experience that has been attended with more success than might have been expected.

I HAVE, indeed, both at the 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 may 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, possibly, not have been sufficiently attended to by every practitioner.

I rest

for our beft attentions. And firft, it may be obferved, that it ought not to be expofed to any

I reft this prefumption, not only upon fome fortunate events where I have had little or no previous ground for hope, but where other practitioners had, in fome inftances, abandoned it. A certain fteady perfeverance in our attempts to preferve life, is, indeed, not only a duty we owe to the Public, as long as the leaft hope may remain, but one fuccefsful attempt is an abundant recompence for many failures ; efpecially, as I imagine we fhall rarely fail wherever there may be the leaft pofitive ground for hope of a favourable iffue.

As to the MEANS, they confift only of warmth, clyfters, ftimulants, and efpecially blowing forcibly into the trachæa, or wind-pipe.

THE ordinary ftimulants are the fmoke of lighted brown paper, or tobacco ; juice of onions ; Scotch-snuff ; frictions with hot cloths, and brandy ; ftriking the nates, and the foles of the feet ; ftimulating the nofe, and upper parts of the throat with a feather, (drawing out the mucus, or froth, that may prefent ;) with every other fimilar mean calculated to excite a ftrong effort, efpecially that of crying ; to which our attempts muft principally, and remotely tend. On this account, I believe, no great benefit is to be expected from ftroking the blood along the cord, or immerfing the after-birth in warm water ; the fetal life being extinct, the recovery of the child will depend on the blood paffing freely through the lungs, which it cannot do till the child is brought to breathe freely and forcibly ; the continuance of which alfo

any thing that may violently, or too suddenly affect the senses : on which account, MOSCHION
and

is never secure, till it begins to *cry*. To these ends, I have depended above all upon blowing into 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 ; at the same time, preventing a premature return of the air, by the fingers of one hand placed at the angles of the mouth, and those of the other on each side 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 diaphragm and breast ; thus blowing in, and alternately 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 : which latter, however, can do very little till the child begins not only to gasp, and that with shorter intervals, but also to breathe in a pretty uniform manner. At this time, should the child not be disposed to *cry*, which is frequently the case, the nates and soles of the feet should be stricken forcibly and repeatedly ; and this failing, as well as the application of ordinary stimulants to the nose, and irritating the wind-pipe, I think nothing is so likely to succeed as a tobacco, or other stimulating clyster ; and putting a little Scotch-snuff up the nose, which latter if it induce sneezing, will soon be followed by a strong cry, and the child be with certainty restored.

AMONGST

and ALBINUS have well advised, that it should not be exposed either to great heat or cold,
nor

AMONGST other means, that of warmth was recommended; to which end, the infant should be entirely covered with very hot cloths, which should be renewed as fast as they become 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, or the cord 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, a priori, as likely to be successful in these, as in any other cases to which it has been applied: but I have never been in a situation to make trial of it, 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.

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 once to have succeeded after the life of the child had been despaired of.

I SHALL just add, that, amongst other symptoms of some probably irrecoverable injury a child may have sustained 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 circum-

nor to a strong light, nor odours of any kind, however grateful to adults; the unpleasant ef-

stances, I had not for many years seen one infant at all revived; but I have lately succeeded in two instances so far as to animate children sufficiently both to breathe and to cry; but they afterwards lay in a moaning state for five or six hours, and then expired. To succeed thus far, however, if I am rightly informed, may prove of importance, where the course of a family estate may be pending on a living child.—Since the latter part of this note has been added to the present edition, I have been fortunate enough to succeed entirely, under the most unfavourable circumstances, and after a great quantity of discoloured mucus, and something like meconium, had been forced up both from the throat and nose; and the child, an unusually large one, is still living.

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 principally 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.—The great importance, however, of the subject, it is hoped, will be a sufficient apology with most readers for the length of this note; 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.

fects

fects of which are sufficiently manifested by the infant itself.

THE attention will next be called to 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 ill-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 endemic complaints†; as a preventive whereof, the washing ought to be repeated for several days, with light frictions of the skin. Some infants also are covered much more than others with a thick, viscid matter, which cleaves so fast to the skin, that it is not easily washed off, which there is, however, another reason for doing, as it would

* *Dr. Hamilton.*

† See *Monf. Baumes*, on the *Jaundice* and *Mesenteric-fever*.

obstruct perspiration, which can never be duly performed, where the skin is left anywise foul. On this account, the nurse should be very attentive to this first concern of her infant charge, and whatever wash she may make use of, it should always have soap in it, and the child be well rubbed, especially under the arms, in the hams, and groins, where this mucus is apt to adhere: and to this end, it would be better she should not make use of pomatum, or other grease, which tends to stop up the pores, and prevent perspiration ; or that she be, at least, very careful the grease be afterwards well wiped off. In the same view, it were well if it were every where a common practice to repeat the washing for two or three days, 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 perspiration.

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,

am, I cannot approve of this substitute for cold-bathing, as it is called ; at least, as an indiscriminate practice. The cold-bath acts on a quite different principle, and 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 complaints*. But to
see

* *Monfr. Le Febvre 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 *DIODENES* to *ZENO*, whose arguments against the possibility of Motion, *DIODENES* 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 men, who from very weakly infants, have been rendered strong and healthy, merely from a prudent

see a little infant of a few days old, the offspring perhaps of a delicate mother who has
not

dent 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.

AND, indeed, from the surprising good effects that sometime follow the use of Cold-baths, I do not wonder that 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 rendering that excretion less readily affected by the impression of the external air.

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

As a mean of acquiring that re-action and glow, which bathing is designed to effect, some people have very rationally recommended throwing a loose flannel chemise 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,

not even strength to suckle it, washed up to the loins and breast in cold water, exposed for several

air, but allow time for friction, along the course of the spine, or back bone, 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 the spine being rubbed until a glow comes on, are unable to bear even bathing in the sea.

BUT I must observe, that the abovementioned 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 should 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. It is not, I apprehend, merely from the coldness of the water that the benefit arises, but is rather from the subject being suddenly immersed into a very different medium, (if so be, that medium be not actu-

* *Hippocrates* speaking of bathing, cautions against the two extremes of heat and cold.

several minutes, perhaps in the midst of winter, (when children are more liable to disease than those born in summer ;) itself in one continued scream, and the fond mother covering her ears under the bed-clothes that she may

ally warm) 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 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 a more salutary operation on the pores.

For the sake of some readers it is necessary to observe, that a child is to be put only once under the water at each time of bathing, and to be taken out as soon as it is possible. It should be received in a blanket, and be 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 ; and by no means be put into bed. There will need no great attention to its being wiped 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.

not

not be distressed by its cries ; has ever struck me as a piece of unnecessary severity, and favours 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 strength. It surely cannot be amiss, in winter time at least, to take the cold off the water for the few first days, which it has been observed, will be useful in other respects ; and whenever cold water is made use of, it will be quite sufficient to wash the child as far as a regard to cleanliness may require, which will always be the parts exposed to the worst kinds of galling and excoriation : on which account cold water is certainly useful. With this view, beside the groins, and contiguous parts, the arm-pits, folds of the neck, and parts behind the ears, being also disposed to slight chafings, may be occasionally washed in like manner, 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

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 dressed with the red drying ointment of *Bates's* dispensatory*. In a very acid state of the stomach however, during the month, particularly where there is a purging with very green stools, the parts covered by the cloths are often infested with a 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.

* This is an excellent remedy in a thousand instances, and has very undeservedly fallen into disuse.

of little consequence, if Infants be kept clean. 79

In this case, instead of washing 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. But one grand mean of keeping children from chafing is to preserve them very dry and clean*; articles of so much importance, that I should have insisted much longer upon them, if I had not already far exceeded the bounds I had intended. It may be necessary, however, to drop a word more with a

* To this end, poor people need to be admonished, that all the cloths should be properly *boiled* every time they are *washed*; a circumstance such people are apt to neglect.—Another error worthy of remark in this place, is, that of wearing a pilch (as it is called;) an old fashion still too much in use, and contributes not a little to make children weak: it being 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.

view

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, on the other hand, next to impossible, that a child should thrive or be healthy, if the strictest attention be not paid to cleanliness, which together with the articles of food and exercise, are, perhaps, the principal ones in which the children of poor people are at a great disadvantage, and which become a constant source of rickets and distortions among them. Let not these ill-effects fall on the children of those whose misconduct alone can expose to them. And, indeed, little 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*.

