Observations

ON

BORDERLINE PROBLEMS IN CHILDHOOD.

BY

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IF we recognize varying planes of sound health, life on one of the lower planes does not signify abnormality. We meet with many children in average health and we may call them normal; gross forms of abnormality—for example, inflammation, infection, deformity, idiocy—are readily detectable. But there is a wide undefined ground between normality and abnormality where answers have to be found to three difficult questions: Is the child well? What is wrong? What should be done?

These children on the borderline of the normal or healthy and of the subnormal or sick come before us for an enormous variety of reasons, with countless indefinite symptoms common to many forms of subnormality, or with suggestions and impressions that the child is not what he or she ought to be. Their study taxes the resources of medical knowledge, their care is often largely a matter of opportunity for adequate supervision, and sometimes expediency is permitted a place in therapeutics.

I seek here to dwell on some outstanding practical points, considering first the physical, and secondly the mental, aspect.

A.—PHYSICAL.

The essential error—if there is one—in a borderline case may be a local defect or disorder, with consequent disturbed general metabolism, or may be a primary general peculiarity, defect, or disorder, and treatment necessarily involves consideration of the fundamental bases of medicine. Such consideration is demanded in all cases, but with varying peaks of intensity according to the condition, and a grouping of cases into types according to complaint facilitates discussion of the general subject.

We not infrequently see children with the complaint that they are "too fat" or "too thin" or "under-size." If we agree that the complaint is justified and find no indication of a definite cause, what is to be the explanation of the condition and what the treatment? In all cases of poor nutrition and backward growth we seek first an infective cause, but failing in such search, and in the absence of the common symptoms of toxæmia, such as lassitude, pallor, etc., I think we may answer: hygiene, including diet and endocrines.

For therapeutics in this connexion endocrine practically means thyroid extract, an aid so powerful as to demand cautious usage. The important contraindications to thyroid therapy are well known, but apart from these the two main dangers in its administration are, I think, first, that it be not sufficiently pushed in cases obviously demanding it—for example, cretins—and which prove resistant to doses ordinarily accepted as moderate; and secondly, that it be used in a wide variety of indeterminate cases, in some of which it causes improvement, but by its action hides the fundamental difficulty or error—for example, dietetic or digestive. Thus intermittent mild glycosuria is not necessarily a contraindication, particularly when associated with a high fatty diet, but improvement under thyroid therapy may obscure recognition of the basal trouble. In the case of a borderline child there is often a degree of thyroid instability, and while minute doses of thyroid extract may help to stabilize thyroid activity, yet the cause of the instability has still to be sought.

If environment, diet, and general hygiene can be controlled success should be obtained, but just these conditions are so often the unobtainable desiderata. Lacking satisfactory control in such directions, small doses of thyroid are often beneficial, and perhaps particularly so in the

case of girls about the period of the commencement of puberty. But thyroid should not be given for the solitary symptom of fatness—obesity—and it should never be given to a child simply to make the child thinner.

Vitamin administration may also be considered in these cases—particularly those of "under-size" or "too thin." In cases of definite illness—rickets, for example—an indication exists for the administration of a definite vitamin, and such administration can be effectively carried out by special diet, or by synthetic drug preparation, or by artificial sunshine, or by all combined. In such a case the treatment must be pushed. In the borderline children there will be no special call for any definite vitamin, and satisfactory provision for vitamins should be present under ordinary hygienic conditions. But for these same borderline children exposure to artificial sunshine is often of distinct benefit, provided exposure is short and mild, and it is sometimes most useful when associated with small doses of thyroid and of ephedrine. Such treatment is perhaps particularly useful in the cases of sallow or pigmented children.

Another large group of borderline children is that in which the symptoms complained of are many and varied, but grouped in all cases round the central complaint that the child seems languid, weak, pale, easily tired—and without definite cause. Such a combination of symptoms can be coalesced into the diagnosis "debility," and this possibly disintegrated into the further definitions of pre-tuberculous, or pre-rheumatic, or hypotonic, or catarrhal, or intestinal, or nervous. The child I have in view at the moment has no marked catarrhal, intestinal, or nervous symptoms, and might be placed in one or other of the first three groups—if such groups be recognized. These terms, however, are not those of diagnosis, but rather the pious expressions of a groping for diagnosis.

