THE HEALTHY CHILD: ITS MANY DISGUISES

BY

ISRAEL GORDON, M.D., M.R.C.P., D.P.H.

Medical Officer of Health, Ilford

Probably the most difficult problem in the medical conduct of infant welfare centres and school health inspections is to decide what is normal and what abnormal. This question may be posed somewhat differently when we ask, "Does this condition require treatment?" Although this problem presents itself in a direct form to the medical officer examining large numbers of the apparently healthy, the practitioner or specialist whose function is the treatment of disease is also frequently presented with the question, "Is this disease?" and only too often he takes the easy way and answers, "Yes"—otherwise, he persuades himself, why did this patient come for advice?

The practitioner is really not primarily at fault, it is his education; for his teachers, with certain prominent exceptions, have not had great experience of the normal and do not give this problem the importance it deserves. In 1949, in two near-by boroughs of similar constitution in one county, at routine medical inspection of school-children 9.6 in every 100 children had defects requiring treatment in borough A, while in borough B the number was 33.5. This was certainly not due to differences in the groups of children concerned.

Of course, now that all treatment is paid for out of public funds, it is essential, in order to avoid unnecessary expenditure on the treatment of essentially innocuous conditions, that the whole problem should be thoroughly explored; and education of the medical profession in this regard, rather than compulsory measures, should be a foremost endeavour in the struggle for economy. There can be no doubt that at present much public money is wasted on the treatment of normal or innocuous states.

I will attempt to describe some of these conditions and indicate fields for further research. As my experience has been mainly confined to children, this paper is likewise devoted to a study of these borderline paediatric states. The same problem presents itself, of course, in adults; but with them it is vastly more complicated, for an adult is ill if he thinks he is ill, though not necessarily in that connotation to which he attributes his malaise. In countries with less highly developed medical services these questions rarely arise, as they are swamped by gross disorders of infection and nutrition.

The problem is not new. In those fields where measurement is possible and statisticians may enter, the spread of the normal range has often been fully investigated: for instance, the literature on intelligence quotients is vast, and anthropological data such as heights and weights are numerous. I do not wish to concern myself with these matters, but with less obvious and often not measurable states. In the course of some years' experience dozens of these conditions have become apparent, both from my own observation and from the study of the observations of others.

These conditions are a heterogeneous collection, covering many specialties, and may roughly be divided into four groups. (1) Conditions essentially normal, though deviating from a theoretical ideal of perfection:

examples are the naevi found at the nape of the neck and bridge of the nose in young infants. (2) Borderline states, such as enlarged tonsils or flat feet, in which clinical acumen is required to decide whether treatment is necessary or not. (3) Conditions definitely pathological, in which, however, the necessity for treatment is extremely doubtful—for example, geographical tongue or the almost universal symptomless infestation with threadworms. (4) Other conditions which are just frank misdiagnoses, such as the milk crust for seborrhoea capitis or the withdrawn testis for the maldescended.

Although many a physician will declare that he has known all about these conditions, experience has shown me that many others are unaware of the absence of the need for treatment. Furthermore, parents often worry and require reassurance.

Five Common Conditions

Five conditions stand out pre-eminently from all the others in importance, either by reason of the amount of public money that is unnecessarily spent on their treatment or by the effect that such treatment has on the later career of the individual. I refer to (a) enlarged tonsils; (b) orthopaedic "defects" in children under 5, such as knock-knees, bow-legs, flat feet, and valgus ankles; (c) phimosis in young infants; (d) constipation in breast-fed babies; and (e) innocuous cardiac murmurs and other sounds.

Enlarged Tonsils.—The extraordinary vagaries of the medical profession with respect to tonsillectomy have been discussed by Glover (1950), and the clinical indications (or lack of indications) by Illingworth (1950), who states that the appearance of the tonsils, unless they are so large as to cause obstruction, should never be a sole criterion for operation. Inadequate or careless surgery is also frequent (Gordon, 1947). Nevertheless, the profession continues stolidly on its way in recommending the operation, and the waiting-lists at hospitals are piling up to such an extent as to provide its own solution of the problem—an unfair solution, for those who require the operation are deprived of it.