ANOTHER

* I have, indeed, known only two instances of it, one of which was in the family of a Lady of rank, whom I was lately attending. I was there myself a witness to the good effect of holding a little pan under an infant of only four months old,

ANOTHER uselefs operation practifed by nurfes, is, that of forcing out the milk from the little breasts of new-born infants. Some children a day or two after they are born, will have the breasts exceedingly tumid, hard, and painful, containing something like milk; and nurfes imagine it to be a great kindness to milk it out, as it is called. But I have often been grieved, to fee a nurse rudely rubbing, and even squeezing the breasts, already in a state of inflammation, and continuing it even for some minutes, though the child's cries might convince her she is putting it to pain. 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; though if it be thought something ought to be done, a little oil with a drop or two of brandy may be gently rubbed in, or small pieces of the litharge-plaister may be applied, and lie on the parts till they fall off of themselves. I have very lately, indeed, met with an instance

as it lay across the nurse's lap; which I was assured had been her practice from the month, and that the Lady had obliged her nursery-maids to do the like with her two former children.

of

of such considerable tumefaction and hardness, as has satisfied 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. The tumour, in this case, was much larger and harder than I could have suspected on such an occasion, and continued for more than a week without any sensible diminution or amendment; yet it soon afterwards subsided perfectly.

HAVING considered these necessary preparations, I proceed to offer a few remarks on the prevailing errors in their *Dress*.

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

* 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 étant grands, nous est donné par l'éducation.

leaves of the vernal flower, or the tender 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 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, and giving it strength? It is a bundle of tender vessels, through which a fluid is to pass, undisturbed, to be equally distributed through the body, and which are therefore surrounded by a soft medium, capable of yielding 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 be 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.

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
thirty

thirty 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 where 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 dresses*—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

* A gentlewoman lately 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, or mould.

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 wholly left to the judgment 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 expresses every time it is undressed, and rubbed with a soft hand. Whereas, *the art of dressing* has laid the foundation of many a bad shape, and what is worse, of very bad health, through the greatest part of life. Instead, therefore, of a scrupulous and hurtful attention to such 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, it has been said, is sometimes over-looked.

THE tender infant being dressed, and having undergone such other little discipline as has been mentioned, is usually so far fatigued by it,

it, as soon afterwards to fall into a sound sleep. We shall therefore leave it a while to be refreshed, whilst I endeavour to conduct the fond mother through the various other duties it calls for from day to day, till it happily arrives at an age free from the peculiar dangers 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, are in their consequences highly worthy of notice; which that they may be thrown into some kind of order, may all be very well classed under the several heads of the *Non-naturals*, as they are called. Such 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 this tender age—The first of these was said to be 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 may be said, that warmth is friendly to very young infants, but they should, nevertheless, be inured gradually to endure the cold air, which is absolutely essential to their health. I cannot therefore agree with Dr. ARMSTRONG, who thinks the rich lose fewer children than the poor, because they are 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 a damp and confined air, that is so injurious 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 nursery-maids 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

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, sit down on the grass, and such like ; 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 some of the like 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 ; though it has been observed, that caution and prudence are required in training up infants to withstand, and profit from being abroad when the air is very cold or moist. Notwithstanding, 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 sudden 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 im-
 " parts to him all the privileges thereof, of
 " which this is one, the ability to bear the ef-
 " fects of the air. Why then debar him from
 " this privilege? as he is all his life to be en-
 " compassed 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, pro-
 " cures, by means of a brisker circulation, a
 " greater degree of heat, and consequently the
 " reverse of its violent impression. This, in-
 " deed, may seem unintelligible to those who
 " imagine the human body to be only an hy-
 " draulic

“ draulic 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 it increases; 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

“ appeal to experience, which will teach us,
 “ that in order to a healthful state, we need
 “ not be brought up like those who are in-
 “ dulg'd with a bed of down, and a warm
 “ room, but those, of whom no extraordinary
 “ care being taken, are greatly left to their
 “ own disposal.”

It is, indeed, generally owing to sudden transitions only that some infants so readily take cold. This sometimes happens as soon as they are born, and repeatedly during the month; the slightest symptom of which is that called the *Snuffles*, or stoppage of the nose. This is, indeed, a trifling complaint, but as such may be just noticed in this place. It usually requires nothing more than a little pomatum, or pomade divine, to be put to the nostrils when the child is laid in the cradle; or if this fail, a little white vitriol may be dissolved in rose-water, and the bridge of the nose often wetted with it.

It will be advisable, in order to inure infants to the air, that they be short-coated as early as the season of the year will permit; but their dress should be still loose and easy, and they may continue without stockings even for

two or three years, and boys till they are breeched. As to this change, I think, it had always better be made in the beginning of winter, than in summer, as the dress upon the whole is warmer, especially about the chest, which from having been open for three or four years, it seems rather strange to cover, all at once, at the beginning of hot weather.

BUT though I have said children would be as well without stockings, for a considerable time, I must remark, that circumstances are always to be taken into consideration. *Mutatis mutandis* * should not only be the motto of physicians, but of common life, and we should be guided by it in regard to all general rules. For want of this caution in the present instance, tender children suffer exceedingly in severe winters, and are distressed with chilblains merely for want of proper covering to their tender limbs. I have seen a child of four years old, the daughter of people of fashion, (who I know will pardon my mentioning it) whose legs were covered with these sores quite up to the knee, and yet the lady could not be

* *Conduct should be directed by Circumstances.*

prevailed

prevailed upon in time, to suffer stockings to be put on, because strong and healthy children are thought to be better without them.

THE second Article under the head of Non-naturals refers to MEAT and DRINK, and is worthy of ample discussion; having as yet been considered only in relation to the expediency of breast-milk, where that may anywise be procured.

IN the first place it may be remarked, that although an infant should be suckled by its own mother, it certainly cannot stand in real need of any food, till the time nature will bring milk into her breast, supposing the child be laid to it in proper time; which, doubtless, ought to be as soon as she may, by sleep or otherwise, be sufficiently refreshed to undergo the little fatigue that an attempt to suckle may occasion. This method, however unusual with some, is the most agreeable to nature, and to observations on the irrational species, who in many things are the very best guides we can follow*. And herein, I am constrained to dif-

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

fer from a late writer † 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*. However, should the mother be unable to suckle, and a wet-nurse be engaged, there can be no harm in putting the child to the breast, after it has taken a dose or two of the opening medicine ; or should it be brought up by hand, and not easily kept quiet,

† Mr. Moss.

* See a Treatise upon Ulcers before mentioned ; in which the *milk-abscess*, and *sore nipples* are fully considered, and a successful, and easy method of treatment pointed out. Amongst other little contrivances to obviate the latter evil, as well as otherwise assist the suckling mother, the vegetable nipple-cover, sold at *Bacon's* in *Oxford-street*, is worthy of trial.

a spoon-

a spoonful or two of water-gruel, with a little Lisbon-sugar, may be given for this purpose, 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 croud 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 bread could become so universal, or the idea first enter the mind of a parent, that such heavy food could be fit for its nourishment. It were well if the fond mother, and all well inclined nurses had more just ideas of the manner in which we are nourished; and especially, that it is not from the great quantity, nor from the quality of the food, abstractedly considered. They may surely be led to conceive, that our nourishment arises from the use the stomach makes of the food it receives, which is to pass through such a change, called digestion, as renders it balsamic, and fit to renew the mass of blood, which is daily wasting and consumed. An improper kind, or too
great

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, King's-evil, slow Fevers, and Marasmus, or general Consumption.

NATURE, it should be considered, has provided only milk, for every animal adapted to draw it from the breast, and that of women is certainly amongst the thinnest of them; 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 lie longer on 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;

* The sugar, or salt, of human-milk is one third more in quantity, and its extract, or solid contents, is double as much as in cows. See the *Table* at the end of the *Introduction*.

though

though mixed up only with water, as it too frequently is, it 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 never be doubted of, 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 more sedentary life of a tender infant, who cannot get that nourishment from bread or other solid food, of which the stomachs of adults are capable. 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 has ventured to recommend it,) at the age of six or seven months; a matter very different from stuffing an infant with it almost as soon as it is born. For every thing the stomach cannot digest, it has been said, may be justly considered as a poison, which if not puked up, or very soon voided

out of the stomach; being half-digested already. 99

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.

MILK itself 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 dissolved, or digested, which by a combination of powers in the chylopoëtic viscera, or parts preparing the chyle, is so far animalized as to be converted into a kind of white blood; from whence it has been observed, every animal body is daily recruited. Hence it is very apparent, that previous to an infant having acquired strength enough to convert solid food into this wholesome chyle, or white blood, 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,

* 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, 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 stomach 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 quit the article of suckling, to relate a recent instance, and a remarkable one out of many, as a proof of the great degree 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.

in general the most proper food for an infant. Whether that 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.

