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Infantile diarrhea

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It is expected & presumed that a Frackleton Thesis should contain some evidence of original research, but in these days when there is such a numerous band of workers in the field with every appliance and advantage at command, it is difficult for the general practitioners to do much more than keep himself well abreast of the science & practice of his profession. I have had some difficulty in selecting a subject on which to write, but after reflecting, that I had no special training at hospital in the diseases of children, and finding that these constitute the great bulk of general practice and that I had in a great measure to educate myself in the knowledge & treatment of such diseases I thought it better to discuss the causes, symptoms, treatment of Infantile Diseases that

(2)

should be contributing a paper in some sense original.

Disease in children requires special study, for the symptoms by which it is accompanied often differ widely from those with which ordinary hospital practice has rendered us familiar. Children have special departures of constitution & another peculiarity which strikes the attention of any one accustomed only to disease as it occurs in the adult is the vast preponderance in infantile disorders of mere disturbance of function over disastrous consequences which may ensue from such derangements. Stake is to be no easy matter for a man entrained in the management treatment of childrens diseases to acquire a knowledge of the diseases peculiar to children, of the symptoms which characterise specially the manifestation of disease at all ages & of the importance to be attached

To correlate signs symptoms as regards diagnosis, prognosis treatment in certain cases of the same disease in children as distinguished from adults.

The study of infantile diarrhea in its various forms is one full of interest there is, I pres.
haps, no class of cases amongst children with which the medical man has more to do. There are few children indeed who are not more or less subject to it at some time or other & too often from a somewhat mistaken & rather un-
grateful notion on the part of the mother or those in charge of the child it is allowed to run its course unchecked, until affecting the general health recourse is had to treatment to stop or at least modify a disease which has long become chronic. From the experience I have already had I am convinced that many of the diseases of children may be traced back to a long continued & chronic diarrhea

while I have seen not a few cases in children said to have been suffering from so called Tubercular Diarrhoea, in which the state of the bowels being improved & attention paid to the child's general condition, particularly as to the food given, marked improvement has followed. I have seen such children reduced almost to skeleton form & right fully emaciated rapidly put on flesh in space of time from mere objects of pity they became plump fat. But on this point I need not further enlarge at present; later on when I come to treatment I shall have occasion to dwell more at length upon it.

Many divisions are the divisions into which authors have divided Infantile Diarrhoea, but all of them are open to the objection that they tend to confuse, the simplest classification is that adopted by Dr. West into Simple or Catarrhal Diarrhoea & Inflammatory Diarrhoea or Dysentery. Some such arrangement is necessary to separate

these different conditions for while the one is common attacks most children it yields generally to treatment the other is fortunately more rare while from the rapid manner in which it advances speedily brings its victim into a state of the greatest danger remains almost to the last little amenable to treatment

If we ask ourselves the question "why is infantile diarrhea so common" we must in forming our reply take into consideration the first great fact that this is a period when the nervous system of the child is weak even at the best, is subject to the most serious disturbance which reaches its summit on the appearance of every fresh tooth, while the whole digestive system is rapidly undergoing changes consonant with the growth of the child. In fact it is an accepted doctrine in most households that a state of diarrhea during the period of teething is alone consistent with the child's safety sic.

stead of endeavouring to correct it many are the doses of Castor oil which are pourest down the throat of the unfortunate little sufferer. Amongst the lower more ignorant classes does this hold good indeed it is only the constant discharge consequent trouble involved that induces most of the mothers to apply for treatment. But while the process of denitration & consequent irritations may be looked upon as the great cause of Infantile Diarrhoea there are others which play a not unimportant part in its production. Amongst these would I especially refer to the system of artificial feeding or cramming to which most children are subject. e.g. It will be universally admitted that children never thrive so well as when brought up at the mother's breast, can derive from her a plentiful supply of that nourishment which is so admirably fitted to sustain them. But unfortunately (tis so to the lower orders I would except although it is not confined to them) the

