

On the Diseases of Children

Robert Bruce 1833.

The subject of the present essay is one which, in its degree of importance, is second to no other branch of medical study, and indeed, it is one of peculiar interest on many accounts. Not only do their diseases differ in many respects (even in their kind) from those of the adult, but their capacity for withstanding the attack, is very much less. And with regard to these points, a kind of line of demarcation might be drawn, growing fainter & fainter as the child attains its full maturity. What helps to render the study of these diseases so important, is the circumstance of their very great fatality, as well as the rapidity with which this sometimes happens. It is estimated that one out of every 3 children, dies before the termination of the 5th year. In children also, there is a much greater sympathy between the different parts of the system. The great activity of all the processes in the child, & the great susceptibility of the nervous system, along with the numerous bloodvessels, especially the arterial capillaries, are causes of that great predisposition to sudden attacks of disease, rapidity of progress, & frequently fatal termination, existing in the child, at the time when organic changes so readily take place: This great activity of all the organs & functions in the child, which, while it predisposes parts to take

on a diseased action, confers at the same time great energy & power of reparation, which come into play when the acute stage is over; so that in chronic disease, the child has more chance of recovery than the adult. The extreme nervous sensibility of the child is one great source of disease, & gives a peculiar character to the diseases which may affect it.

When a morbid action has once set up in a mucous membrane, it shows a great tendency to extend along the course of that membrane, especially downwards.

There are particular periods of the child's life, which might well be deemed critical, viz, the first & second dentitions so that particular attention ought to be paid to the general state of the health at such epochs, & any appearance of morbid symptoms carefully watched.

One of the most common sources of illness in childhood, is irregularity of diet, or improper food—causing derangement of the stomach & bowels, which are apt to be productive of more serious results than in the adult. The child is particularly liable to be affected by changes in the temperature, or by impressions of cold & wet, as the power of generating heat is not great; these powers, low at any time, are most so during sleep, & it is, consequently, at this time, that there is greatest susceptibility of the injurious effects of alternations of

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temperature. Want of light & air, are very injurious, the bad effects of which are mostly to be seen among the poor. One of the most important points with regard to the diseases of children, is their diagnosis, one which is often attended with great difficulty, a fact readily understood when we consider the circumstances in which we are placed in regard to them. we are here deprived of things which we are accustomed to consider necessary, & put in force in the diagnosis of disease in the adult. One of the first things we do on being introduced to an adult patient, is to put some questions, but we cannot do this in the child, when it is very young, & when older, so as to be able to speak, it either does not comprehend you, or refuses to speak; but should it reply, you cannot depend upon the answers— for instance, when you ask where pain is felt; the child will often point out a quite different place from its actual seat— Again, in the adult, you auscultate the chest without difficulty; but to attempt this in the child, you require to use great address, & will sometimes fail altogether; the child, perhaps, cries incessantly, & you cannot distinguish any sounds in the chest. Also in feeling the pulse, much difficulty will occasionally be experienced; the struggles of the child may prevent you feeling the beats at all; & if you hold the arm

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forcibly, the child cries, and in its easily excitable system the pulse will be raised, & an inaccurate result obtained.

To prevent these occurrences as much as possible, care should be taken not to frighten the child, as by coming into the room hurriedly, talking in a loud voice, &c.

Many points may be ascertained before coming to a close examination, sitting at a little distance, while at the same time, you may obtain some particulars from the nurse. Some points should be attended to before others, as during sleep, you will best ascertain the state of the pulse, as also the frequency of the respirations. In examining the chest, the ear should be applied to the back part of the lungs first, as it is not only easier to examine there, without disturbing the child, than at the front, but the information desired is much more valuable. Afterwards, the front also may be examined if necessary. Percussion should come after auscultation, as the child is more apt to be disturbed by it, & very, rendering it almost impossible to auscultate afterwards. The chest should be struck gently, as it is very resonant, & with the fingers interposed. The expansion of the chest should also be noticed, observing whether it expands freely, on the respiration be abdominal, & also, whether the child takes full or short inspirations. Again, the abdomen cannot be properly

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examined while the child is crying, as the muscles then become tense. An examination of the mouth, to ascertain the state of the tongue, gums, &c, must not be forgotten, and this is often by no means easy of performance, it is best not to attempt it until you have finished your examination of other parts. If the child is crying you may see the tongue, & pass your finger into the mouth; but if it is quiet, by placing a finger on the lips, or by rubbing on the gums, it will generally open its mouth, when you will obtain a very good view of it by putting in your finger, & passing it over to the back of the tongue. Of course, all these minute details are not necessary in older children.

On first seeing a sick child, we should attend to the expression of the countenance, & the attitude; when the brows are knit, the eyes fixed & staring, or looking wild and vacant, our attention is directed to the head - see whether it hangs heavily on its nurse's arm, or rolls about from side to side, sunk on the pillow, or if it puts its hands up to its head; we should observe if the neck is stiff or retracted, we must also pay attention to the state of the limbs, and observe the condition of the pupil, whether contracted, or dilated & insensible to light; The young child generally swallows any expectoration, & so we have not this to guide us in our diagnosis. When acute inflammation is present

in the chest, the respiration is hurried, the alae nasi dilated & in quick motion, the respiration is carried on principally by means of the diaphragm & abdominal muscles; But when the inflammation is situated in the abdomen, its muscles remain quiet, & those of the thorax are principally called into action.

The temperature of the skin must always be attended to; it may be as high as 104° during disease.

With regard to the diseases which may affect the human frame, some ^{are} almost confined to childhood although most of them may occur at any period of life; sometimes we are able to assign a reason for this, & sometimes not. In the case of Measles & Scarlatina for instance, we may reasonably suppose that they are peculiar to childhood, because at that time the children are soonest exposed to the contagion; & because such diseases having occurred once, are not liable to attack the same person again. We might include small pox also, when there has been no re Vaccination, but where it has been practised, the disease becomes more frequent at a later period of life. Of the other diseases peculiar to early life, we may mention, Croup & Whooping cough, & these last most especially are diseases of early life. There are other diseases which occur most commonly during childhood.

of such are, Acute inflammation of the lungs, Convulsions, Scrofulous disease, Hydrocephalus Pellicular states of the mouth, Inflammation of mucous membrane of ^{stomach &} intestines, Acute skin diseases, Chronic diseases of the scalp, Worms Calculous disorders. Diseases of the brain & nervous system, & of the digestive system are most common during childhood - Affections of the respiratory system are extremely common at all ages, though they often terminate fatally in children -

The diseases of the brain & nervous system which occur most commonly in the child, are Acute & Chronic hydrocephalus, Hydrocephaloid disease - Tubercle, Convulsions. The reason of the extreme frequency of diseases of the nervous system (proving fatal to about 1 in every 4 children) is probably owing in part to the rapid development of the brain, the active state of the nutritive process by which this is performed causing a greater liability to disease from causes which would perhaps be quite innocuous to the adult brain; & also to the greater liability of the brain to disorder from the undeveloped state of the cranium (membranous fontanelles & unossified sutures)

The most common diseases of the digestive system include, Stomatitis, Softening of the stomach & intestines, Dyspepsia, Diarrhea, Tapes mesenterica, Tubercular

peritonitis, Intestinal worms. The (mortality) caused by these diseases is about one, ^{out} of every 10 children.