THIS

THIS infant 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 almost all its food, was become very rickety, and had all the appearance of an infant almost starved. Trial had been made of almost every kind of food, except the breast, and the child been many weeks under the care of an experienced apothecary ; 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 very face of this account, it was very evident, that this infant was not nourished by the food it received, and that the complaint lay wholly 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 recovered from that hour; 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 compleatly weaned in six or seven days at the farthest, it is yet no uncommon thing for children, when ill, to take to it again, after seeming to be thoroughly weaned for three or four weeks. And this circumstance is the more worthy of notice, as it sometimes is a very fortunate one; and should encourage parents to make the trial whenever infants newly weaned may be seized with any complaint, under which a return to the breast may be useful. Such, particularly, is the hoop-
ing-

ing-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 being taken of leading it to make the first attempts during the night. Such children 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 will prove sufficiently nourishing for nineteen out of twenty, I might perhaps say ninety-nine out of a hundred : exceptions, I believe, there may be, but much fewer children would perish if no exception were to be made, than by absurdly rushing into the contrary extreme. But supposing a very strong child, at the end of the month, really not satisfied with milk only, and always craving the moment it has been thus

fed, it, doubtless, may have a little boiled bread added to it, two or three times in the day; but I should be very cautious of extending it further*. In the case, however, of an infant at the *breast*, if 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 a more solid food, the quality of the milk, as well as the state of the nurse's health should be inquired into, and the milk be changed if its goodness be suspected. Perhaps where bread and milk is allowed, whether at a very early or a 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

* “ In *Italy, Holland, Turkey*, and through the whole “ *Lewant*, 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.

its acefcent quality ; the water fhould then be ftrained off, and the bread 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 ; and I fhould not, indeed, have faid fo much on the fubject, had I not had it much at heart to perfuade thofe whose affections would ever lead them right, were their judgments not previously perverted—I fhall only add, that infants certainly ought not to be fed lying on their backs, but fitting upright ; as they will in this pofition fwallow their food more eafily, as well as more readily perceive when they fhall have had enough.

IF Milk be the proper food for infants brought up by hand, the next inquiry will naturally be, what milk is the beft ? and what is the fittest inftrument for feeding with ? And it is from long experience, as well as from reafon and analogy, that I venture again to recommend the ingenious contrivance of the late Dr. HUGH SMITH, fet forth fome years ago in a treatife on the Management of Children, in a feries of letters addreffed to married-women.

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. 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 harts-horn shavings, boiled in water to the consistence that veal broth 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,

* There is sometimes a difficulty in making this jelly, on account of the harts-horn 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.

the acescency of the milk; this quality being thought to abound in the milk of different animals, in proportion to the quantity 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 small pot Dr. SMITH has contrived for the purpose, which must be very carefully cleansed and scalded, at least once every day, and the spout be thoroughly rinsed, lest any four curds should stick about it; and to this end, it may be convenient to be provided with two*. At first the milk ought to be boiled, to render

† See Dr. YOUNG, *De Natura et Ufu Lactis, in diversis Animalibus.*

* The objection to this mode of feeding, made lately by a writer at *Dover*, that the pot may often be left foul, and therefore

render it less opening, but when the child is several months old, or may chance to be constive, 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 subtile particles, which evaporate upon its being long out of the body.

THOUGH I have said cows milk is usually preferable to any other, it will be conceived, that I mean to infants who are strong and healthy. Asses milk, on the other hand, being

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, 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 Mr. *Philips's* in Oxford-street, near Cavendish-square; *Storer's* in Piccadilly, near to Park-lane, and at *Neale's Staffordshire warehouse* in St. Paul's Church-yard.

more

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 tender infants and adults. And, perhaps, it may be inferred, from the very different proportion of cream, and of cheesy principles, that the milks of different animals contain, that providence has rather considered the benefit of man than of 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

rished at the breast, and by this mean it is, that infants, especially when very young, are not so apt to oversuck, as they are to be overfed 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, the child is tempted to take too much at a time; whilst the nurse often forces down a second or third boat-full, in order to put a stop to the cries, which indigestion from the first or second may have occasioned.

THE writer just now alluded to, as well as Mr. LE FEBURE DE VILLEBRUNE, detracts from the advantages 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 so many temptations to the contrary, (at least I have met with very few that 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, it has been observed, is frequently the nurse's sole motive for giving it.

But

the Child is not tempted to take too much food. III

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, or parchment; which being left loose a little way over the spout, is soft and pleasant to the infant's mouth, and it has been said, is nearly 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 ever known made to it by those who have made trial of it, is that which I esteem one of its highest recommendations, which is, that children thus fed are frequently hungry, that is, they are what nature designed them to be; this food fitting light on the stomach, and being easily

easily digested, like the breast-milk, children often need a supply of it.

I SHALL just mention another popular objection to the plan here recommended. This is taken from the many fine children we meet with, who have been brought up by hand from the birth, and fed with thick bread victuals all the day long, whilst we every now and then see some of those who have been debarred that sort of diet, weak and tender till they become a year or two old. Not to stop here 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 soon be 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 surpris'd me
at

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 a number of fine children one day in *London*, he with some shrewdness observed, that we did not seem to have so many weakly half-starved children 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 warm nurseries, and survive the trying periods of infancy, though some of them remain weak and rickety till they become old enough

114 *that their Food may be rendered more nourishing,*

enough to endure severe exercise, which is alone able to strengthen them effectually.

I HAVE no doubt of there being certain exceptions to this mode of feeding, that are worthy of more 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, as hath been already noticed under the head of purging. 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-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, however, frequently necessary, and will be indicated

cated 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; breast milk being more nourishment than any other. The first addition of this kind, however, whenever it becomes necessary, I am persuaded, ought to be beef-tea or broth*, which with a little bread

* “ I cannot help remarking here, that the gravy of beef
“ or mutton, not over roasted, and without fat, properly

116 grow older; when having acquired more strength,

bread beat up in it in the form of 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 once or twice a day, 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 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 boiled in milk, and such like. But to

“ 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.

feed

feed a child with veal, chicken, or other animal food, before nature hath given it teeth enough to chew it, howsoever 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. It is true, 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, with puddings, or blamange, white-pot, custards, and such like kitchen preparations of

* Ante dentium eruptionem non conveniunt cibi solidiores. Ideo natura quæ nihil frustra facit, & non deficit in necessariis, dentes ipsis denegavit, sed lac concessit, quod masticatione non eget. PRIMROS.

milk†, but even a little red wine is beneficial to many constitutions. This will not only promote digestion, and obviate in great measure a disposition to worms, but by strengthening the habit, will also render children less liable to become rickety, 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, certainly keep even older children 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. But so many little 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*.

IT

† “ Infancy and childhood demand thin, copious, nourishing aliment.” ARBUTHNOT, *On Aliments*.

* 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
ried

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. I shall just observe therefore, that no adequate rules can be laid down on the occasion, and on that account none ought to be attempted, since none can be sufficiently comprehensive; and I am happy in not being at all at a loss in this

ried 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 the 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 circumstance may be owing) that 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 the three last 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*.

instance, wherein writers have differed so widely. For infants not usually taking too much at a time in the manner of feeding that has been recommended, on account of the little fatigue which, it was observed, they undergo in acquiring their nourishment, may generally be permitted to partake of it as often as they might of the breast*. This is, however, by no means the case, when children are allowed to eat thick victuals, and are fed by the spoon, by which, it has been 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. And after the hints that have been thrown out through the former part of this work, I need only observe, for the sake of those who are unacquainted with diseases, that as light a diet as is possible is usually called for when a child is unwell, let the disorder be al-

* Optimum vero medicamentum est opportunè cibus datus. CELSUS. *De Med.*

most whatever it may. If a fever should accompany it, the child will require still less food than in any other complaint, but plenty of drinks; which may also be so calculated as to furnish nearly as much nourishment as the infant will require, and may in summer-time be given cold. Such are barley-water, water in which a crust of bread has been boiled; or if a purging attends, rice-water, and a drink made of harts-horn shavings, with a little baked flour in it. In this complaint, wherein more nourishment is required to support the child than under most others, baked flour mixed up with boiled milk, (as mentioned under the article of purging) * is admirably calculated both as a proper diet and medicine; and if kept in a dry place, may be preserved fit for use for a considerable time. For the like complaint, the food directed by Dr. SMITH is very well adapted, and will afford a little variety. He orders a table-spoonful 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

* Vol. i. page 145.