Orthopaedic Defects.—Price (1949) states that "a very casual observation of the posture of normal children will refute the suggestion that the legs should be straight." In the first two years of life there should be a varoid phase with an outward curve and inward twist of the lower end of the leg. This is present at birth and compensated for by adduction and valgus movement of the foot. At about 2 years the knee becomes valgus, and this "deformity" is maximum at 4½ years and normal by the age of 6. At times there may be 2½ in. (6.3 cm.) between malleoli standing and 2 in. (5 cm.) lying. Stamm (1948) declares "flat-foot" in early childhood to be a myth, and insists on the far greater importance of deformities of the toes. Experience in infant welfare centres amply confirms the views of these two authors. Nevertheless, expenditure on wedges, special shoes, and splints continues at an unnecessarily high level.

Phimosis.—The subject of phimosis in early life has been admirably dealt with by Gairdner (1949). Whilst I feel that there is still room for discussion on the general advisability of circumcision, there is no doubt that in the early months it is impossible to tell if there will be phimosis in later life, and operations performed because of phimosis at this time have no scientific basis.

Constipation in Breast-fed Babies.—Constipation, in the sense of infrequent stools, in the breast-fed infant is entirely normal. Forty-one per cent of such infants in the third, fourth, and fifth months of life do not have daily stools (Gordon, 1951) unless they are given purgatives, enemas, or some such treatment. It is possible that such

measures may be the cause of chronic constipation in later life. Infrequent stools in later years are themselves a condition of doubtful moment if examination can exclude any serious disorder.

Innocuous Cardiac Murmurs.—Systolic murmurs in the heart have been the subject of much debate, and it is generally agreed that most of them are innocuous, while unnecessary attention or treatment leads to a neurosis. From my own experience I would have thought that the medical profession generally appreciated this, but Evans (1949) apparently considers that that is by no means yet the case, and he also remarks on the misinterpretation of the reduplicated first mitral and the accentuated first pulmonary sounds.

Other Conditions Causing Unnecessary Anxiety

There are also a large number of conditions in childhood that cause unnecessary anxiety and should usually be ignored. Some of them have not hitherto been discussed or sufficiently well defined and may require further investigation, but others will no doubt be considered obvious by some though misinterpreted by others.

Skin.—Naevi are often a cause of concern. The faint port-wine stains on the bridge of the nose (Airey, 1944) and nape of the neck in infancy are normal. The strawberry naevus disappears of its own accord (Lister, 1938). Small veins are seen on the back of the neck or opposite the insertion of the diaphragm (corona diaphragmatica) more commonly in adults, and are of no significance. Small pearly-white milium sebaceous cysts are found on the face and nose, and less often elsewhere, in 40% of healthy infants. They disappear spontaneously, and are probably due to closure of hyperactive sebaceous glands by epidermis in the foetus (Gordon, 1949). I have known a case to be notified as pemphigus neonatorum. A red papular eruption on the face, less common than the sebaceous cysts and occurring later, is also harmless. Desquamation of the pink newborn infant and physiological jaundice are of course familiar. A bald patch on the occiput in infants is also common and soon remedies itself. The milk crust, a collection of oils and dirt over the anterior fontanelle, can be removed by soap and water if it is not secondarily infected by pityriasis simplex (Gordon, 1940). In cold weather an infant's hands often swell. This may be due to gloves being pulled off, and to tight sleeves; it has never, in my experience, given rise to any trouble. In hot summer weather mothers are often worried by the pigmentation that seems to be confined to a region just proximal to the finger-nails—sunburn. A blister is not uncommon in the centre of the upper lip, and in older children quite harmless scabbing occurs on the rim of the pinna of the ear. Mothers often complain bitterly of the sweating of their infants, but this is usually due neither to tuberculosis nor to rickets.

Nervous System.—It is here that it is most difficult to decide whether treatment is necessary or not. In the majority of the following cases the answer is against treatment: common tics, such as blinking; nocturnal enuresis in children under 5 years; masturbation and minor sexual mischievousness between small boys and girls; variations from the average in the amount of sleep required, and night terrors in small children in whom imagination is dawning; the small infant that jumps with a sudden noise, such as a sharp voice or the banging of a door; the head-banger, the breath-holder; morning sickness in the school-child who is anxious about his performance at school; the queer

twisting of the hands of infants at 5-8 months of age that suggests athetosis but of course is not; nail-biting—18.6% of school-children bite their nails (Gordon, 1947). In all these cases precipitate action should not be taken, but the child must be considered carefully in its general reaction to stress. This subject is further discussed by Professor Capon (1950).