child is not many months, may often not many weeks old till to use a popular expression, is gets the run of the house his stuffed at every meal with the to it most undesirable substances which, per-
haps, ere they reach the stomach have come well nigh to choking the child. But "les va sans dire" a vigorous thump on the back sufficent almost we would think to produce dislocation of all the vertebræ Nature's objections to the unwhol- some food are disregarded & there it remains until ~~chaud~~ vomiting begins, set up the child gets rid of the poison only however to have the pro- cess repeated in the course of a few days. As I have said it is amongst the working classes that this system principally prevails, this is caused in this way. The mother commonly sits down to dinner the principal meal of the day - with the child on her knee his beginning soon to cry the state on its little arms various resources short per-
haps of allowing it to partake an trial but all

is of no avail & the master ends by feeding the child
with whatever comes handy, bread, potatoes beef &
even beer. This system is found to answer admir-
ably: the child remains quiet & is even happy & so
custom comes to be a second nature the child is
never content unless it gets a share of whatever is
going. Thus things go on, a chronic diarrhoea is
the result & at length beginning to be troublesome
the doctor is called in. And here is it that the great
difference in the treatment begins. Some astringent
is prescribed & the mother is ordered to give the
child nothing but milk & some coarse food but
however determined she may be to carry out his
instructions the continual crying of the child as
each meal comes round will its accustomed
dainties personal comfort is considered first & the
mother is yielded. The doctor at his next visit on
inquiring if the child is having milk is answered
"Yes" but is kept in ignorance is may be of the cir-
cumstancial feeding which is perhaps rendering all his

treatment abortive. Remonstrance in most cases is useless; hence tried it over & over again, & still I well remember in answer to my reproaches replied that if these children would only be too glad to give them anything that would keep them quiet.

The season of the year also plays an important part in the occurrence of infantile Diphtheria. Summer & autumn contributing much more heavily than spring or winter. And this is what we should expect for not only are atmospheric influences the most actively at work but these seasons also supply us with new vegetables, fruits to which children are all more or less partial which instead of being withheld from them are dealt out with a too lavish hand. Green gooseberries, unripe apples, to be play not an unimportant part in the production of many cases of that severe form of summer diphtheria, the dysenteric. I have more than once followed in the wake of

some itinerants buckles, that cause to thank him
for much of the additional work entailed by the
ready sale which he got for his rubbish.

When we look at many of the dwellings of the
poor consider the fearful dens in which many
of them live we have here another most fruitful
source of Infantile Diseases. Too often consisting
but of one room, that in a locality so closed in
that sun. there never brightens is the home of the
poor may serve to cover them from the inclemency
of the weather but it is a perfect hot bed of dis-
ease, this is the Infantile population condemned
to pass day after day, year after year breathing the
same pernicious atmosphere that suffers most
heavily - well then indeed is it little better than
a continued struggle for existence : the stronger
portion survive the weaker "go to the wall." It
is to be hoped that the reformation now being effect-
ed in our large towns by the City Improvement
Bands may do much to provide the poorer classes

with increased accumulation & also by expressing
obedience to the most important rules of sanitation.

Having thus looked at the causes or at
least some of the more important causes of infantile
diarrhoea it is now time to go on investigate
the symptoms. And here it will be necessary
to refer to our classification to treat first of
that simple & more common form of diarrhoea,
the catarrhal. Usually this variety is ushered in
by vomiting more or less severe which in most
cases precedes the diarrhoea or the two may com-
mence at the same time lasting for a certain
period & exist although it is not the rule that
unlability of the stomach continues throughout
the attack. The vomited matter consists first of
the contents of the stomach then of a nasty
green tenacious substance which has a sour
most disagreeable smell. & not as this period
affected the bowels soon take on increased activity
& a state of diarrhoea is induced. At first

focal in character the discharge soon assumes an
unnatural appearance, the motions lose their
proper consistency, become yellowish & this in
turn passes into green, either on exposure to
air or by the continuance of the disease. In the
course of a few days after from the effects of treat-
ment or of itself the discharge lessens & once more
assumes its healthy character. An attack, mild
like this, often in no way affects the general
health of the child except that for the time
being there is increased thirst. In general however
the disease is found to depend on the irritation
of a coming tooth which may be so severe as to
cause considerable fever, great heat of head & body
unperspiring skin this may continue till the
tooth has cut its way through the gum & all cause
of irritation being thus removed the fever & the
disease both subside. In children it is very dif-
ficult now almost impossible to determine the
amount of pain from which they suffer but I

