emphasized that unless a joint is capable of some movement massage to the muscles which control it is a waste of time. A muscle can only be restored to a normal state if it is performing its natural work. In the same way no joint can possibly be maintained in a healthy state unless it carries out its normal function of movement.

Manipulation

There is no branch of physical treatment that requires more discrimination than the application of active and passive movements to joints that are, or have been, the seat of some inflammatory process. First, what is the limitation of movement due to—muscular spasm, thickening of the capsule of the joint, or actual interarticular changes such as fibrous or bony ankylosis? To ascertain this an *x*-ray examination is essential.

Having determined that an increase in mobility is practicable, the question then arises whether this should be secured at one sitting, under an anaesthetic, or be accomplished gradually at many. Speaking generally, the latter is to be preferred, as forcible mobilization is very apt to set up fresh trouble by breaking down adhesions too quickly. In the selection of suitable cases it must be

remembered that a joint which is the seat of active inflammation should not be moved. Rest with the joint splinted in the optimum position is the best treatment. If after cautious mobilization the range of movement in the joint is lessened, that may be taken as fairly certain evidence that inflammation is still present. On the other hand, if after mobilization the range of movement remains increased there is every encouragement to carry on until the full range is obtained.

Cases of osteo-arthritis show perhaps the best results from manipulation. These cases are primarily degenerative, not inflammatory, and by perseverance mobility can often be obtained in joints that appeared almost hopeless. Patients with rheumatoid arthritis should always be encouraged to perform all the active movements they possibly can. The fingers especially should be put through all their normal movements every day. If as a result of movement a joint becomes inflamed it is rested, but an early attempt should be made to repeat the movement. A hot bath is very helpful in the performance of movements at the knee, ankle, or foot joints. Muscular spasm is relieved and the weight of the limb is lessened by the buoyancy of the water.

SOME COMMON DISEASES IN INFANTS AND CHILDREN*

BY

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The Wasting Infant

Wasting in infancy is a common condition and often a source of much anxiety to the parents and physician alike. The organic causes most commonly found are pyloric stenosis and congenital heart disease. The main features of the former condition are so familiar that it is unnecessary to say much about it. The infant, generally a boy and often the firstborn, begins to vomit at the age of 2 to 3 weeks. The vomiting gradually becomes forcible and the infant loses weight rapidly, although he takes the feeds greedily—unlike the baby with gastro-intestinal trouble. Peristalsis across the upper abdomen is best seen during or after a feed, when the stomach is full, and if much patience is exercised the pyloric tumour may be felt.

Congenital heart disease must be diagnosed on hearing any marked bruit over an infant's cardiac area. This is a serious handicap to the infant, and progress is always slow. The infant is not always cyanosed, but if it is the outlook is even worse.

Premature infants, too, have a poor hold on life and a feeble power of digestion. As Robert Hutchison says, they are an "extravagant machine," needing a large amount of food to maintain the body temperature as well as for the purpose of growth. The premature infant is also often too weak to suck, which adds to the difficulty, and it is no wonder that so many of these infants do not survive.

Underfeeding is a common cause of wasting, and is, of course, easily remedied. The baby is fed on too dilute feeds, and in consequence becomes cross and unhappy. Often the feeds are then weakened still further, as it is thought the baby has colic or indigestion. It is common to find a wasted baby being fed on barley water, and it is remarkable how long life can be maintained on such a diet. Another cause of starvation is a teat with too

small a hole in it, so that the infant soon gets too tired to continue sucking, for it takes considerable force to draw the food through a tight teat. Congenital adenoids, which block the nose and interfere with feeding, should be removed at once.

Infants who are always crying with flatulence and colic are a common sight. They are usually nervy babies, who sleep badly and wake at the slightest noise. The condition quickly becomes a vicious circle, the dyspepsia and crying reacting on one another. They are also liable to loose stools, and become most difficult to deal with. The nervy, worried mother is not the best person to look after them, and, if there is a nurse in charge, often interferes.

Prognosis

The outlook is always doubtful in any wasted infant, and changes for the worse are apt to take place even though there has been response to treatment for a time. On the other hand, it is remarkable how often, even after a long standstill, the baby gradually begins to gain weight. One of the best signs, apart from a gain in weight, is when the infant takes more notice of those around him and begins to smile—always a good omen.

Treatment

Above everything the baby needs good nursing and what one would call mothering—that is, he is not to be left alone in the cot too much, and he needs nursing in the arms at intervals during the day. It is important that anyone with a "cold" must be kept away, to avoid infection. Warmth is essential, and one of the most successful nurses I know keeps the room at a very high temperature, summer and winter, with excellent results. It is also a mistake to take a delicate baby out of doors too soon. Cleanliness and frequent changes of soiled napkins are important. Regular weighing on proper scales is essential, though this must not be made too much of, for many wasted infants gain one week and remain stationary the next, much to the disappointment of the mother. A food rather poor in fat but with high carbohydrate is often best, such as half-cream Cow-and-Gate brand, or a weak milk-and-water mixture. For the very poorly infant sherry whey is valuable, and is taken well. Later on, if all is going satisfactorily, one

* British Medical Association Lecture given to the Blackburn Division, October 23rd, 1935.

teaspoonful of Benger's food may be added to the milk-and-water mixture. For the infant with loose stools lacidac, a dried sour milk, may be tried. Alcohol, as whisky or brandy, five drops three or four times a day, is a great stimulant when given apart from a feed.

Treatment of Haemorrhagic Diseases of the Newborn

These conditions are characterized by the sudden onset of bleeding in the first week after birth, usually about the second day. The napkin is changed and is found covered with blood. The baby may then start bleeding from the mouth, vulva, or umbilicus. The bleeding is profuse, and the patient is at once blanched and collapsed. The condition is serious unless treatment is given at once, as infants stand the loss of blood very badly, and any trouble during the first week of life is dangerous.