The diseases of the respiratory require to be studied most attentively, as the mortality is very great, causing about a third of all the deaths under 5 years of age; They are thus much more fatal than the diseases of either the nervous or digestive systems. The chief of such diseases are Bronchitis, Pneumonia, Pleurisy, Whooping-cough, Croup, Phthisis.

We shall now take some more particular notice of these systems & of their diseases, as occurring in the child; and first, of the nervous system. The diagnosis of such diseases is attended with many difficulties, from the incapability of the child, if very young, to give any account of its sensations, or if older, to give a correct account; disturbance of the motor powers, likewise, gives us very little information, as this may occur in trivial as well as in severe affections (Convulsions) will sometimes recur frequently without any particular lasting effects, & without any sufficient cause being perceived; whereas, in the adult, such symptoms would betoken serious disease. Knowing all this, we must endeavour to find out in some other way whether there is disease or not: we may suspect it if

the child has become listless & does not recognise those whom it is usually most attached to: we ascertain if it is pained, by the change in its looks, by its anxious expression; by the disturbed movements of its head. When the child is moved, it sometimes becomes dizzy, this you may surmise by its sudden ^{staring} look. There is often intolerance of light, easily perceived by the efforts of the child to avoid it. It is often drowsy, lying with its eyes half open, & frequently awakening with a start, & crying.

But we must never conclude from one set of symptoms alone, that disease of the brain exists - we must examine the heat of the skin, the state of the fontanelles, & of the bloodvessels of the head - the character of the pulse - and the condition of the pupil. The state of the digestive & respiratory systems must also be attended to - Nausea & vomiting are important symptoms, also the occurrence of convulsions, but the latter may arise from slight causes as well as serious ones, & may be quite unconnected with disease of the brain, we have to ascertain if any such causes are present; such as, the presence of worms in the intestines, or of irritation from a tooth endeavouring to pass through the gum. It is of consequence to know, whether the convulsions or the other symptoms of

disease of the brain. It is a bad symptom when we find the thumbs drawn in towards the palm.

Capillary haemorrhage is more frequent in the child than in the adult, & the period of its occurrence is usually immediately after birth, in consequence of the great & continued pressure to which the head of the child is subjected during its passage through the pelvis of the mother; the blood is sometimes discharged by the vessels of the scalp (instead of those within the cranium) into its own tissue; or it may be discharged between the brain & pericranium; in the latter case often giving rise to a tumour, known under the name of cephalhaematoma, & frequently met with by those practicing midwifery, as it generally appears within 24 hours after birth; this tumour is of no consequence, & disappears without any treatment. Cerebral haemorrhage is not so serious a disease during subsequent childhood as in the new-born infant; the blood is almost always effused into the arachnoid cavity, while in the adult, it may take place in various parts of the brain.

The symptoms of this affection are very obscure, paralysis, though common in the adult, is rare in the child, owing, perhaps, to the diffusion of the blood over a larger surface. Haemorrhage into the substance of the brain is extremely rare in the child.

Inflammatory affections of the brain, occur by far the most frequently in children. About 90 per cent of all the cases of fatal inflammation of the brain occurring before the age of 10, & 8 p.c. before the age of 5. Inflammation of the brain in children occurs under two different conditions. 1. In previously healthy children. 2. In connection with the scrofulous constitution, or resulting from tubercular deposit in the brain or its membranes. The former of these is named Encephalitis; the latter, & much more common of the two, Hydrocephalus. It is of the utmost importance to recognise Hydrocephalus in its early stages, for it is only at that time, that there is much probability of curing the disease, when in the advanced stage, & all the symptoms strongly marked, few, or no recoveries take place. We do not often meet with this disease in strong healthy children. We should always be on our guard when a child has been gradually wasting away, without any evident cause, especially if any of the family are consumptive, if the child should become at all drowsy, or has a short, hacking cough; vomiting is a suspicious sign, when it occurs independantly of any meal having been taken. And here, as well as in all other diseases of children where there is cause for apprehension, the child must be seen several times a day, as sudden changes

are so very liable to occur. The diagnosis of hydrocephalus, from remittent fever, is sometimes difficult, but the latter does not generally occur until after the 5th year, the former usually before that period. Vomiting, so serious a symptom in Hydrocephalus, is absent in remittent fever, except at first; the tongue is moist in the former, dry in the latter. Then there is a costive state of the bowels in hydrocephalus; generally relaxed in remittent fever; in the latter, also, there is usually some degree of pain in the iliac region; Delirium is of early occurrence, while in hydrocephalus it never occurs until a late period, or not at all.

The pulse is much quicker in the fever, there is great desire for drink, while in hydrocephalus this is not the case usually. In the latter, the exacerbations & remissions are irregular, in remittent fever they occur regularly.

Incipient hydrocephalus might also be mistaken for simple gastric disorder; vomiting & constipation being present in both, also headache; in gastric disorder a slight degree of fever, a heavy, but not anxious countenance. But recognized by the speedy relief from the use of appropriate remedies. Another important point with regard to hydrocephalus, is that there are sometimes delusive appearances of recovery; the child appears to be getting better, cheerfulness returns, the other symptoms abate. But this soon disappears, & the preceding unfavour-

able symptoms return. The term "water stroke" has been applied to any case in which the head symptoms were prominent, & proved fatal in a short time, 24 to 48 hours. Simple inflammation of the brain is a rare affection in children, & differs from the serofulous or hydrocephalic affection, by its occurring in a child, of previous good health, with violent vomiting & great febrile excitement, running its course without intermission, & with great rapidity to a fatal termination, which may happen in a few days, generally within the first week; convulsions occurring at the commencement, or soon after, & generally continuing almost constantly until death. Inflammation of the brain sometimes succeeds to disease of the ear, & is a most formidable & fatal affection.