are inclined to think that in many cases at least this form of diarrhoea is attended with a considerable degree of colic so called or rather straining which is not attended to renders the little patient fall round him for the time being miserable. It is this restlessness constant scream. in, of the child which makes many unscrupulous mothers close their children with opiates which has secured for Mrs. Winslow's Soothing Syrup & other similar preparations such an important place in the nursery. Amongst the lower orders (especially of Scotland) I have not observed the practice since I came to England) Laudanum is used in a most reckless & almost impudent. al manner & am certain, although I never could get positive proof, that I have seen more than one child whose premature death was principally owing to the unscrupulous use of this drug. It is a remedy which almost every house contains & I have known mothers give

is to their children in such doses which had I ordered them would have seriously disturbed my peace of mind. Such is the course & progress of a case of Simple Diarrhoea. It usually yields speedily to treatment & in a few days the child may be perfectly well. If on the contrary however it is allowed to go on unchecked it may speedily become dysenteric passing from one of little gravity to a condition free of the gravest danger. The diarrhoea which marks the convalescence of Measles is one of the most troublesome as well as most untreatable of the sequelae. In several instances I have known, it occasions the death of the child. The very last epidemic of Measles which I saw which broke out in a mining village contributed a very large number of cases of diarrhoea. To the Measles but very little attention was paid the Dr. perhaps never consulted till he was called in on account of the over active state of the bowels which was supposed to be due to

the "days" of the Measles.

It has been noted how even cases of simple diarrhea may merge into the Inflammatory or Dystenteric form. I will further consider the symptoms of this state. From the very outset which is generally sudden the disease is marked by a rapidity, severity of all the symptoms the child's life is at one instant in the greatest peril. As in simple diarrhea, this form is generally attended by vomiting, but of a more incessant nature, the stomach rejects every thing which in the desire to prevent the burning thirst the little supper eagerly swallows. The diarrhea is profuse & almost continuous, the slightest motion even on the part of the child is followed by an evacuation. The stools rapidly lose their healthy character become watery & almost colorless or of a dirty muddy aspect. Soon they consist only of unctuous mucus well here & there little particles of feces streaked with blood. The abdomen is drawn in contracted the skin is soft & pliable

to the touch. It is to be expected that a condition like this cannot long exist without speedily producing marked constitutional symptoms. The child lies prostrate on its mother's knee, uttering incessant cries & all its features bear evidence of the great depression of the vital powers. The skin is cold & dry, the pulse very rapid, very short, from the excessive drain upon the system that conviction is induced to which the name "spurious hydrocephalus" has been given. In this state the child falls into a brief doze with the eye lids half closed, starting every now & again for a few moments subsiding into its former condition. The head is rolled about in a restless tremulous manner there may be some twitching of the extremities. It is in this condition that the parents or those in charge of the child dreadings a convulsion are unusually possessed with the idea that the head is the seat of disease. This opinion they persistently stick to based as it generally is on the dictum

of some old wife who is regarded as "shilly" in children's diseases. But it is much to be feared, for my own part I will at once plead guilty, that this is a mistake which many medical men, especially those who have seen little or nothing of infantile diseases before entering practice are most apt to fall into. And what a mistake! On the accuracy of his diagnosis most probably depends the issue of life or death. On the one hand by recognising that the cerebral disturbance is but the consequence of exhaustion by so depleting his treatment to sustain the vital powers a favourable issue may be hoped for, while on the other hand if he is guided on perhaps by the entreaties of the friends to treat the boy by deceptively con- sidering as something truly cerebral his decaying brain instead of his assets in the ap- proximate dissolution. Leeches are applied, the child is copiously depleted. The result of this most active treatment is perhaps to usher

in a convulsion, the child becomes comatose his state rapidly dies. Dr West truly says "Diarhoea is the exciting cause of the greater number of cases of that spurious hydrocephalus in which cerebral disturbance from debility stimulates new inflammatory disease of the brain." But when matters have arrived at this point it is not uncommon for the diarrhoea to cease there is no necessary to exercise caution in respect to our Prognosis as we may fail to bring about re-action this child may speedily die. In this country it is not usual to have a very rapid termination such cases being more common in warmer climates where infantile cholera plays sad havoc amongst the children causing death perhaps in a few hours from the commencement of the attack.