Mucous Membranes.—There is little relationship between the colour of the mucous membranes and the haemoglobin values (Adcock *et al.*, 1950).

Eyes.—Epiphora, due to a blocked tear-duct, clears of its own accord in most cases. Strabismus in the newborn has of course not the serious import that it has six months later. Blue sclerotics in infancy rarely betoken fragilitas ossium.

Urinary System.—If ammoniacal urine in an infant over 3 months does not cause a rash it is not a disease of the child but an error of hygiene (Gordon, 1940). In cold weather frequency of micturition increases, and clean babies may relapse; in hot weather there is less urine, and mothers are often worried over the red sediment.

Breasts.—The common secretion from the breasts of newborn infants is of course physiological and not a mastitis. Boys at puberty may occasionally complain of tender and somewhat enlarged breasts.

Cardiovascular System.—Besides the murmurs mentioned above boys are commonly brought to the doctor with complaints of fainting, especially when standing for long periods. This is usually not of any significance.

Ears.—Pinnae that stick out unduly require treatment only exceptionally by a plastic surgeon. Strapping is probably useless. Many infants touch their ears when teething, and this is not usually due to pain or otitis media. Mothers when talking of "discharge" from an ear more often refer to wax than to pus.

Bones, Joints, and Muscles.—Not a few infants hold their heads to one side. This usually rights itself without treatment and is not then a true wryneck. Asymmetry of face and cranium is very common, and in most cases the mother can be assured the "defect" will not be noticeable in later years. A depressed calcified anterior fontanelle must not be mistaken for one that has not closed. A "lump" on the inner side of the foot proves to be the tuberosity of the tarsal navicular. Mothers are often worried by quite normal protuberances on the occipital and temporal bones. They can likewise be assured about cracking joints. Divarication of the recti in infants is also of small moment. The "growing pain" has been dethroned from its position as an important rheumatic manifestation and is now largely regarded as a consequence of minor orthopaedic deformities. I doubt even this. These pains require adequate investigation, especially so far as history is concerned, but most are innocuous.

Genitalia.—The maldescended testis may on more careful examination prove to be a normal testis drawn up by the cremasteric muscle, especially if the weather is cold. The penis in the obese youngster with a suggestion of Fröhlich's syndrome may have a disconcerting habit of disappearing in the fat of the pubic region.

Growth and Progress.—At about 1 year of age many children temporarily cease to gain in weight, or may even lose. This is probably due to increased activity when the child is beginning to walk. Some children are late in walking because they have developed a technique of getting about by other means. The speed

of the "bottom-shuffler" has sometimes to be seen to be believed.

Lymphatic System.—D'Espine's sign—that is, bronchophony over the spinous processes at a lower level than usual—is not commonly an indication of hilar tuberculosis.

Larynx.—Small infants often have a quite harmless stridor and make many mysterious clucks and noises of little significance. The husky voice in toddlers is seldom the result of the papilloma on the vocal cords that we are warned about.

Conditions in the Alimentary Canal

Teeth may erupt at birth or at 1 year of age and yet be quite normal. Not uncommonly, there may be bleeding into the gum preceding eruption. The barbarous custom of incising the gum for these complaints is fortunately dying out, but has not yet quite disappeared. Grinding of teeth has usually no pathological significance. Dribbling does not forecast the imminence of eruption.

In infants the tongue may normally be kept protruded, deviate to one side a little if protruded, or not be kept still. A strawberry tongue does not always indicate scarlet fever. The geographical tongue is of no evil portent. "Tongue-tie" is almost invariably a figment of the imagination, and incision of the fraenum is not called for.

Besides the problem of enlargement of the tonsils, mentioned above, specks on the crypts often turn out to be food debris or small growths of a fatty or xanthomatous nature. The "won't eat" neurosis is more often a complaint of the mother than of the child. An infant that is contented and gaining well may regurgitate its feed to its heart's content. Curdling of the milk merely means that it has entered the stomach. Mothers often complain of halitosis in their children. Usually no cause can be found, and the child remains perfectly well.