Chronic Hydrocephalus is a dropsy of the brain, & is sometimes congenital. There is reason to believe that in some cases it arises from a slow kind of inflammation of the arachnoid membrane, especially of that lining the ventricles. Impaired nutrition is one of the earliest symptoms; sometimes the enlargement is not preceded by any distinct cerebral symptoms. Almost every case proves fatal, generally at an early period, either by convulsions, or, from their weakened state, are easily carried off by intercurrent diseases, or sink from an atrophied

condition of the brain. In some few cases, however, such persons live to come to manhood, & even to a considerable age. Hypertrophy of the brain is an affection which may be confounded with chronic hydrocephalus, the diagnosis is sometimes difficult, but is of importance with regard to the prognosis & treatment; when it is hypertrophy, we have more hope of cure. In hypertrophy, the head does not become so large as in chronic hydrocephalus, the enlargement is most apparent at the occiput, the eye has never the prominent appearance & downward direction that we observe in hydrocephalus; although the forehead may become prominent through time, the eye always remains sunk. Besides, the symptoms of cerebral disturbance in chronic hydrocephalus are much more marked than in the case of hypertrophy, & are observed to come on much earlier.

Hydrocephaloid disease is of great importance to be acquainted with, in connection with hydrocephalus (acute) because the treatment which is proper for the one, might prove fatal if employed in the other. Hydrocephaloid disease is attributed principally to exhaustion, which may be induced by premature weaning, diarrhoea, some wasting disease, or from too active treatment. We meet with the most striking examples of spurious Hydro-

cephalus in the course of infantile diarrhoea. Dr Marshall Hall, one of the first to describe this affection, divides it into two stages, that of irritability, & that of torpor. "In the first stage, the infant becomes irritable, restless, & feverish; the face flushed, the surface hot, & the pulse frequent; there is an undue sensibility of the nerves of feeling, & the little patient starts on being touched, or from any sudden noise, there are sighing & moaning during sleep, & screaming; the bowels are flatulent & loose, and the evacuations are mucous & disordered.

If through an erroneous notion as to the nature of this affection, nourishment & cordials be not given, or if the diarrhoea continue, either spontaneously, or from the administration of medicine, the exhaustion which ensues is apt to give place to a very different train of symptoms.

The countenance becomes pale, & the cheeks cool or cold; the eyelids are half closed; the eyes are unfixed, & unattracted by any object placed before them, the pupils unmoored on the approach of light; the breathing, from being quick, becomes irregular, & affected by sighs; the voice becomes husky; and there is sometimes a husky, teasing cough; & eventually, if the strength of the little patient continue to decline, there is a crepitus or rattling in the breathing. The evacuations are usually green; the feet are apt to be cold." When the symptoms

are ambiguous, we should trace the manner in which they came on, and their probable cause. Another important diagnostic character is derived from the state of the anterior fontanelle (when the child is very young), which is generally the case, in hydrocephalus is found to be tense and prominent, but in hydrocephaloid disease, concave & depressed. When head symptoms come on in an infant, we should not judge of their import merely from the state we find it in, but enquire into its history, whether it belongs to a consumptive family, or if any of them have had hydrocephalus. Whether the infant has thrived at the breast or been drooping for some time back; or if, having thrived at the breast, it fell off on being weaned. Ascertain the state of the bowels; & the period at which vomiting comes on. The treatment of this affection is the opposite of that for hydrocephalus, the system must be nourished, & stimulated & tonic if necessary. The stomach being very irritable, nourishment must be given in small quantities at a time & often repeated.

Tubercle of the Brain. A rare affection in the adult, but common in children. Deposits of various sizes situated in the substance of the brain. They are in general associated with the granular state of the membranes frequently met with in hydrocephalus. The cause of this affection being more frequent in the

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child than in the adult, not known. Neither the character nor intensity of the symptoms bears any regular relation to the extent or seat of the local mischief. & moreover, the symptoms usually ascribed to the disease may exist without any tubercle being present, so that in the treatment, we endeavour to combat the most prominent symptoms, in the hope that the disease is not tubercle.

Convulsions - This deserves particular notice as a symptom of very frequent occurrence; hardly a case of serious disease of the brain running its course without their appearance. In many cases, convulsions in the infant, ansuew to delirium in the adult. The affection is not by any means a necessarily serious one, nor is the degree of danger directly proportional to the violence of the attack.

It may be observed that convulsions are most frequent during early infancy, when the brain is but imperfectly developed, & its functions least complex; & as the infant gets older, the convulsions become less & less frequent. And the more frequent their occurrence, the less serious are they in proportion. Fever in the adult is ushered in by shivering, in the child by convulsions. To find out the cause of convulsions, we should endeavour to ascertain where the irritation lies which causes this excitement of the

nervous system; They may be induced by the presence of worms in the intestinal canal, a constipated state of the bowels, the teeth endeavouring to pierce the swollen gum, any sudden fright, pain, or disorder of the digestive system. We should enquire whether any cerebral symptoms preceded the attack; as acute disease of the brain rarely sets in without convulsions; however, they occur early in apoplexy & Phrenitis; but even in these diseases, the convulsions are usually preceded for some hours, by great drowsiness & pain in the head, also vomiting while the recovery from the convulsions is imperfect.

Tubercles in the brain may not be attended with them until the last. If they occur in an apparently healthy child, they may indicate that one of the eruptive fevers is about to come on, especially if the stomach has not been overloaded, or any indigestible article of food taken.

You must be very careful how you receive nurses assertions of the child having been much convulsed; while you perhaps find upon further enquiry, that it has not had any fit; they in general mean an inward fit, which forebodes an attack of convulsions, in which, the infant often appears as if smiling in its sleep, & rolls about its eyes; the mouth is sometimes drawn down, with slight twitchings of the lips, & at times some surrounding blueness of the mouth, owing to the

difficulty of respiration which sometimes occurs; the child is easily started; gentle moaning also takes place.

This "inward fit" is usually induced by overdistension of the stomach or bowels, flatulency, or undigested food; and relief will be obtained on removing the cause; by administering a mild aperient, or a few drops of turpentine, or sal volatile with some aromatic water.

Symptoms of a convulsion fit, Violent spasmodic action of the muscles, sometimes only of certain muscles, or limited to one side - twitching of the muscles of the face, starting of the eyes, or distortion of the eyeballs; the tongue is protruded, & there is foaming of the mouth;

The body is stiff & immovable for a while, & then in a twitching motion; the hands are in general firmly clenched, the head & neck are drawn backwards, & the limbs violently flexed & extended; the respiration is obstructed or laborious; at the same time, there is absence both of consciousness & sensation; the eye is fixed & does not see; the pupil is immovably contracted or dilated; no sounds are heard; the pulse is small & very frequent, & the skin is bathed in perspiration.