But supposing the child to have got over the acute dysenteric attack, that the diarrhoea & sickness have abated there is still the danger that a too early return to indulgence susceptible

food may produce a relapse or perhaps a series of relapses which at length end in the case assuming a chronic form. The motions become very numerous varying in character, generally very fetid & the little supper is reduced to a state of great emaciation. Sometimes the food is passed just as it has been swallowed & even a drink of water may suffice to produce an evacuation of the bowels. The child becomes reduced to a perfect skeleton his powers of maintaining the proper heat of the body are notably diminished, the extremities being almost always cold. In an advanced stage the tongue becomes watery with aphthous patches or the whole mouth is covered with thrush. In such a condition with the vital powers so feeble it takes but very little to cause the death of the child: a slight increase of the diarrhea or the recurrence of some other disease speedily inducing a fatal termination.

I have before alluded to the frequency with

which diarrhoea occurs after measles remained but troublesome is often so. And if we consider that diarrhoea "per se" often sets up bronchitis in an otherwise healthy child it is not difficult to understand how the bronchial catarrh so often connects with measles and likewise, sympathetically affect the bowels. In the one case we have the bowels first affected, then the bronchi; in the other case the bronchitic symptoms are the first to appear the diarrhoea being only a secondary phenomenon but one which very often materially increases the danger of the case. These are, indeed, just the class of cases in which from a mistaken notion that no profuse evacuations are but the "ills" of the measles consequently injurious to the system in which the diarrhoea is allowed to persist the coming chronic laps the formation of weak imperfected bowels may, even develop in the child a phthisical tendency as regards the post mortem aspect.

cases in both severe acute Moronic diarrhoea
 the pathological conditions are the same. It is
 the large intestine which is most uniformly affect-
 ed. There is increased reascidity of the mucous
 membrane over all the parts of the membrane covering
 the solitary glands. In the next stage there is
 ulceration & the glandular mucous membrane
 is destroyed. If the diarrhoea has continued for
 any length of time the submucous coat of the
 large intestine becomes thickened, most notice-
 able in the rectum sigmoid flexure. In the
 small intestine the changes are more marked -
 about the two cecal valves or the nearer we
 approach to them. Peyer's glands are often affect-
 ed : sometimes a few are congested swollen
 ulceration even has been observed. Lastly
 the mesenteric glands even in the vicinity
 of the diseased large intestine deviate but
 little from a state of health.

And now we come to the Treatment

of Infantile Diarrhaeas it is obvious that here again we must refer to the classification already observed for the different forms of the disease require different remedies.

(1) Simple Catarrhal Diarrhaeas. The stomach in these cases being often very irritable the first indication in order to get the proper benefit from our remedies is to overcome this irritability. We will suppose that the child is at the breast & deriving most if not all its subsistence from the mother's milk. It must at once be taken from the breast so long as the vomiting continues allowed nothing but a little barley water & perhaps a drop or two of brandy may be given. Should this however be found to aggravate the vomiting it must be stopped. So soon as the stomach becomes quiet the child may be cautiously again tried with the breast but it should not be allowed to remain too long at a time, a mistake which is

repeatedly made. The mother thinks that as the child has been vomiting so long it must necessarily be weak & cannot possibly have too much nourishment. It is consequently allowed to drink its milk, & during the operation may possibly fall asleep, only however to be soon awakened with recurrence of the former symptoms. There is nothing of more importance in this affection, as indeed in all forms of Drambas, than the proper dieting of the patient his children who are already weaned they must for the time being be restricted to milk & urine water. A mustard poultice may also be applied over the stomach which often materially assists in removing the irritability. On the principle of similis similis I have often used P. acacia in slop doses every hour but many cases leave but reason to be remedied. He is well at present however I have found it of no avail & must confess I am as