In these cases we consider family and personal history, and from them we may receive guidance to diagnosis and treatment—or we may not. If on full examination there is no discoverable abnormality in the child, it is right that we should concede to our clinical training its due and, accepting negative clinical signs, attempt to glean information from the facts of environment and habits of daily life. Is the mental and material environment healthy? Is school work suitable? Is the sex position normal? With all our trying we may fail to define a cause, and if treatment appears advisable we should base it on the fundamental principles of therapeutics—rest, fresh air, simple diet. The greatest of these is rest. The healthy child is never lazy—he bubbles over with physical and mental activity. A child does not like to be guided into lines of activity, or, rather, may be guided into lines to which he objects. Thus he may get easily tired if forced to continued monotonous physical exercise, or he may appear lazy if asked to do school work above him or below him. His bodily and mental processes are active but spasmodic, and if guided indiscreetly easily tired. If the child of whom we speak is languid and wishes to stay in bed he is abnormal, and should be kept in bed till he asks to get up. If any reasonable cause for change in mental activity can be found it should be fully explored.

It is important that the child should not be exploited in the light of the value of fresh air. Desperate illnesses demand desperate remedies, and even our climate often helps to cure desperate illness. But this child requires as much fresh air as can be sensibly obtained by educated guardians in view of the climatic conditions prevailing.

In relation to consideration of diet there is just one point to mention at present. For most children of the type of which I speak iron is bad treatment, and pallor and languidness are often secondary to gastro-intestinal disturbance. But for apparently causeless mild anaemia in young children with no digestive abnormality the administration of a few grains of iron daily often has most rapid and excellent results.

There is another group of cases in which the complaints relate to excessive or diminished appetite, vague symptoms of indigestion, irregularity of bowel action, and biliousness. Most parents to-day have a considerable if superficial acquaintance with the details of dietetics, and seriously endeavour to feed their children correctly. They

further pride themselves on not being faddy, but open to modern teaching. Among the well-to-do, however, two slogans are often obeyed to excess—the call for vitamins and the restriction of meat. All parents like to see their children big and strong, and it comforts their hearts to know that butter, eggs, and cream, as well as vegetables and fruits, are rich sources of vitamins. At the same time they read of the dangers of excessive meat in the diet, and the wisdom of curtailing this article in the dietary of the child. As a result the diet of very many children contains too much fat and too little meat, and in counteracting these tendencies lies much of medical work in borderline children. Acidosis is a popular term and a common subterfuge for a diagnosis. But a real tendency to the condition is, of course, also common, and accounts for the value of alkalis as tonics for children. There is also a further reason for the value of alkalis and big doses of alkali, which I believe is more common than is sometimes suspected. This reason is the condition of celi-uria or colipyruria in girls, and chiefly young girls. In babies the condition is usually so acute as to pass beyond any borderline stage, but in a less acute form it is common in young girls as a cause of borderline symptoms without hint of urinary origin.

The diagnosis of "latent tuberculosis" in the complete absence of signs on thorough examination, though possibly often a correct diagnosis in view of the very great incidence of infection, must yet be frequently no sufficient explanation of symptoms or condition present. Latent tuberculosis must be arrested local infection, and such infection is compatible with general fair health—with adequate growth and nutrition. Indefinite symptoms may be caused by toxæmia from the tuberculous focus, or may be due to some quite different intercurrent condition. All the more important is it that because the child is considered tuberculous other abnormalities should be sought for and treated.

In the case of some children the main complaint is frequent colds or sore throats—recurrent nasopharyngeal catarrh and infection. An occasional cold is part of the physical education of youth, but frequently repeated colds overstrain resisting processes and may produce a local focus of weakness and possibly, further, of infection. The dividing line between education and danger is hard to define. Who dare be so bold as to dogmatize? Having considered the general aspect in each particular case, there remains the question of local interference. Have the tonsils and adenoids become a source of weakness and danger, and should they be removed? This we may say: in borderline cases it is wise to postpone tonsillectomy if possible until the child is at least 5 years of age; and, further, when the operation is performed we should see that it is a true tonsillectomy and not merely a tonsillotomies. It is possible that there may be occasions when tonsillotomies is indicated, but tonsillotomies performed when tonsillectomy is indicated is bad medicine and probably also bad surgery.