The face often red at the commencement of the attack, becomes purplish towards the conclusion. The convulsion fit may be mild, & present the above symptoms in a modified degree, & some of them may not be seen at all.

The fit may last from a minute up to an hour or more when they cease, the child falls asleep, or looks as if bewildered, or falls a crying. It then recovers; or perhaps sinks into a state of coma, remaining motionless, or twitching of some muscles may continue; or lastly, it may die in the fit; this, however, is uncommon, unless the child is much exhausted, or the convulsions have occurred as the result of apoplexy, or whooping-cough; or when associated with spasmodic croup. The treatment consists in removing the cause of the irritation - the child's clothes should always be loosened, the head elevated, cold air admitted, & the face sprinkled with cold water; or the cold affusion employed. Musticks applied to the feet, or the warm bath, is also of great service, increasing the effect of the cold applications. When there is much nervous irritation, small doses of Dover's powder are often of service; but if the attack is attendant on inflammatory action, great injury may be done by endeavouring to control the convulsions by narcotics; & still more by giving stimulants, (which are sometimes used as antispasmodics).

Convulsions having once attacked a child, are liable to return; we must try to prevent this by using all means to improve the general health & strength. Change of air & tonics, are especially indicated in delicate children,

Diseases of the Respiratory Organs. Diseases of these organs, so very frequent in children, & attended with so great a mortality, (even more so than diseases of the nervous system) require to be very carefully studied; which, from our means of diagnosis, we may enter more confidently upon; being able, with care & patience, to ascertain pretty nearly the state of the lungs in children, though not with so great certainty as in the adult. Besides, in the diseases of the nervous system, the only use of our knowledge, in many cases is to be able to say, that the issue of the will be fatal, medical aid being of little or no avail; and although such an event not unfrequently happens in diseases of the respiratory system, still there is much more hope of success from the skill & attention of the practitioner. Some peculiarities in the respiratory & circulatory systems will now be taken notice of. And first, the rapidity of the pulse & respirations - In infants about a week old, the average frequency of respiration is about 40, nearly 3 times as quick as in the adult; the rate of the pulse in the former is about 130, from that to 115 during the first year - 115 to 100 during the second year. 100 to 90 during the third year, about the 7th year - 90 to 80. while in the adult, it is about 70. The frequency of the respirations & pulse in the child, however, is very easily raised by some transient excitement,

or disturbance, the pulse, to 140, the respirations, to 84 —
 About the 6th year, the respirations are about 30. The
 activity of the vital processes in the infant cannot altogether
 account for this easy excitability of the pulse & respiration,
 but must depend upon the weak condition of the system
 generally. The respiratory apparatus is not only
 weaker in the infant than in the adult, but is less
 powerful compared with the difficulties it has to over-
 come. Another peculiarity in the infant is that its respi-
 ration is in great part abdominal, & the respiratory mus-
 cles is very feeble compared with the puerile respiration
 of subsequent childhood, when the muscular system
 is more developed. The respiration being so feeble in
 the infant, little is required to put a stop to it altogether,
 so that at birth the muscular power is sometimes so
 feebly developed, that it is insufficient to carry on life;
 the blood is imperfectly aerated, & nutrition is carried on
 defectively. The same state results from cold, from insufficient
 food, &c. Portions of the lungs sometimes become ~~contracted~~
 emptied & collapsed in consequence of mucus filling up
 the bronchial tubes; dyspnoea then grows urgent, &
 the child dies from symptoms which in the adult, would
 result only from serious disease, (structural) This is important,
 especially with regard to the treatment: weakness being
 the cause in the one case, & requiring stimulants, in the

other, the disease is serious, & requires corresponding activity of treatment. Inflammatory affections of the respiratory mucous membrane, are of very frequent occurrence in infancy, owing to the highly vascular & sensitive state of the mucous membrane, & of the close sympathy with many morbid processes; as in the cough caused by the irritation of teething, or of worms, or from the stomach; and the intestinal mucous membrane is seldom affected without that of the respiratory apparatus, suffering along with it. The lining membrane of the respiratory apparatus is not so extremely susceptible during the first month or two of its life as afterwards; perhaps caused by the general feeble vitality of the infant: in the same manner as the mucous membrane of the intestinal canal seems to be during the same period; constipation being frequent, & diarrhoea comparatively rare. There is an exception to the general insensibility of the respiratory mucous membrane during the first two months, in that lining the nose; coryza is therefore more frequent there, much more so than the other forms of catarrh. Coryza, or "snuffles", so called from the snuffling noise produced during inspiration by the swelling of the mucous membrane: the discharge when it becomes puriform, sometimes dries, & forms a crust about the nostrils, inter-

fering much with respiration: This affection, however, is seldom so severe as to prevent the child from sucking.

Little treatment is called for, nor indeed, is it of much avail. But when the child cannot suck, it must be fed with a spoon; Yeaws must be taken to prevent the accumulation & drying up of the thick secretion.

Catarrh appears to be most frequent during the period of teething, & very slight causes are sufficient, to induce it; the approach of a tooth to the surface, & diarrhoea frequently going along, or alternating with it,

Diseases, as well as reparative processes go on with great rapidity in early life; from this circumstance, as well as from the great susceptibility of the respiratory mucous membrane, what is a trivial disease today may become serious by tomorrow. Catarrh is also a prelude to Measles, Hooping-cough, &c, so that this affection, in the child must be viewed more suspiciously than the same affection in the adult.

Bronchitis One source of difficulty in the study of bronchitis & pneumonia in the child; & an occasion of great danger, is the tendency of the lung to become collapsed, & so to prevent the admission of air, and consequently, the due oxidation of the blood. The detection in the chest of the adult, of a mixture of rhoncus, sibilus, & large crepitation, would not excite much

apprehension; it is otherwise when such symptoms are met with in the child, for, a copious secretion of mucus in the bronchi of their lungs is sufficient to prevent free access of air to the pulmonary vesicles, & thus induce collapse of a considerable portion of the lung. This accounts for finding dulness on percussion, when a few hours before, we had found none, & the occurrence of bronchial respiration; And such changes occur without any exacerbation of febrile symptoms, such as would occur in consolidation from inflammation. In general, an attack of bronchitis which is long in reaching its height, seldom proves of a dangerous character.