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 baked flour, as mentioned above, 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 vast acidity of the first-passages, good beef-broth ought to be made trial of, which may be thickened with baked flour, instead of bread, and makes a very pleasant, as well as anti-acrescent diet.

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
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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 acefcent, and till the body be disordered, and digestion hurt from one cause or other*, this quality of their food is not likely to be very injurious to them, and, probably, far less so 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

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

children.

children. 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 dill-water is that I have generally recommended, and being a liquid, is always ready to be added to the food, without loss of time.

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 chamomile flowers, or a few drops of the tincture of columba, 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 pre-

* Though such an occasional 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 design with which it was used, by the stomach becoming accustomed to it.

servative and remedy, and especially making infants break wind after sucking or feeding. And this may generally be effected, as every nurse knows, by raising the infant up, and gently tapping it on the back, or rubbing its stomach, before it be laid in the cradle to sleep.

I SHALL only add further, that when 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.

I SHALL now close this head, with some observations relating to Wet-nurses, and to Weaning.

* It is a very great mistake, though a common one, to imagine that salt will dispose to the scurvy. This mistake is founded upon the bad effects of the long use of salted-meats; but salt taken with fresh meats is quite a different thing. And I shall just remark, that salt and water is one of the best lotions for the mouth, and preservative from the tooth-ach, (with which many pregnant women are tortured) and also makes an excellent wash for the face; which will remove some kind of pimples without any risk of injury to the constitution.

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 whilst 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; such distention being 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 six months old, it is, doubtless, an advantage. And this is of more consequence, than it seems of late years to be thought; 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.—A wet-nurse ought 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

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. And I cannot help adding here, that she ought not to be disposed to prescribe medicines; otherwise, something improper can scarcely fail at one time or other to be administered, and perhaps to the no small injury of the child.

PREVIOUSLY to the observations I have to offer on the head of weaning infants, it may not be amiss to drop a few words on the proper diet for wet-nurses. 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 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 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,

nurse, I believe a healthy child will rarely suffer by their 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.

THE proper age for weaning a child is to be gathered from the particular circumstances attending it. The child ought to be in good health, especially in regard to its bowels; and, doubtless, ought first to have cut, at least, four of its teeth. This seldom takes place till it is near a twelvemonth 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. 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,

ever, 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 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 taken wholly from it. I, therefore, never have any fear in that respect, and should be happy if any

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

thing I can say from experience, may be the means of lessening the trouble of parents on this occasion, as well as counteracting, 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, or oftentimes not benefited, by a little food once a day of a more solid nature than the breast-milk, as, indeed, I have intimated before; but when children happen to be 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.

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; and they should not, from the first, be fed, or even suffered to drink in the night; 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

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 child need only be fed the last thing 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 nurse, and much more to a mother, from observing how greedily the child takes its food, and how satisfied it will lie for many hours on the strength of this meal;—the mention of which naturally leads me to consider the next Article proposed, viz.

SLEEP and WATCHING.

AFTER what has been already advanced on this article, under the head of their Complaints, little more will be necessary than to observe, 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 conti-

nue 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, if she be in the same room; who, especially if she suckles, will be less disturbed, at a time when she particularly requires this refreshment.

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

that their Sleep may be properly regulated. 133

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, as I shall have occasion presently to notice; but then this deficiency is chiefly in the night, and is often the consequence of some complaints which the child labours under. Upon these, however, sufficient has already been said in the former part of this work, to which therefore the reader is referred.

BEFORE I quit this article, it may be remarked, that the custom of constantly placing infants on their backs, 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 their sides, particularly the right, as favourable to the stomach getting easily rid of its

* See vol. I page 13.

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 children, 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 children down 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

pended 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 by instinct, 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 fore-fathers;

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.

I SHALL only add on the article of sleep, what cannot be too often urged, that however wakeful a child may be in the night, it cannot receive a greater unkindness than from the exhibition of *Godfrey's* cordial, syrup of poppies, or any other opiate, and given as they usually are, to procure sleep, not because it is necessary, or proper for the child, but because it is convenient to the nurse. It were, therefore, a good rule in the nursery, to forbid administering *any* kind of medicine without an express permission. And in regard to watchfulness, as was 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 ever to be in a 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 will hardly submit to it. Exercise, like air, is indeed of so much importance to children, that they cannot possibly be truly healthy without it ; care only should be taken that it be properly suited to their age.

THE first kind of exercise, it has been said, 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,

ressed; and especially, as noticed before, 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 cloths 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 is able to continue. For children, it has been noticed, 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

* Vol. 1, page 356.

the mode of carrying them, because I have seen children flung carelessly over the arm in such a manner, as neither affords a child any exercise, nor allows it to give any motion to itself; which a lively child 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; the ill effects of which have been pointed out already.

It may be a proper inquiry in this place, at what age children should be put on their feet, a point on which people have differed 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, it is, as has been said, always in motion, and as soon as it gets strength, it will support itself by the help of its hands and feet, and will crawl about wherever it is permitted.

mitted. 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 its manner of moving its limbs, and its bearing more or less on the arms, will shew what advances it has made. Whenever it is strong enough, however, 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 in-

* I cannot help 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 renders 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 they have sometimes cried out from the pain, and yet not been able, at the moment, to bring the infant down into the lap.

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clination, 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 has been disposed to make the attempt. The mischief is, we lead on children prematurely to the trial, by back-strings, goe-carts, and other contrivances, calculated only to spare idle nursery-maids*, or what is really pitiable, to allow poor people time to attend to other concerns, who are obliged to

* I cannot avoid once more risking giving offence, that I may do every thing in my power to induce parents to give the utmost attention in regard to exercise ; for the want of which I have, with much concern, beheld some children of people of large fortunes turn out as rickety as those of the labouring poor. In some instances, I have been so satisfied this has been owing merely to a want of exercise, that I have informed ladies, that from the appearance and manner of the nursery-maid, I was certain their children were not exercised sufficiently, and have pointed out the bad consequences that must ensue. And where the advice has not been taken, I have as constantly been consulted some months afterwards, about the cold-bath, for children of a year and half, or two years old, who have only been able to waddle across the room, with their knees knocking together, and reeling at every step, so as not to be trusted, for a moment, alone.

work

work for their bread. But where this is not the case, such contrivances are unpardonable, and are the consequence 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.

It is said, however, by a sensible writer †, that children's legs do not become 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 the cases, I apprehend, are widely different ; quadrupeds and fowls are designed by nature to be early on their legs, and it is necessary they should be so. They are accordingly calculated for it, their bones be-

* I have seen a child walking alone before it has been nine months old, and at ten months, carrying a heavy plaything in its hands ; whilst other children, rendered weak and rickety by mismanagement, have been unable to do half as much at two years of age.

† Dr. HUGH SMITH, *Letters to married-women.*

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ing 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, but by urging them to it by contrivances of our own, for which poverty is the only apology that can possibly be offered.

A NOTE of Dr. BUCHAN on the subject of giving exercise to children, which some people from their poverty 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, 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,

less, in the power of people of large fortunes, both in town and country, to give it very considerable influence, 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 infants lives than if the whole re-
 “ venue of the crown were expended on hos-
 “ pitals for that purpose. This would make
 “ the poor esteem fertility a blessing, whereas
 “ many of them think it the greatest curse
 “ that can befall them;” and I may add, I
 have known them express great thankfulness,
 when any of their children have died.

MUCH as there has been said on this article,
 I cannot suffer it to be closed without drop-
 ping a hint or two with a peculiar reference to
females; upon whom beside every infirmity
 common to the other sex, is imposed the pain-
 ful task of child-bearing. It is the benefit of
 the lower class of people, indeed, that I have
 here

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 parents 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 beside every caution already pointed out, lays a strict prohibition on girls being suffered to sit, for hours together, on a low seat, whereby that assemblage of bones, called the pelvis, or basin, is pressed between the lower extremities and the inferior part of the back bone, 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 a situation to give their children all the exercise

ercise 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 back, 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*.

THE subject of this chapter seems to demand a still more serious attention than was bestowed upon it in the former editions of this work, having since discovered a much greater fatality amongst the children of the poor of this metropolis than I ever suspected.

* 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.

To ascertain the fact, an inquiry has been for some time set on foot, at the *British lying-in Hospital*, at the suggestion of my colleague, Dr. COMBE. Inquiries have likewise been making ever 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
VOL. II.	Z	several

several of the mothers of 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, and one twelve, 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, had preserved them all; and one woman, (lately come from the country) with 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.

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.