yet unaware of the special conditions present which tend to success or non-success in its administration. I think however that I have seen most benefit from it in the diarrhoea that comes on in connection with teething. When successful it speedily relieves the irritability of the stomach although the diarrhoea may require some additional treatment before it entirely disappears. In general after having got the stomach quieted I usually employ Sulphuric Acid with perhaps a little Chloric Ether, also at least twice give the child some Dover's Honey Powder, desiring also that it should have a mustard bath each evening. Should the motions be pale, clayey, pasty looking as they often are I have recourse to the method described by Dr. Ringel & give one grain of Grey Powder every hour or two hours till the natural brownness of the stool is

restored. In simple diarrhoea there remedies generally suffice, although should the bowels remain loose for some time recourse must be had to some of the ordinary astringents such as Castor oil, hogweed & chalk mixture, for it must now be forgotten, that the longer the discharge continues the more difficult is it to cure. There is positive danger in allowing it to become chronic.

(2) Inflammatory Diarrhoea. It has before been observed that cases of simple diarrhoea, uncomplicated, are seldom or never fatal. So far as themselves turn towards recovery. In the form we are now discussing, the same unfortunately cannot be said, many of them proceeding to a fatal termination in a very short time. This is particularly true of cases of hepatic cholera, but save for at present treating of this severe though allied form.

This form of Disease, the Inflammatory, like
the last, the Catarrhal, is generally ushered in
with great irritability of the stomach. Con-
sequently it is necessary to have recourse
to the same plan of treatment to meet this,
taking the child from the breast giving it
nothing but barley water & applying a
mustard poultice to the stomach. When this
concretion has been combated if there is much
straining a mixture of Castor oil ℥ij. Morph.
one Spn. Chloroform, suspended in Ouncil.
This is often productive of the greatest benefit
& the Castor oil may be combined with Lan-
guish with equally good results. If the
motions are slimy mixed with blood a
weak solution of Belladonna or Mercury
in the strength of a single grain in ten
ounces of water of which the dose is a tea-
spoonful has in my hands often proved
useful. It may be employed in either the

Acute or chronic form, the special indications
for its use being the slimy character of the
 stools. If the diarrhoea from the piles be so
 severe the sickness so incessant as almost
 to constitute hysterical cholera it becomes of the
 utmost necessity that the treatment adopted
 should be such as the gravity of the case de-
 mands. The profuse discharge must be checked
 as speedily as possible, for this purpose,
 nothing answers so well as an emulsion of
 Horehound. The addition of some
 Acetate of lead or Sulphate of Copper renders
 the injection still more efficacious. For a
 child about half an ounce is sufficient to
 use at once; a greater quantity is apt to irritate
 also the intestine to contract, scapel the
 faeces, the child also should be put into
 a mustard bath, kept there for a few
 minutes. It is then removed thoroughly dry
 by hot towels the process may be repeated.

ed three or four times a day—
but let us suppose that the disease has been
very severe thus run a very rapid course than
when called in we find our patient in the
hypodermatized state. What are now the in-
dications for treatment? Have already alluded
to the danger of mistaking this condition for
treating the symptoms as if they were truly
cerebral. The child is lying, half drowsing on its
mother's knee, rolling the head occasionally
from side to side, if it has not had an
actual convulsion there may probably be tort.
uring of the extremities. If the diaphoresis
has not subsided it must be checked at
once, although general. At this stage there is
a full. Every effort must be made to restore
stimulate the vital energies. I do not say
that stimulants should not be given earlier
in the disease; on the contrary I employ them
almost from the outset certainly never

their administration becomes a necessity. I have generally used brandy but in several cases have noticed that its exhalation was not well tolerated, in these cases I have recourse to good whisky with the best results. The addition of a small quantity of camphor will strengthen its effect but the former must be sparingly used whilst the latter must be employed with rather a lavish hand, not large quantities at a time, but small & frequent repeated doses will do away well this ammoniacal delusion. It may be given particularly if the child manifests a repugnance to the more common medicative stimulants. The greatest attention to diet must be enforced, the child kept simple on milk & urine water till the more urgent symptoms pass off the solid food of any kind should be allowed till the disease begins to yield & even then great care is required in allowing animal broths or meat.