An uncomplicated case of idiopathic bronchitis, taking place in a healthy child, is generally over in a few days; but an increased sensibility is left to a recurrence of the affection. The most dangerous form of bronchitis, is the acute or suffocative; the smaller air tubes are here involved, throughout a part of the lungs, or throughout the whole: the inflammation is very intense, terminating either in the abundant secretion of pus, or in the formation of false membrane that almost obliterates their cavity; or gives rise to vesicular pneumonia, & vesicular bronchitis, by involving the pulmonary vesicles themselves. Sometimes it occurs suddenly, though generally it is preceded by the

ordinary symptoms of catarrh, for some days; or it may occur after the eruptive fevers. The diagnosis is sometimes a little difficult, from the alarm of the child; sensibility of its surface being much increased, so that percussion cannot be easily practised. We diagnose from pleurisy by finding that the sensibility is not limited to one side, but is felt on every part - percussion yields a natural sound. The ear at first detects a mixture of rhoncus & sibilus, afterwards a sub-crepitant rale; finally, a mucous one, on account of the air penetrating little farther than the larger bronchi; which is known by hearing the smaller crepitations when a deep inspiration is taken, as in coughing. This disease has proved fatal within 48 hours, but usually not until the 5th to 8th day.

With regard to the treatment, we must carefully guard against the superruption of pneumonia, or collapse of the lung. The general principles are the same as in the adult. We may remark here that the degree of dyspnoea in a case of infantile bronchitis, must not always be taken as a measure of the affection of the lungs: it may only be an evidence of the sympathy of the nervous system, since there is, as has been already remarked, a great tendency of this system, in early life, to sympathize with the

affections of other parts; especially seen in inflammation of the respiratory organs. Therefore, if this symptom is treated actively, the child may lose its life. To prevent such an error, you must take notice of the conditions of other parts of the system at the same time; see if there is any increase of the heat of skin, or any alteration in the previous state of the chest.

When such symptoms (nervous dyspnoea) occur late in the disease, they indicate that the active treatment, must be given up. (Pneumonia) is one of the chief dangers of infantile bronchitis, but it may arise independantly of it. When it supervenes upon catarrhal symptoms, it often comes on insidiously, at other times, suddenly, & with well marked symptoms.

Again, pneumonia may exist along with bronchitis, forming broncho-pneumonia; especially during the teething period. A violent onset does not betoken a more serious attack. The persistence of an almost unvarying high temperature is one of the characteristics of the disease as occurring in the child as well as in the adult. Crepitation is heard in the chest of the child, but seldom so minute as that true pneumonic crepitation met with in the case of the adult: it may, however be heard for an instant when the child takes a full breath. We can get no information from the sounds,

of the voice, in the child; which aid us so much in diagnosing the disease in the adult. Another symptom viz, what is derived from the character of the sputa, present in the adult, & of much importance, is wanting in the case of the child, in whom, it is generally swallowed, even up to the 3rd or 6th year. Pneumonia usually runs its course rapidly, sometimes proving fatal before there is any distinct dulness, or bronchial breathing; this disease, although in general easily recognised when alone, yet coming on insidiously, in the course of other diseases, requires to be carefully & patiently looked for. Diagnosis of Pneumonia from Pleurisy - Pain in the chest is more frequent in the latter, & there is greater sympathetic disturbance of the brain, as well as greater restlessness; also absence of the râles characteristic of pneumonia; & air enters less freely in the affected side; a friction sound may even be heard. As a general rule, whenever a child is suddenly seized with symptoms indicating some affection of the lungs, & the auscultatory signs are absent (of pneumonia), the disease is pleurisy, especially if the child bears percussion on the one side, & not on the other. From incipient phthisis - Vomiting, pain in the head, restless nights, & talking in the sleep, are present in the beginning of almost all the acute

diseases of children — Fever & constipated bowels are present in pneumonia as well as in incipient phthisis. Sympathetic affection of the head is seldom wanting in pneumonia, as well as cough, although slight; so that it may not be noticed, or if so, mistaken for the sympathetic cough sometimes present in incipient hydrocephalus.

The vomiting of pneumonia soon gives over, in general, & is free from the permanent nausea & irritability which occur in the early stages of hydrocephalus. The evacuations in pneumonia are natural; the tongue much more red than in hydrocephalus; the pulse much more frequent; the heat of skin (especially of trunk) much greater; thirst generally urgent. Pneumonia sometimes occurs in children while teething, generally in weakly children, & is very apt to be overlooked, as it runs rather a chronic course; we require to be on the watch for it. The treatment of pneumonia in the child is conducted on the same principles as that of the adult.

No point in the management of this disease is more difficult than being able to know, exactly when to have recourse to stimulants. Pleurisy

Idiopathic pleurisy is a rare affection in childhood; but secondary pleurisy, coming on in the course of pneumonia, is perhaps as frequent in children as in adults. After the 5th year it begins to be more frequent

The symptoms, course, & treatment, of Pleurisy, are much the same at every period of life. However, there are some peculiarities, in the beginning of the disease, as it occurs in children; the symptoms pointing more to the head than to the chest. There is vomiting; fever; headache; delirium; screaming or crying; short cough & hurried breathing; but the cough may be absent, & the breathing not much hurried. We diagnose by means of auscultation, which, although of less value than in the adult, still gives much information.

The presence of feeble respiratory murmur, at the lower part of the lung, & sudden accession of acute febrile symptoms in a previously healthy child, almost certainly denote the existence of pleurisy.

The diagnosis of pleurisy is rendered more difficult, in the child, from various circumstances; the difficulty of ascertaining the exact seat of the pain felt—the want of information to be derived from modifications of the voice, being weak & shrill, & emitted in a different pitch at one time than another. And, for the same reason, we cannot gain much from the vibration of the voice, by placing our hands on the chest.

The negative symptom of absence of sputa, is of no use here, as it is always swallowed by young children. Chronic pleurisy almost always comes

on in the course of other affections, frequently as a complication of the dropsy which sometimes follows scarlatina; & then, may very easily remain unnoticed, as in some of these cases, there are few symptoms present, to denote its existence - there may be no complaint of pain; no increase of the cough, or of dyspnoea; for these two generally attend to some extent, the anasarca succeeding to scarlatina.