A VERY few words may suffice on the article of REST, the irregularities therein being far less numerous and important than in the former. 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 their beds 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

* See the *Introduction* to this *Second Part*.

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.

PROLIX as this article may appear, it may, nevertheless, add a completeness acceptable to many readers, to comprehend under it several things relating to the different *Modes* of Motion and Rest, and pointing out many improprieties that have a natural tendency to induce, or increase various corresponding deformities.

THESE will relate to the manner of children's standing, walking, sitting and lying, and 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 a graceful manner of standing or walking, would be highly incompatible with the intention of the work ; but since this part of it is formally devoted to the direction of parents, such readers may not be displeased that it should aim at general usefulness, by calling their attention to such things as for want of
correction

correction whilst children are under their own eye, may, as they grow up, become real evils. For it is very certain, that from an improper 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 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 to people of rank, that the very means frequently made use of 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.

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

INFANTS sometimes either come into the world 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; 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

Several striking instances of it, however, have been met with*, and we daily observe 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 back bone projecting too much behind, and forming an unfightly curve.

THE morbid affection of this part has been mentioned already; 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,

* AN Embassador 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 Embassador, to the great surprise of the whole hospital †; curiosity or surprise effecting that, which the most powerful medicines could not, in so short a time.

† Histoire de l'Ambassadeur de *Maroc*, Envoye au Roi de *France*, en 1682. ORTHOPÆDIA, par *Mons. Andry*.

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 upright, and preserving an equilibrium of the body; and it is obvious, that either a bending posture, or the efforts necessary to avoid it, if 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 very difficultly broken.

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 be 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 be 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

it up. Or he may be caused frequently to carry a light chair, or such like play-thing, in that hand, 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.

ANOTHER easy and efficacious mean 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, it has been said, are likewise liable to receive an improper turn; and this may arise from habit, as well as from original mal-formation, which has already been noticed. 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 is manifest in every woman who wears 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

times been very improperly done. Beside this, such children should be frequently caused to walk up steep ascents, by which they will be obliged to bear 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 too much can scarcely be said: the great neglect of it, especially among the poor, is daily lamented by every man of observation 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—I shall, however, just observe, that it 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;

tions*; which are the next things it was proposed to consider.

RETENTION

* THESE particulars are well expressed by *Monfr. Des-ESSARTZ*; from whose fuller account, let the following suffice by way of illustration to intelligent parents :

“ 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 Médecine nous a représenté le corps animé, et jouissant de ses fonctions, comme un cercle dans lequel on ne peut reconnoître ni commencement, ni fin.—En effet, les instrumens destinés à la chylickation tirent toute leur force des organes de la sanguification, ceux-ci des nerfs et du fluide qui'ils contiennent : et ce fluide (si nous en croyons le système le plus universellement adopté, et auquel il manque peu de chose pour 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 aussi multipliées dépendent notre santé et notre vie. Il ne suffit pas de prendre des nourritures, il faut qu'elles soient bien digérées, changées en sang, et ce sang doit être assez travaillé pour fournir non seulement la lymphe nourricière de tout le corps, mais encore un fluide très-subtil qu'on appelle fluide animal. Chaque liqueur doit être séparée dans ses glandes, et celles que la nature rejette comme inutiles et dangereuses, doivent être poussées au dehors.

OR, rien n'est plus propre à faciliter et à perfectionner toutes ces opérations, que l'Exercice. Si nous jettons les yeux

RETENTION and EXCRETION.

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 blad-

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 grande partie de leur mouvement et de leur action sur les fluides. A mesure que les muscles entrent en 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 caractérisent leur bonne constitution, mais elles broient, 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 sécrétions se font mieux, et plus uniformément, et la digestion en devient plus parfaite.—*Traité de l'éducation corporelle des Enfans en bas Age.*

der ;

der; but the latter is not very liable to disorders. After what has been already advanced under the head of *Diseases*, it will be sufficient, therefore, to say, that the retention of urine during early infancy is chiefly from the birth, and is usually removed by applying a bladder of hot water to the belly, and gentle 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 little marsh-mallow, or parsley, or wild-carrot-tea, sweetened with honey, with the addition of two or three drops of the spirit of nitrous ether. 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. Should the suppression, however, continue during two compleat days, the following cataplasm may be applied warm to the region of the pubis.

TAKE of parsley and mallow-roots, leaves of cresses, and juniper-berries, of each a handful,
and

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 lower part of the belly 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.

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 with it in early infancy. They prescribe agrimony and myrrhe, and direct astringent fomentations of red wine to the belly, the perinæum, or seat, and the loins.

THE present observations are therefore chiefly confined to the Bowels, which would call for a scrupulous attention in this place, if so many things relative to them had not been discussed in the former part of this treatise. It were needless, therefore, to say more, than to remind common readers, that (as far as general rules may go) infants are rarely healthy long together, who have not two or three stools every

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, 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 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 until they have had an opening, for which they should strain, till at length it becomes customary ; and by which we shall gain a point, with respect to the health of children. On the other hand, if an infant is brought up by hand, the danger generally lies in the other extreme, such children being disposed to be purged, and to have griping and four stools, from the acescent, and often 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, and their food to be changed, in the manner directed under the article of Purg-
ing.

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 too long kept up, or too violent, may not only induce the hiccough, but it is said, may even throw an infant into fits. The latter is, indeed, 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 induce me to believe, that this expression of the passions in Infants is not only much more
harmless

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 (as was mentioned in regard to the Croup) 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, or air-vessels, that run through them*. 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

* Fletus moderatus pueris non obest—pectus dilatat et calefacit. PRIMEROS.

† In support of this sentiment, which I conceived not to be a very common one, I quoted in a former edition, the above authority of *Primerose*. Mr. Le Febure de Villebrune's translation has since furnished me with a better and more ancient one. *Aristot. Politic. Lib. vii. C. 17*, where the idea is supported more at large.

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, (against which so much has been said) occasions far greater evils in thousands of instances, than ever were produced by the irritation from Crying. The crying of infants, however, is very commonly plaintive; it seems to argue distress, and cannot but create it in every person of sensibility around 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 any animal being, 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 help trespassing on the reader's time to make 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; and for the sake of my fair readers,
who

who may do me the honour of consulting this work, I have endeavoured to lessen their Fears, as far as those have appeared to be needless, wherever no other Remedy could 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 any violent passion, of whatever kind it may be, the bad effects of which have already been instanced in the former part of this treatise*. And I shall think myself well recompensed for the trouble I have had, if this, or other hints, 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

* *Vol. 1. page 166.*

168 *at least, to the present Comfort of Infants.*

me to say, may by Art and good Management, be often prevented, the author ardently hopes the fond Parent may have fewer occasions to lament, and her rising Sons be athletic.

THE END.

ERRATA.

Page 22, last line, for litharge, read quicksilver.

29, line 10, for noctè, read nocte.

103, line 19, for acitatae, read acetati.

149, line 14, for and, read which.

SECOND PART.

Page 63, line 14, for æra, read era.

69, last line, for circ mstance, read circumstance.

115, line 19, for nourishment, read nourishing.

AN ALPHABETICAL LIST

OF
Medicines recommended in this Work,

TO WHICH

The COLLEGE of PHYSICIANS have given *new*
Names.

Both the *Latin* and *English* Names are given, of which,
that one will stand first which more frequently occurs
in the Work.

NEW NAMES.

Names formerly in Use.

A.

<i>ANTIMONIUM tartari-</i>	<i>Tartarum emeticum,</i>
<i>satum,</i>	
Tartarised Antimony.	Emetic Tartar.
<i>Argentum nitratum,</i>	<i>Causticum lunare,</i>
Nitrated Silver.	Lunar Caustic.
Aromatic Confection,	Cordial Confection,
<i>Confectio Aromatica.</i>	<i>Confectio cardiaca.</i>
<i>Aqua Cupri ammoniati,</i>	<i>Aqua Sapphirina,</i>
Water of ammoniated Cop-	Sapphire water.
per.	
<i>Aqua Kali puri,</i>	<i>Lixivium saponarium,</i>
Water of pure Kali.	Soap Ley.

Aqua Ammoniac,
Water of Ammonia.

Spiritus Salis Ammoniaci,
Volatile Spirit of Salt ammoniac.

Aqua ammoniac acetata,
Water of acetated Ammonia.

Spiritus Mindereri,
Minderus's Spirit.

C.

Catechu,
Calx of Antimony,

Terra Japonica.

Calx Antimonii.

Calcined Antimony,

Camphorated Spirit,

Antimonium calcinatum.