Umbilical herniae in infants are so common that I doubt if we should call the smaller ones pathological. There is one condition in which an empty tag of skin protrudes from the navel: it is certainly not pathological, is not a hernia, and requires no treatment.

Mothers often complain about the stools of their healthy children. Green streaks turn out to be vegetable remains. With hard stools, or even with normal stools, streaks of blood may occur on one occasion: examination discloses nothing, and the condition may never recur. Threadworm infestation, if as common in England as in Holland (Schüffner and Swellengrebel, 1943), which I suspect it to be, is almost universal and usually symptomless. Is it, then, a disease?

Discussion

This latter question immediately brings forward the much debated problem, What is "health"? One school regards health as an ideal, an abstraction that is not to be sullied by association with disease, and a great deal of contempt is expressed for those who consider ill-health in forming their definition of health. They often incorrectly call their ideal "positive health"—a term which should be reserved for an effort, or striving, not a state—and express themselves with grandiloquence rather than with clarity. I hope the evidence of this paper is enough to show that health cannot be considered apart from disease, any more than the quality

of hot can be considered apart from cold, or good apart from bad. One quality is necessarily employed in the practical definition of the other; it is no use scorning this feature of the human mind, it is the way it works.

As an example of the perfectionist line of approach I would like to quote Capon (1945). He states:

"The following features characterize a large proportion of healthy children: (1) The mucous membranes (e.g., the lips and palpebral conjunctiva) are definitely pink in colour. (2) The facial expression is happy, often radiant; smiling is frequent, and the eyes are bright and responsive. (3) The skin is smooth, elastic, and covers a sufficient layer of subcutaneous fat to give the limbs a rounded appearance. (4) The tissue-turgor is normal. (5) The muscles are well formed, and their tonus is good. (6) The limb bones are almost straight. (7) The stance is well balanced, erect, and graceful. (8) The spine is straight and the shoulder-girdles do not drop. (9) The arches of the feet are well formed. (10) The movements of limbs and body, in walking and running, are characterized by elasticity, agility, vigour, and poise."

This seems to me to be the description of an exhilarated ballet-dancer rather than the ordinary healthy schoolboy, were it not that ballet-dancers are said to have flat feet. The real danger of such an ideal, however, is that if a child does not conform to it it is considered necessary to see that he does, and steps are taken accordingly. That is, for example, if his conjunctivae are not pink enough, his legs not straight enough, his soles not arched enough, he must have iron by mouth, irons to his legs and wedges to his shoes, and undergo unnecessarily frequent examinations, causing unnecessary expense and unnecessary neurosis.

We do not get much further by putting a hyphen in "dis-ease." Within a wide range of disorders a man is as ill as he is determined to be. But are we to regard as an invalid a man with high blood pressure who makes the most of his complaint, and as in perfect health a man with similar blood pressure who does not complain? Obviously not; they each have something wrong, although not quite the same thing.

Then there is the "functional" school, which states that an individual is well if the disorder present allows him to perform his function in life satisfactorily—that is, a policeman with flat feet is unhealthy, whereas a typist is not. It is easy to pick holes in this argument, for so many of us have no useful function to perform, or, if children, do not yet know what our function in life is going to be. We may be old and retired, or in an asylum with schizophrenia; and to be logical this school will deprive us of the luxury of being ill by definition should we contract, say, tonsillitis. Again, two people may have precisely the same disorder and the same job. One—we all know him—will make the most of his trouble, and the other (we know him too, but not so well) will ignore it and continue to work as efficiently as before. Is the former ill and the latter well?

Even if a man feels well and functions well physical examination may disclose something of dire consequence for the future—for example, an early melanotic carcinomatous change in a mole.

It appears that the answer to this problem is a critical synthesis. We are healthy if we (a) feel well, (b) function well, and (c) if the objective signs of imperfection which we all can provide are such as, besides allowing (a) and (b) in the present, give reasonable confidence that we may feel well and function well in the not-too-distant foreseeable future.