Croup - Cynanche Trachealis - A disease worthy of great attention from the formidable nature of its symptoms, & generally fatal termination. Different from cynanche laryngea, which is almost confined to the adult; for the inflammation of croup sometimes extends upwards to the larynx, as well as down the bronchia. Cynanche laryngea is not so fatal a disease, as the sufferer is often saved by mechanical means, which are seldom of any benefit in croup. What renders croup more remarkable, is the termination of the inflammation in the formation of false membrane; an uncommon occurrence in mucous surfaces; there is no such membrane formed in cynanche laryngea. The danger of croup is often greatly increased by concurrent inflammation of the lungs. The usual period of the occurrence of croup, is between evening & midnight. It most frequently attacks males, no reason can

be assigned for this. It is liable to occur endemically & prevails in cold & damp situations: its attack usually comes on during the night; its symptoms are generally preceded for a day or two by catarrh, which is attended with hoarseness, this is important, as hoarseness does not usually attend a common cold in ^{young} children; or there may be no premonitory symptoms. Croup having once occurred, is liable to return, but subsequent attacks are generally less severe. In no disease is the prompt employment of appropriate treatment more important, as in none, does the use of remedies sooner become unavailing. An error liable to be fallen into, is to over-treat the disease; it has a tendency to remissions & exacerbations, but these exacerbations may be merely spasmodic, & capable of being removed by immersion in a hot bath. On the decline of the croupy symptoms, we must be on the watch for any inflammatory affection of the lungs. —

Spurious Croup or Spasmodic — Child crowing.

This is a spasmodic affection of not infrequent occurrence in children, & resembling croup in its most evident symptoms. The essential distinction between the two, is the absence (in the spasmodic form) of inflammation & fever, & therefore of any effusion from the mucous membrane of the air passages: The

child is suddenly seized by a catch in its breathing, it struggles to inspire, but is unsuccessful for some time, at length, air is drawn in with a shrill whistling or crowing sound, like that of croup, evidently depending upon a temporary narrowing of the fissure of the glottis: these symptoms take place in paroxysms, more or less frequent & severe; sometimes there is a peculiar contraction of the hands & feet. The attacks often take place after a full meal, and are often connected with dentition. Spasmodic croup may be distinguished from croup by its sudden accession & departure; by the freedom of breathing during the intervals of the paroxysms; by the absence of fever, of catarrh, of hoarseness, & of any abiding cough. It seldom occurs after the end of the third year of the child's life. The affection is sometimes a perilous one, the respirations being so long suspended as to destroy life; or general convulsions, take place, the child dying comatose. The treatment depends greatly upon the causes, predisposing & exciting; the state of the bowels & skin must be regulated; fresh air is of great service; & therefore, removal to the country. In the paroxysm, a sponge wrung out of hot water, is often very useful; likewise sprinkling the face & chest freely with cold water.

Whooping-cough. Pertussis. Is most especially a disease of childhood, although there are some few instances of its occurrence at a later period. In its severe forms, it is a very fatal disease; in many cases, the life of the child is kept in a precarious state for days, or even weeks; we cannot altogether subdue the symptoms by remedies, but merely lessen their severity, ward off the most imminent dangers, if possible; for the disease has a certain course to run.

It is a contagious disease, whose nature & seat is unknown. One of its peculiarities is, that much of the suffering & danger attendant on it, result, not from the disease itself, but from some complication. The paroxysms of the disease, are most severe at night. The disease is very easily brought back again, after its severity has been got over, by exposure to cold, &c. Its ordinary duration is from weeks to 3 months.

As a general rule, those cases which have a long catarrhal stage, are seldom severe. In some cases whooping-cough sets in with many of the symptoms of acute bronchitis. It is liable to many complications; the most frequent & perilous of such, are with bronchitis & pneumonia; Convulsions, or hydrocephalus; these may appear at any period of its course. The presence of febrile & inflammatory

diseases often occasion the disappearance of the characteristic hoop. Exposure to cold or damp will be very likely to cause an exacerbation of the cough, or an attack of bronchitis. Death sometimes takes place at an early period of the disease, owing to the severity of the impression on the nervous system.

Sometimes the first indication we have of the head being affected, is the increased irritability of the stomach; scarcely retaining anything; vomiting here is an important symptom, for if it occurs, independant of the fits of coughing, & of remedies, & continued the second day, & is moreover, unconnected with any gastric disorder; there is great fears of affection of the brain. Sometimes, in severe cases of whooping-cough, the child is seized during a paroxysm of coughing, with a convulsion fit, which may prove fatal, & yet be the first appearance of affection of the head. The symptoms are sometimes very similar to those of spasmodic croup. The supervention of dyspnoea, or its sudden aggravation, when already present, is frequently one of the earliest indications, of serious affection of the nervous system; it is important to recognise this, as it may be easily mistaken for affection of the chest. Hydrocephalus is an uncommon complication of whooping-

cough. Other symptoms often attending it, are diarrhoea (sometimes very troublesome) & an inevitable state of the stomach, which latter along with occasional vomiting, are symptoms almost constantly observed during some part of the course of hooping-cough.

There is no specific for this disease; when it has fairly set in, our object is to ward off inflammation, & quiet irritation.

Pulmonary Phthisis— Although a disease of adult life, as well as of childhood, still there are some peculiarities in its character as affecting children. Consumption occurs most frequently in the lungs at every age; One great difference is that the different organs in the child are not equally liable to the disease as the same organs in the adult.

In the latter, the lungs are affected in every case; next in frequency of the organs liable to the affection, are the bronchial & mesenteric glands; small intestines, spleen, & large intestines: (While in the child, the lungs are not so frequently affected as in the adult, (3 in the proportion of about 3 to every 4 cases) The bronchial glands (taking the organs in their order, as to the relative frequency with which they are affected) are nearly as frequently affected, in the child, as the lungs, & much more frequently than the same glands

in the adult, (about 3 to 1) The mesenteric glands, much less commonly affected than the bronchial, in the child, are much more frequently so than the same glands in the adult; but the disproportion, here, is not so great as in the case of the bronchial glands. The small intestines are affected nearly as frequently in the adult as in the child; In the latter, the spleen, nearly as frequently affected as the small intestines, is much more commonly so than that of the adult; the same is the case with regard to the pleura, the peritoneum, the liver, the large intestines, membranes of the brain, Kidneys & brain; all of these (from the pleura downwards) with the exception of the large intestines) are rarely affected in the adult; The stomach, the heart & pericardium are sometimes, but not often, attacked. (From the above, we see that a greater number of organs are simultaneously affected with tubercle in children, (upto 15 years of age) than in the adult. The deposit of tubercle often takes place with great rapidity in early life).