Spiritus camphoratus,

Camphorated Spirit of wine,

Compound water of acetated

Spiritus vinosus camphoratus.

Litharge,

Vegito-mineral water,

Aqua Lithargyri acetati composita.

Aqua vegetabilis mineralis.

Compound Tincture of Gentian,

Bitter Tincture,

Tinctura Gentianæ composita.

Tinctura amara.

Compound Tincture of Aloes.

Elixer of Aloes.

Tinctura Aloës composita.

Elixer Aloës.

Compound Spirit of vitriolic Ether,

Hoffman's anodyne Liquor,

Spiritus Ætheris vitriolici compositus.

Liquor anodynus mineralis.

Compound Spirit of Ammonia,

Aromatic volatile Spirit,

Spiritus Ammoniac compositus.

Spiritus volatilis aromat.

H.

Hydrargyrus muriatus,
Muriated Quicksilver.

Merc. corros. subl. alb.

White corrosive sublimate

† Labdanum-

L.

Labdanum-plaister,
Emplastrum Ladani.

Litharge-plaister,
Emplastrum lithargyri.

Stomach-plaister,
Emplastrum stomachicum.
The common Plaister, or
Simple Diachylon,
Emplastrum commune.

M.

Muriatic Acid,
Acidum muriaticum.

Spirit of Sea-salt,
Spiritus Salis marini.

N.

Natron præparatum,
Prepared Natron.

Sal Sodæ,
Salt of Soda.

O.

Ointment of acetated Cerusse,
Ung. Cerussæ acetatæ.

Ointment of Lead,
Unguentum Saturninum.

P.

Powder of Scammony with
Calomel,
Pulvis è Scammonio cum Calomelane.

Basilic Powder,
Pulvis Basilicus.

S.

Sp. æthæris vitriolici,
Spirit of vitriolic Ether.
Spirit of nitrous Ether,
Spiritus ætheris Nitrosi.

Spiritus Vitrioli dulcis,
Sweet Spirit of Vitriol.
Sweet Spirit of Nitre,
Spiritus Nitri dulcis.

Tartarised

T.

Tartarised Natron,	Rochelle Salts,
<i>Natron tartarifatum.</i>	<i>Sal Rupellensis.</i>
<i>Tinctura Catechu,</i>	<i>Tinctura Terræ Japonicæ,</i>
Tincture of Catechu.	Tincture of Japan-earth.
Tincture of Opium,	Laudanum,
<i>Tinctura Opii.</i>	<i>Tinctura Thebaica.</i>

U.

<i>Unguentum Calcis Hydrargyri</i>	<i>Unguentum è Mercurio præci-</i>
<i>albæ,</i>	<i>pitato,</i>
Ointment of the white Calx	Ointment of white Precipi-
of Quicksilver.	tate.
<i>Unguentum Hydrargyri nitra-</i>	<i>Unguentum citrinum,</i>
<i>ti,</i>	
Ointment of Nitrated Quick-	Citrine Ointment.
silver.	

V.

Volatile Liquor of Harts-	Spirit of Harts-horn,
horn,	
<i>Liquor vol. cornu Cervi.</i>	<i>Spiritus volatilis cornu Cervi.</i>

W.

Prepared Water of Kali,	Ley of Tartar,
<i>Aqua Kali. ppt.</i>	<i>Lixivium Tartari.</i>
Water of acetated Litharge,	Extract of Lead,
<i>Aqua Lithargyri acetati.</i>	<i>Extractum Saturni.</i>

DEFINITION

OF

TECHNICAL AND OTHER TERMS,

Not fully explained in every passage where
they may occur;

With a view to render the work more familiar to some
readers, when consulting particular or detached parts.

A.

ABDOMEN,
Alimentary Canal,
Alvine complaints,
Anasarca,
Anus,

The Belly.
The Stomach and Bowels.
Disorders of the Bowels.
A dropsy of the Skin.
The opening of the great gut,
or lower bowel.

C

Carneous,
Cathartics,
Cholera,
Coma,

Flesh-like.
Purging medicines.
A Purging with great pain.
Unusual drowfiness.

D.

Dentition,
Diagnostic,

Teething.
The knowledge of the nature
of a disease.

Diaphoretics,

<i>Diaphoretics,</i>	Medicines promoting Perspiration.
<i>Diathefis,</i>	The particular disposition of the body.
<i>Diarrhœa,</i>	A Purging.
<i>Drastic,</i>	Rough or violent.
<i>Duodenum,</i>	One of the small Bowels.
<i>Dura mater,</i>	A Membrane covering the Brain.

E.

<i>Erysipelas,</i>	Saint Anthony's fire.
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G.

<i>Gangrene,</i>	A Mortification of any part.
<i>Gastric juices,</i>	Secretions in the stomach, and from various glandular parts contained within the Belly.

I.

<i>Icteric,</i>	Appertaining to the Jaundice.
<i>Intestines,</i>	The Bowels or Guts.
<i>Intestinal,</i>	Belonging to the Bowels.

L.

<i>Longitudinal Sinus,</i>	A passage for the blood from the forepart of the head to the hind-head.
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Meatus

M.

Meatus urinarius,

The opening leading to the bladder.

Medulla,

The marrow of the bones.

Medulla spinalis,

The Marrow of the back-bone.

Mesentery,

The connecting Membrane of the Bowels.

Metastasis,

The removal of a humour from one part to another.

O.

Os sacrum,

The extreme part of the back-bone.

P.

Palatum molle,

The back parts of the Mouth and Throat.

Pancreas,

The Sweetbread, a large gland.

Parenchymatous,

A sponge-like substance.

Pæroxyſm,

The height, or return of a fit.

Pathognomonic Symptoms,

Symptoms denoting the Essence of any disease.

Perinæum,

The space between the genitals and the anus.

Perioſteum,

A Membrane covering the bones, and uncut-teeth.

Pubes, or Regio Pubis,

The space between the two groins.

Pylorus,

Pylorus, The inferior opening of the stomach.

S.

Scapulæ, The blade-bones.

Spine, The back-bone.

Spine of the Tibiæ, The edges of the shin-bones.

Sternum, The breast-bone.

T.

Tibia, The larger of the two bones of the Leg.

Trochanter, The head of the thigh-bone.

U.

Urethra, The Passage from the Bladder.

Uvula, The small pendulous portion of flesh, at the back of the mouth.

V.

Vertebræ, The joints of the neck, back, or loins.

Viscera, The Bowels or Entrails.

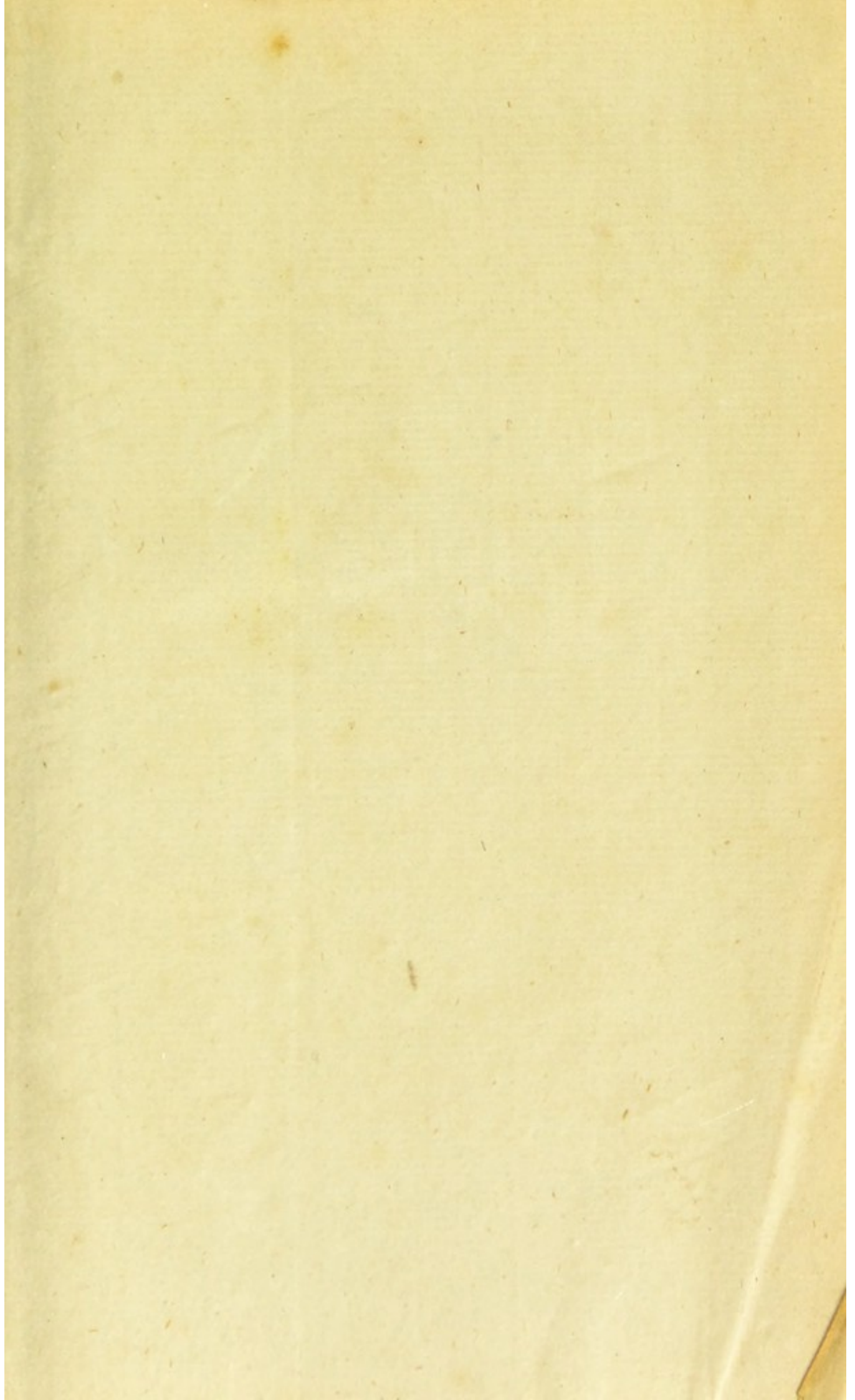
A comparative Analysis of the Milks of Women, the Cow, Goat, Afs, Sheep, and the
Marc, by M. BOYSSOU of Aurillac in Upper-Auvergny.