Should the disease pass through the acute stage it is not uncommonly happens that the diarrhea still persists with much of its dysenteric nature even the case assumes a chronic form. The motions may be very offensive smelling looking or green colored so many as ten or twelve may be passed daily so the evacuations may contain mucous blood or pus. Well such a profuse constant discharge it is impossible that the child can thrive for no matter how eagerly it may take food it is swept through the intestines before any of its nutritive elements can be absorbed into the system. The child consequently becomes more and more emaciated some times to such a degree as to make it become a mere object of pity. Evidently the proper indication for treatment here is to stop or at least moderate this excessive discharge but this is not always easy of accomplishment.

No disease perhaps has continued so long that there is considerable ulceration of the intestinal mucous membrane as requires long, careful treatment to overcome this condition. Now is the time, of all others, for the administration of Asturicin. There at the outset I would wish above all others unhesitatingly to decline for the sake of him. Doctors let him to use it when acting as assistant in a large mining district where chronic enteritis diarrhea was very common. I have had numerous opportunities of judging of its efficacy & I think I may say that I have scarcely ever known it to fail. His name is now succeeded when other remedies have failed. I generally give it in grain or two grain doses three or four times a day sometimes alone but usually combined with a little Dover's Powder. It is easily taken in pills. Its administration may be continued as

long as the disease exists. Its success is due,
I doubt not to its action as a nervous tonic
on the muscular coat of the bowel whereby it
prevents that undue relaxation which is too
often the continued cause of Chronic Disease.
I have tried Infusate of Sileres with Tartar Acid as
recommended by Dr. Gustave Smith, but although
sometimes successful, have not obtained such
uniform success from it as from the Oxide
of Zinc. But whatever treatment we may employ
a careful regulation of the diet must in
all cases be insisted on & so shall be prescribed
Sparingly before & want of due observance on
this point contributes most of all to render
all our efforts at treatment futile. Millie when
it agrees his rejected is too suitable food for
our children but should it be found that it
does not suit his rejected almost as soon as
it is swallowed we must allow beef to render
with the great induction being to keep up

the child's strength saves the tendency to death. Here the raw meat treatment, as recommended by Dr. Weisse of St. Petersburg, plays an important part. The meat should be cut up into very minute morsels, put into a mortar worked into a thick mass. The pulp so made is passed through a cutter, as fine as to prevent nothing to pass except the pure of the meat. A moderate quantity should be given at first in case a吐itile should be taken to it. For some days after the commencement of this regimen it is very usual to find the raw meat almost unchanged in the stools, but in spite of this it is soon found that under this diet the diarrhoea lessens till the child begins to regain its strength. Such is the raw meat system so very good one is it too if one could only get it properly carried out but in my experience I have found it this most difficult of accomplishment. When ordered it often

but in only two cases do I know that the child was actually adhered to him one of these have no hesitation in saying that it saved the child's life. In this case the diarrhoea was profuse continuous, the stomach so irritable that it would bear almost nothing the child in consequence so much emaciated that I thought it must necessarily die. Had had of the usual medical treatments but having never tried it must confess that I was rather sceptical. However resolved to try Salpermutin, at its administration myself. The child took it eagerly laid on it for days, with the result, that the diarrhoea speedily became stopped and gradually got back its lost strength. In the other case which was simply one of chronic diarrhoea which was for the time relieved by astringents but never thoroughly cured had recourse to it was gratified to find that by continuing it for some

time the diarrhoea was completely cured. But so far as my experience goes you cannot get this plan of treatment carried out amongst the lower orders. You may get it commenced in a way, but the trouble involved in its preparation does not commend it to them as a suitable means of treatment. Besides when you do get them to try it they generally think fit to supplement it by giving the child all kinds of adventurous food, whereas during the time that is in this regimen it is indispensable to forbid the use of any other kinds of aliment, save drucles except nutritive drucles - whatever form be given the child is should be small in quantity & administered frequently. The child should also be warmly clad & flannel rolls should be placed round the body as Dr. Smith suggests. To complete the cure it is also desirable to give the

which in the course of time on some treatment by giving it Penic. or iron has some
or Malaria etc. I have tried Reserpine,
but cannot say with much satisfaction how-
ever, besides, my experience of it is as yet
too limited to form anything like a definite
opinion -