In children, the affection of the bronchial glands is sometimes as important, or even more so, than that of the lungs. There are some peculiarities, also, in the symptoms of this disease, in early life; there is generally, neither haemoptysis nor expectoration; the

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cough is slight; colliquative sweating, rare. And with regard to auscultation, a valuable sign of incipient phthisis in the adult, is furnished by what is termed, coarse breathing, heard at the upper part of the chest, below the clavicle; especially when you also hear roushus & creaking sounds. But in children, you have not this symptom, the deposit of tubercle being more uniform, & more generally diffused. Prolonged expiration, a valuable symptom in the adult, is much less so in the child, you may have it where there is no serious disorder of the respiratory organs. Enlargement of the bronchial glands from tubercle (in children) by touching the walls of the chest, may give rise to the opinion that hopeless phthisis exists; the air, passing through the large bronchi, is now audible in the supra-scapular region, & sometimes in the infra-scapular; very like bronchial respiration from solidification of the lung itself; the sounds from presence of mucus in the larger air-tubes, is heard in other than the usual situations. If the sounds are caused by solidification of the lung, the results will be as invariable as those of percussion; but if merely sounds caused by transmission from the larger air tubes, they will vary much on different occasions; but the dulness

of percussion will remain unchanged, being caused by enlarged glands. The variability in the sounds of auscultation, is one of the most valuable symptoms of bronchial phthisis. The information afforded by the modifications of vocal resonance, so valuable in the adult, are of little value when we have to do with a child. The average duration of phthisis in the child is estimated by Millier, & Parthey, at from 3 to 4 months, although its extreme limits vary from 2 months to 2 years, never longer. —

Diseases of the Heart, are not of frequent occurrence in children. Several reasons may be assigned for this; acute rheumatism, which is a frequent cause of disease of the pericardium & endocardium, (the more especially, the younger the child is), does not generally occur until a later period of life. And Bright's disease, which is a cause, or at least is often accompanied by, disease of the heart, is a disease of adult life; as are also the atheromatous deposits in the coats of arteries, or in the valves of the heart. Disease of the heart, however, sometimes supervenes upon Acute Rheumatism.

Diseases of the Digestive Organs —
Stomatitis, or Inflammation of the mouth — is not an uncommon disease among children; it is not generally a serious one; it frequently comes on during teething

Diarrhoea. Is a very common disease of children, sometimes serious, & when a concomitant of other diseases, often adding greatly to their danger; the most frequent period of its occurrence, is between 6 months, & 2 years; at the time when dentition is most active. There is, however, another cause present at this time, in the active development of all parts of the digestive system, to enable it to assimilate the various kinds of food now made use of. And diarrhoea may be caused if there is any error in the quantity or quality of the food. Atmospheric influence is another cause. If the attack is severe, in a very few days, the child is reduced to a state of great weakness & exhaustion; & in some cases, all the symptoms of spurious hydrocephalus, have been observed. Diarrhoea may merge into the more serious disease, dysentery.

Dysentery. Inflammatory diarrhoea. Not easy to distinguish between this affection, & diarrhoea. The difference appearing to be one of degree, rather than of kind. The attack often commences with vomiting. There is scarcely any affection in which the loss of health & strength is so rapid as in the severe forms of dysentery. — Peritonitis. Is of less frequent occurrence in children than in adults.

In connection with which, it may be remarked, that inflammation in children, seems rather to attack the mucous than the serous membranes.

Chronic Peritonitis Is sometimes merely the sequel of acute inflammation of the peritoneum, But there is another kind of chronic peritonitis, viz, the tubercular, consisting of a number of granules, & masses of tubercle in the peritoneum. It is a very unpromising disease; & it is seldom that we can do more than mitigate the most distressing symptoms, or, perhaps, retard its course.

Towards the close of the disease, the child has become extremely emaciated. There are liable to be occasional signs of amendment, which, however, are generally temporary.

The presence of the disease may be suspected (when the symptoms are ambiguous) if the child loses flesh, and becomes emaciated, while there is constant, (although slight) tenderness on pressure, of the abdomen.

Very similar to this disease, is scrofulous disease and enlargement of the mesenteric glands (tubercles mesenterica).

In both, the viscera are chiefly involved, & are both in consequence, characterized by great impairment of the functions of nutrition. Preternatural enlargement of the belly was formerly considered an almost certain sign of atrophy; and consequently,

tabes mesenterica was regarded as a very common affection, much more so than it is now known to be; tubercles in the glands, indeed are often met with, but to a limited extent. --- Great size of ~~the~~ abdomen, is one of the peculiarities of early life, appearing more so, from the undeveloped state of the thorax; and it is often a cause of anxiety, without any cause. From disorder of the digestive organs, flatulency of the intestines is apt to be caused, & so the abdomen be further enlarged; such cases are sometimes associated with some degree of frickets; they are to be distinguished, ^{from *tabes mesenterica*} by the softness of the abdomen on pressure the absence of symptoms of tubercle; & by the circumstance that this condition is usually met with during the first dentition; while *tabes* is rarely present before the 5th year. Tubercular peritonitis is a more frequent cause of the enlargement; in which case we have the indications of tubercular disease; it is attended with some degree of fever; the abdomen is firm, tympanitic & painful; there is a sensation of adhesion between the viscera & walls of the abdomen; diarrhoea makes its appearance every now & then; & there is emaciation.

The enlarged abdomen is also, in some cases due to the presence of some tumour; sometimes from enlargement of the liver; enlargement of the spleen is common in ma=

various districts. The gradual failure of the health, loss of flesh, & occasional disturbance of the bowels, are accompaniments of various disorders of the abdominal viscera, & do not characterize any one in particular.

Intestinal worms. Are much more frequently present in the child than in adult life, but no species is peculiar: the small thread worm is that most commonly met with; but even these are not nearly so common as is popularly supposed: nor do they produce the many distressing symptoms generally attributed to them; still they are often troublesome enough, sometimes giving rise to disorder of the digestive organs, or aggravating any disorder already present, & may even cause much nervous disturbance. The two kinds of tape worm are very rarely met with in children. Nothing but actually seeing the worms, can be considered conclusive as to their presence: the symptoms popularly regarded as indicating their presence, are indeed, only evidences of irritation of the mucous membrane of the intestinal canal; and this irritation may arise from other causes, as the presence of indigestible matter, unhealthy secretions, or a diseased condition of the membrane itself.

Calculous Disorders. Are much more frequent during childhood than in adult life; they are often occasioned by very slight & temporary causes. They

consist chiefly of the amorphous lithate of ammonia, or of the small reddish-brown crystals of lithic acid.

Struggling cold, some slight gastric disorder, or the disturbance of the system sometimes attendant upon dentition, frequently produce these deposits, which disappear upon the subsidence of the temporary constitutional disturbance which gave rise to them. Sometimes there is considerable suffering, without any local symptoms indicating their presence: sometimes there is much pain on attempting to make water, & occasionally there is suppression of urine even for 24 hours. It is rare for the child to suffer that severe kind of pain which not infrequently happens in the adult, during the passage of a calculus from the kidney to the bladder. The occurrence of colic in children of 3 or 4 years of age, should direct attention to the urine.