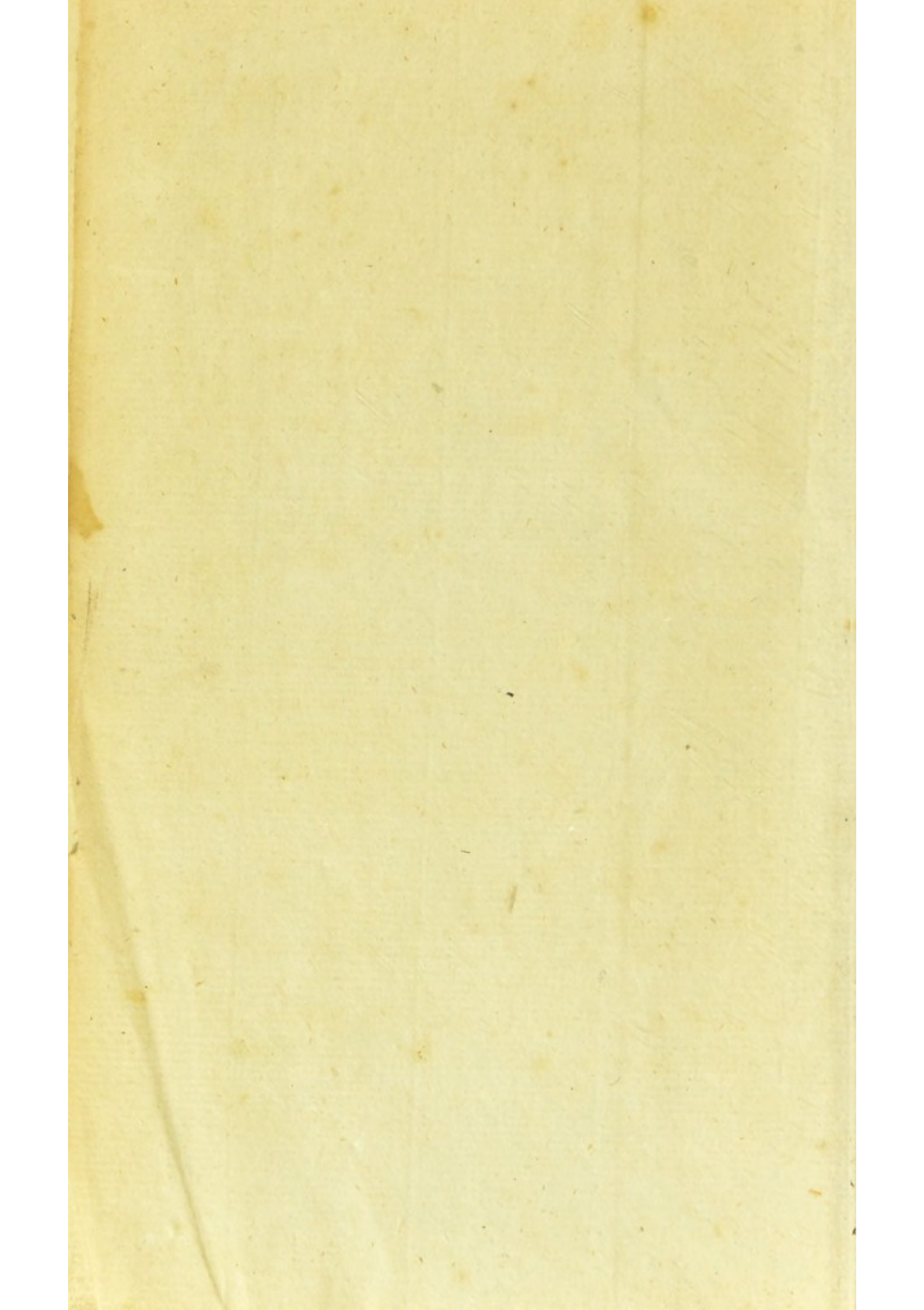
Quantity of Milk.	Names of the several Animals.	Their Nourishment, &c.	Ages of the Milk.	Quantity of Butter.	Quantity of Cheesy Matter.	Quantity of Saccharine Sol.	Quantity of Extract.	Produce or Extra in Bal. Martia.
One Mark-pound Weight. (8 Ounces.)	Woman's milk.	Inhabitant of a City.	7 months.	4 drams, 48 grains.	1 dram, 48 grains.	6 drams, 48 grains, in 4 cryf-tallifications.	1 dram.	1 ounce, 8 grains.
Ditto.	Cows milk.	Fresh Pasturage.	6 weeks.	3 drams, 45 grains.	5 drams, 51 grains.	4 drams, 40 grains, in 5 cryf-tallifications.	$\frac{1}{2}$ dram.	9 drams, 42 grains.
Ditto.	Goats milk.	Ditto.	3 months.	4 drams, 24 grains.	7 drams, 48 grains.	3 drams, in 4 cryf-tallifications.	$\frac{1}{2}$ dram.	2 ounces, 16 grains.
Ditto.	Afles milk.	Ditto.	2 months.	10 grains.	2 drams, 61 grains.	6 drams, 16 grains, in 6 cryf-tallifications.	1 dram.	7 drams, 12 grains.
Ditto.	Sheep's milk.	Ditto.	3 months.	5 drams, 40 grains.	7 drams, 30 grains.	3 drams, in 4 cryf-tallifications.	$\frac{1}{2}$ dram.	2 ounces, 16 grains.
Ditto.	Mares milk.	Ditto.	2 months.	6 grains.	2 drams, 48 grains.	4 drams, 48 grains, in 5 cryf-tallifications.	2 drams, 36 grains.	7 drams, 12 grains.