Treatment consists in giving citrated whole blood taken from the mother, father, or other healthy person. The citrate solution is made by dissolving 2 grains of sodium citrate in 3 c.cm. of water and using 1 c.cm. of this solution for every 10 c.cm. of blood. The citrated blood is injected into the outer side of the thigh, so as to be away from the napkin area. The amount of blood to be injected is 10 to 15 c.cm., and if the bleeding does not cease further injections are given every four hours. No typing of the blood is necessary, and so treatment need not be delayed. During treatment the infant is kept as quiet as possible and not lifted from the cot. He can be fed by a bottle or spoon with breast-milk or, if necessary, with an artificial food. The prognosis depends on the adequacy and speed of the injection of blood, and also on the amount already lost.

Intracranial Injuries in the Newborn

In these cases the baby is fairly well after delivery, but on the second or third day he goes off his food and becomes restless and cross. Vomiting starts, he begins to twitch, and finally has convulsions. The fontanelle is tense, and there is cyanosis with deep, irregular respirations. These symptoms all point to an increasing cerebral tension, exactly as occurs in a severe head injury in an adult. Now the oedema and congestion of the brain are temporary, and if they can be relieved the infant will stand a chance of recovery.

The treatment is to administer hypertonic saline solution per rectum. Ten times normal saline—that is, ten teaspoonfuls of salt to the pint, or one teaspoonful in two ounces of water—is given slowly by the rectum in the same way as an ordinary saline is given. The usual amount is 3 oz. every four hours. The solution needs to be injected slowly and carefully, otherwise it is returned, and the buttocks must be held together to aid retention. It is now my custom to treat in this way all cases in which there is likely to have been a risk of cranial injury at birth, or where there is evidence of the onset of congestion and oedema of the brain. Lumbar puncture also may be beneficial. The infant must be kept as quiet as possible and not lifted from the cot for any purpose. Chloral hydrate, 1/2 to 1 grain, should be prescribed every four hours to keep the baby quiet and prevent convulsions. Any head injury from a fall or blow should be treated in the same way.

Debility and Cyclic Vomiting

A large number of children are brought for examination because they have not been in satisfactory health for some time and are thought to be "run down." There is no adequate cause for this, and nothing really tangible can be found. These children, as a rule, take

their food badly, and are generally difficult to manage. A large number of them suffer from cyclic or periodic attacks of vomiting, which is usually preceded by lassitude; often there is abdominal pain with a rise of temperature. Vomiting then starts, and persists for two or three days. No food and very little fluid is kept down, and the child feels, and is, really ill. Then, when the vomiting ceases, the child picks up quickly, and soon regains the weight he has lost. The condition is not to be confused with appendicitis; the abdomen is always lax and mobile. It must be remembered that this type of child may take an anaesthetic badly. Excitement and overtiredness are often predisposing causes. Such children, too, are liable to car- and train-sickness, which prohibits them going far afield for holidays without much discomfort.

Treatment consists in strictly regulating the daily life, so as to ensure as quiet a time as possible. The child must be taught to sleep late in the mornings, and to rest after the midday meal and go early to bed. A return to school may be advised, as the average child is doing less by being at school than by running about at home, and the discipline at school is good, especially for the only child. The bowels must be opened well each day, and it is much better to give a small dose of paraffin, supplemented, if necessary, with cascara or syrup of figs each bed-time to ensure a good motion, than to give the usual large dose once a week. The diet also needs regulating; fats should be limited and plenty of sugar should be given with each meal, glucose being used if necessary. Boiled sweets or barley sugar should be taken during the day. Rich milk is not advisable, and milk in large quantities is to be avoided. The outlook for these children is generally good, as the attacks nearly always cease before puberty is reached. Occasionally a severe attack of vomiting may be fatal in a very weakly child.

ROYAL MEDICAL BENEVOLENT FUND

This is the centenary of the Fund, and a special appeal is being made (1) for new contributors to raise the annual income by subscriptions and donations to £20,000, thus enabling annual allowances of £52 to be made to medical practitioners and £36 to dependants, instead of £40 and £26 as at present; (2) for special donations to create a fund from which larger grants can be voted to very urgent and distressing cases, and towards training the widows and orphan sons or daughters of practitioners to enable them to be self-supporting. Cheques should be made payable to the Honorary Treasurer, Royal Medical Benevolent Fund, 11, Chandos Street, Cavendish Square, W.1.

At a recent meeting of the committee nineteen new applicants were assisted and thirty-four grants were renewed to beneficiaries on the books of the Fund; in all, £1,346 was voted. The following particulars of a few cases helped indicate the kind of work undertaken.

Widow, aged 40, of M.B. who died in December, 1935, aged 39. The husband had worked as a medical missionary. Widow left with a capital of £1,300 and three children to educate and maintain. The Fund voted £26 plus a special gift of £10. The Ladies' Guild will assist with education of children.

Daughter, aged 61, of M.R.C.S. who died in January, 1927. A subscriber wrote in support of this application: "Her father practised for some thirty years, and was much loved by the poor. His poor daughter has a few pounds only of her own, and makes up her income by needlework, but she is over 60, and of late her health has been giving way and she can no longer work eight hours a day at her needle, which she has to do if she is to earn enough to keep herself alive. If, therefore, she had some financial help she would be able to diminish a little the long hours of working without the fear of starvation." The Fund voted £26.

Widow, aged 63, of M.D. who died in April, 1927. Since her husband's death she has endeavoured to support herself. Recently she has held housekeepers' positions, which now through ill-health she finds difficult to get and to hold, age and ill-health being against her. Income £51 a year. The Fund voted £26.