Remittent, Fever. Corresponds to continued fever of the adult. Though the local affections associated with each of them, vary much in different cases, yet we always meet with those symptoms which make up our idea of fever: they have each a certain course to run, which cannot be cut short by any means: And, if we look to the anatomical peculiarities found after death, we find, that enlargements

ment, hard ulceration of Peyer's glands, are generally present in both. &c. Some of the most important symptoms of remittent fever, occurring in the child, are, vomiting (which usually continues only for the first day or two) loss of cheerfulness, & of appetite; a heavy look; great heat of the skin; generally a loose state of the bowels; dry tongue; thirst; often pain in one or other of the iliac regions; very quick pulse; Periodical exacerbations & remissions, sometimes one in the morning & one in the evening, but generally the latter only, is well marked; delirium; In the advanced stages, the child's tongue becomes red, dry, & glazed, or partially covered with scudae; and the child becomes nearly or altogether unconscious. By the end of one or two weeks, the child has become extremely emaciated, & reduced to an apparently hopeless condition; yet the disease seldom terminates fatally. The signs of recovery are much the same as in the adult, and generally occur about the end of the second week. Convalescence is slow, & relapses are very easily induced. The diseases that remittent fever is apt to be confounded with, are some cases of gastro-intestinal disorder, hydrocephalus & pneumonia. Although the disturbance of the brain in remittent fever, is usually functional merely, & will generally pass away; still, it is sometimes

attended with serious cerebral affection. Unusual excitability; very noisy delirium, present during the day as well as at night; and ungovernable temper, are suspicious, & should direct our attention to the brain; but sometimes the onset is more insidious.

With respect to the treatment, the disease has a certain course to run; and our duty is to alleviate or suppress any untoward symptoms which may supervene. The child is left extremely weak & emaciated; the recovery is very slow; and the digestive system is found to be much impaired.

Change of air is one of the most effectual remedies, & will often rapidly cause a restoration of the health, after all other means have failed.

Having finished all the remarks we intend to make upon the diseases of children, we will now take some notice of Infantile Therapeutics. Most remedies, act with energy upon the child; and some have a peculiarity in their action not present in the case of the adult. They all require to be given in smaller doses, according to the age of the child. The following has been regarded as about the proper proportion; although there are exceptions. For 2 months a 15th part; for 7 months, a 12th; for 1 year, a 10th; for 2 years, a 6th;

for 3 years, a 1/4th; for 5 years, a 5th; for 7 years, a half; for 14 years, 2 thirds; for adults, a whole; and for old people, the doses are again lessened a little. With children in particular, we avail ourselves of the advantages to be obtained, from giving the medicines in divided doses, so as to ensure the exact result. The dose of a liquid medicine for children, should not exceed a dessertspoonful; a larger quantity being objectionable.

When there is an indication for the use of active medicines, we should have recourse to them immediately, & watch for the earliest moment when they may safely be suspended, & milder measures employed instead. During febrile or inflammatory complaints, the diet must consist of very thin gruel, whey, or barley water; even breast milk may be too stimulating, & must then be discontinued, or mixed with water. Change to a more nourishing food will sometimes be enough, during depression, or convalescence, without having recourse to stimulants or tonics, of whose action the child is very susceptible. Change of air is extremely beneficial, to the infant, a few days of it being sometimes sufficient to put a stop to some protracted illness; its effects are most remarkable in some affections of the chest, especially when chronic, or of a spasmodic nature; as in whooping-cough; chronic bronchitis; & in spasm of the glottis sometimes;

its good effects are also observed in remittent fever, diarrhoea, & dysentery. Change of climate, also, is sometimes to be recommended. — Some medicines have some peculiarity in their action on the child — and, with regard to Mercury; a remarkable circumstance is that young children are salivated with great difficulty; and even resist this action altogether. But at the age of 6 or 7, sudden & secure salivation is liable to ensue, if the dose is large, & the strength broken down. In consequence of the usual absence of salivation; in the treatment of acute inflammations of children, we are deprived of this sign of the system being affected with the remedy; still, we may sometimes observe swelling & soreness of the mouth. In confirmed scrofula, we should be cautious how we have recourse to mercury; using it sparingly, if necessary; but if possible, not at all.

On account of irritation being a very frequent attendant on the diseases of children, Sedatives are of great service; but much disorder arises from their habitual use; the appetite is prevented, or lost; there is derangement of the digestive organs; constipation, &c.

Opium must be given with much caution to the infant, as its action on it is very rapid & energetic; some hours of sleep usually follow the dose, it must not be repeated until the infant awakens, or the symptoms

are renewed, 2nd or 3rd a day is generally sufficient.

Narcotics readily produces their effect when applied to the skin, & are therefore, to be used cautiously.

Alkalies & alkaline earths exert a sedative influence on the mucous membranes, when in a state of irritation or chronic inflammation; & alter and improve their secretions; and, from their antacid properties also, they are peculiarly adapted for the treatment of infantile disease; they are particularly useful in quieting gastric or intestinal irritation.

Bloodletting. Young children do not well endure repeated bloodlettings: as a general rule, it is well to stop the flow of blood when decided pallor takes place, without waiting for actual fainting, which does not readily occur in young children, and from which they do not easily recover.

Blisters must not be allowed to remain on children for more than 3 or 4 hours, at the end of which time, the surface will be blistered, probably, but if not, after the application of a warm poultice, in the generality of cases.

Diaphoretics are not much employed in the diseases of children; perspiration is not easily induced; nor are the partial sweats that sometimes occur, of much benefit, but rather the

reverse. And the increased heat of the skin in fevers, is best moderated by refrigerants, diuretics, and baths; sponging the surface with cold water, is often of much benefit.

Having now finished our remarks upon the diseases of children, of course not claiming for them a place as a regular description of such diseases; but merely as an account of them, in so far as they showed any peculiarities or remarkable points of difference from the same diseases at a more advanced age. Or, where the diseases were confined to children, not giving an entire description, (which was not our intention, nor would space have allowed of it) but only a general review; expanding on any points which seemed to deserve more particular notice; while some diseases have not been treated of at all. Enough has been said, we believe, to show that no one can be properly qualified to undertake the treatment of the diseases of children, until he has given them a separate consideration; & that it is not enough to have studied disease as it occurs in the adult alone. There are no doubt, difficulties in the way, & it is much to be desired that the facilities for acquiring such a knowledge, in this city, were greater than they are at present. I believe that the establishment of an hospital for the diseases of children, along with a course of lectures, would be very generally appreciated by students of medicine.

Robert Bruce