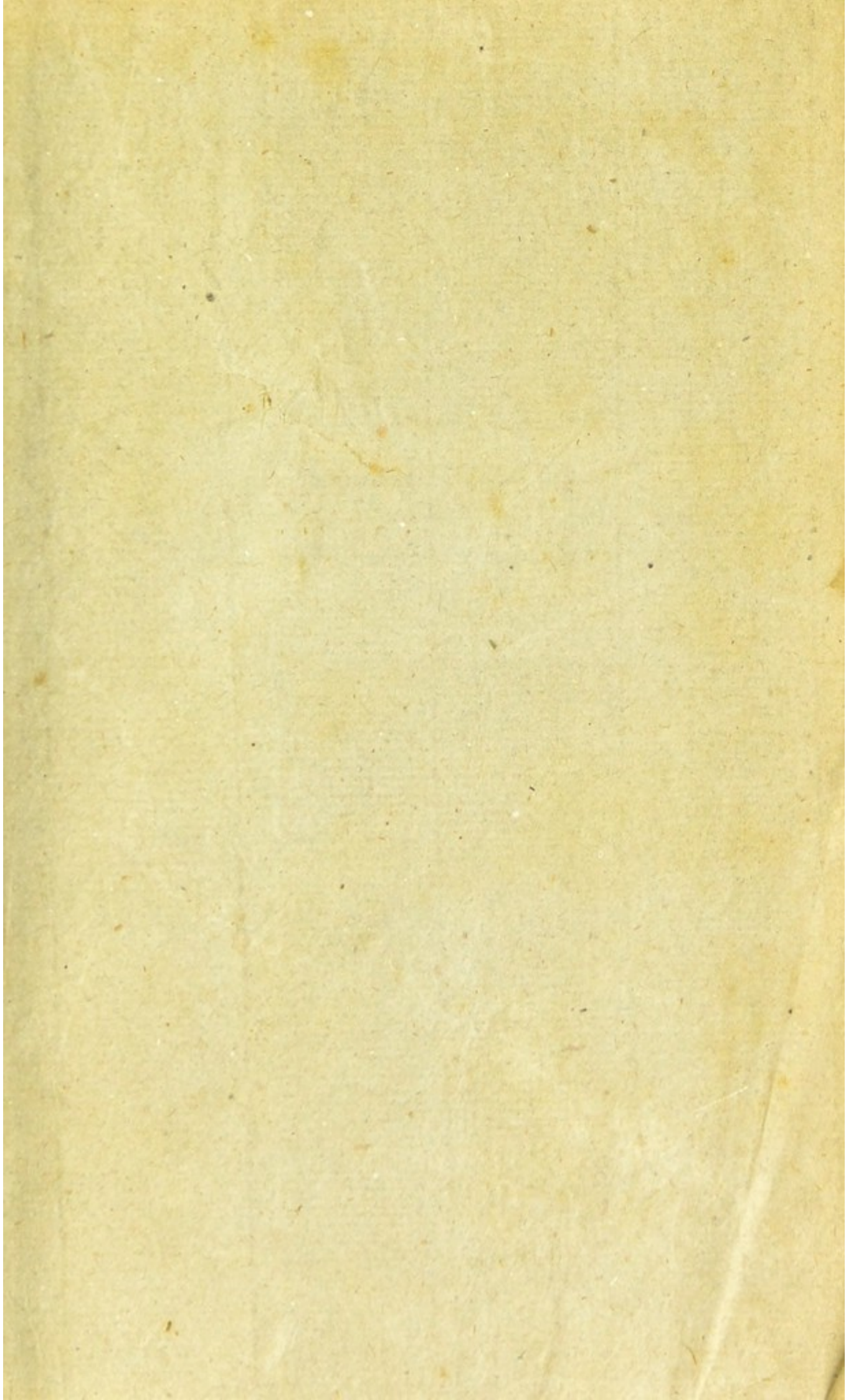
A comparative ANALYSIS, by ABRAH. VAN-STRIPIAAN LUISSIO, Physician to the
Dauphin; and NICOL. BONDT, Physician at Amsterdam.

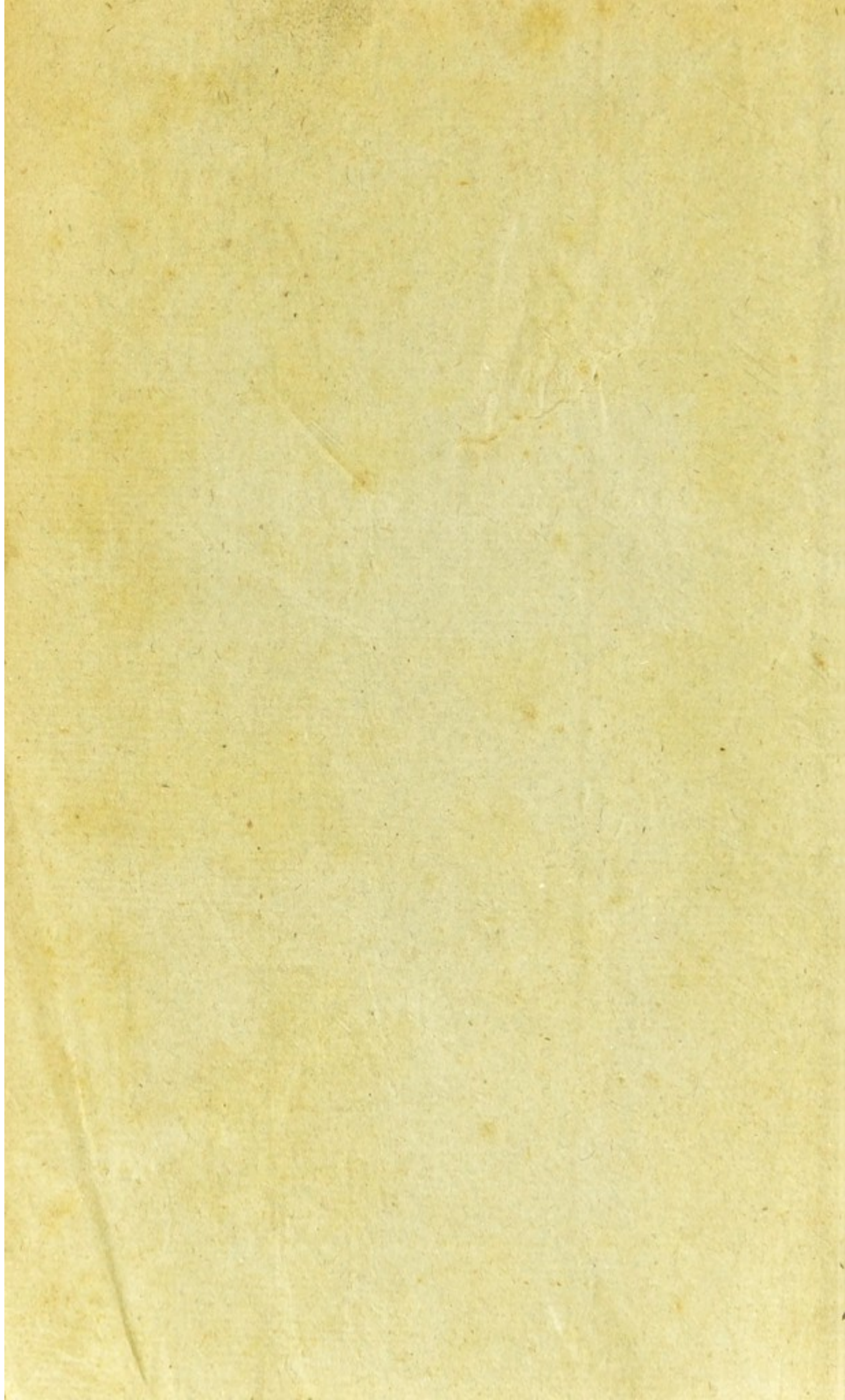
Scale 100.	Cream.	Butter.	Cheese.	Sugar.
Cows milk.	$4 - \frac{1}{8}$.	$2 - \frac{1}{16}$.	$8 - \frac{1}{8}$.	$3 - \frac{1}{16}$.
Woman's.	$8 - \frac{1}{8}$.	3	$2 - \frac{1}{16}$.	$7 - \frac{1}{8}$.
Goats.	$7 - \frac{1}{8}$.	$4 - \frac{1}{8}$.	$9 - \frac{1}{8}$.	$4 - \frac{1}{8}$.
Afles.	$2 - \frac{1}{16}$.	—	$3 - \frac{1}{8}$.	$4 - \frac{1}{8}$.
Sheep's.	$11 - \frac{1}{8}$.	$5 - \frac{1}{16}$.	$15 - \frac{1}{8}$.	$4 - \frac{1}{16}$.
Mares.	$\frac{11}{16}$.	—	$1 - \frac{1}{8}$.	$9 - \frac{1}{16}$.

COUNTRY	NAME	RANK	REG'T	COMP	SERV	REMARKS
CANADA	JAMES	CAPT	1ST	REG'T	1861	DIED
CANADA	JOHN	CAPT	1ST	REG'T	1861	DIED
CANADA	JOHN	CAPT	1ST	REG'T	1861	DIED
CANADA	JOHN	CAPT	1ST	REG'T	1861	DIED
CANADA	JOHN	CAPT	1ST	REG'T	1861	DIED
CANADA	JOHN	CAPT	1ST	REG'T	1861	DIED
CANADA	JOHN	CAPT	1ST	REG'T	1861	DIED
CANADA	JOHN	CAPT	1ST	REG'T	1861	DIED









Sciences médicales.

Thérapeutique et Pathologie
thérapeutique.