It is, I hope, obvious that nothing that I have said can be construed as an argument against finding out and recording these conditions in children—that is, against routine medical inspections. My argument is that the interpretations should not be at fault. In fact, interpreting these universal imperfections is one of the most difficult tasks that can be required of a doctor, and for this reason should, in school-children, be left to doctors and not to teachers and nurses, as suggested by Professor Moncrieff (1950).

Summary

A description is given of a large number of paediatric "disorders" which are always, or usually, innocuous, and do not require treatment. It is pointed out that much public money is wasted on their treatment, especially since this has become free, and a plea is made for the education of the medical profession in this regard. A short discussion criticizes various definitions of health, and provides a new one.

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Dr. Edith Summerskill, Minister of National Insurance, has asked the Industrial Injuries Advisory Council to consider further the question of the methods of "prescribing" pneumoconiosis as an industrial disease under the National Insurance (Industrial Injuries) Act, 1946—i.e., how the classes of insured persons eligible for benefit for the disease should be defined. Pneumoconiosis is at present "prescribed" in relation to insured workers in a number of occupations which are known to give rise to a risk of the disease. These occupations include stone and granite quarrying and masonry, sand blasting, pottery manufacture, metal grinding, steel fettling, coal and certain other forms of mining, coal trimming, and slate dressing. The Council's Industrial Diseases Subcommittee under the chairmanship of Sir Wilfrid Garrett, who is also chairman of the Advisory Council, is now reviewing the present method of prescribing pneumoconiosis. It will consider such possible alternatives as prescribing the disease generally for all insured workers, or by reference to occupations involving exposure to concentrations of specified dusts. The committee may also reconsider the definition of pneumoconiosis for this purpose. It is at present defined as "fibrosis of the lungs due to silica dust, asbestos dust, or other dust, and includes the condition of the lungs known as dust-reticulation." Persons and bodies interested in the question of the method of prescribing pneumoconiosis are invited to submit written evidence for consideration. Communications should be addressed to the Council's Secretary, Mr. S. E. Waldron, Ministry of National Insurance, 30, Euston Square, London, N.W.1, as soon as possible, and in any event not later than May 1, 1951. An explanatory memorandum can be obtained from the Ministry on request.

RECURRENT SYNCOPAL ATTACKS FROM BRADYCARDIA IN AN INFANT

BY

JOHN K. WAGSTAFF, M.B., M.R.C.P.

Senior Medical Registrar, Brighton General Hospital

The convulsions of infancy probably include some types of syncope that have been recognized in adults, but opportunities to investigate attacks in early childhood are infrequent. In this case it was possible to make some observations, as the attacks continued to recur for a short period after admission.

Case Report

A female infant of 2 months was admitted on September 24, 1948, on account of convulsions. She weighed 7½ lb. (3.4 kg.) at birth, labour having been induced on account of hydramnios, and her progress had been excellent until September 20, when she developed coryza. Her general condition remained satisfactory until 18 hours before admission, when she threw up her arms and collapsed. Five other short attacks were observed during the next few hours.

On admission her ashen pallor and impalpable pulse made it appear that she was moribund. Nikethamide was injected intramuscularly. Her colour improved, a regular pulse of 128 was recorded, and a few minutes later her condition appeared satisfactory. She was apyrexial, and, apart from a few rhonchi, there were no abnormal physical signs. One and a half hours later the infant gave a few coughs, collapsed, and lay motionless with her eyes staring upwards: respiratory movements were imperceptible, and though the pulse could not be felt an apical rate of 40 was recorded. After one to two minutes she became moderately cyanosed and then began taking occasional gasping breaths; the apical rate rose to 128, normal respiration returned, and her colour improved rapidly. Similar episodes recurred at intervals ranging from 15 minutes to two hours. In all attacks when the pulse was recorded the rate fell below 55 (Fig. 1). An injection of 1 min. (0.06 ml.) of 1:1,000

FIG. 1.—Record of pulse rate during first 12 hours in hospital. Times of attacks are shown by arrows; where a record of the rate was made in the attack it is indicated by an X. Readings obtained by apical auscultation or from cardiograms are encircled.

adrenaline had no effect. Ten hours after admission she was given ½ gr. (32 mg.) of quinidine by mouth. No further attacks occurred except for a slight one a month later. A throat swab taken shortly after admission gave a practically pure growth of Friedländer's bacillus, but, though