Particularly during recent years great emphasis has been laid upon the symptoms of nervous instability in children. We rarely see a child who is not described as nervous. Nervousness is a complaint. But all children must always have been nervous if by the word we are to understand instability and ready excitability of the nervous system. It is possible that the nervous system of many children during the past fifteen years has been more excitable than in previous generations, but it is certain that the nervous phenomena of childhood have been more closely studied by a nervous public than has been the case for a long time.

The complaint with our borderline children is nervousness, possibly abnormalities of sleep and enuresis, pains, twitchings, and occasionally stammer. If a child has chorea, habit-spasm, or a definite stammer, he ceases to be borderline. Are the symptoms present because of innate physical make-up or because of influence from without, material or mental? It is impossible for anyone to alter the peculiarities of heredity—the child is the offspring of his parents—but it may be possible to counteract special tendencies if they can be determined, and for the rest we must seek for and deal with material and mental influences. Thus we must see that the condition is not one of primary physical unrest or disorder in which we may, for example, by giving alkalis, by releasing foreskin, or by removing worms,

directly cause improvement. Very often in order to reach the child we have to work through the parents, and in all cases we need their hearty co-operation.

Among important possible causes which should be sought for are slight and unsuspected abnormalities of sight or hearing which may give rise to trouble in school.

The last two types of children I shall note under the heading of physical defect are those where, in the first place, the complaint is that the child is dull, stupid, placid, and quiet; and secondly, where the child is described as naughty, unreliable, and irresponsible. The first type of complaint to a doctor is rare without distinct physical or mental abnormality to account for it, if we except the group of borderline mental cases in whom the dullness is usually brought into prominence through scholastic efforts.

With regard to the latter type, it is merely necessary here to note that such a master of the subject of nervous conditions in childhood as the late John Thomson wrote of "abnormal naughtiness in normal children"; it is advisable, therefore, to be cautious in labelling a child as a post-encephalitic.

B.—MENTAL.

Consideration of the last two types carries our attention to borderline children in whom mental traits or characteristics or symptoms are the chief cause of anxiety to parent, schoolmaster, or doctor. Is the child mentally normal? In attempting to answer this question we must proceed carefully along a path which, though tortuous, differs in no fundamental respect from that we customarily travel in purely physical cases.

Thus here we deal with a central factor—the independent capability of the child; and two environmental factors—the home and the school; and we have to consider the nature of each of these environments, their influences on the child, and his reaction to them.

Our examination, then, can be considered under three headings:

- (a) Ordinary medical physical examination, including facts of history and environment.
- (b) Investigation into temperamental and social conditions and reactions.
- (c) Scholastic reports and tests of general and scholastic intelligence.

Ordinary medical examination and investigation conducted in the usual manner must form the essential basis for a considered opinion. Thus it is important to commence with inquiry into details of family history. While gross mental defect is usually a sporadic occurrence it is very striking how borderline children tend to be born of a borderline group of the community—are of borderline ancestry. Also striking is the tendency to large families and high mortality. Further, facts of illegitimacy, mixed blood, extreme poverty with large family, alcoholism, and criminality in themselves favour suspicion. The influence of syphilis is, of course, hard to assess, and its direct effects appear to be either very striking or little marked.

As regards personal history, very important points are the nature of the labour and the condition of the baby at birth. If the baby was definitely a "blue baby," if he appeared moribund, or if he took fits within the first few weeks of life—particularly within the first few days—all such histories strongly favour a diagnosis of mental defect.

Any discoverable physical defect has an important bearing on the mental position. A child growing up with a severe physical defect tends to have an unusual mental outlook, but though many are very backward from lack of opportunities of varied experience or schooling, yet they may be otherwise distinctly clever. Also the nature of the physical defect is obviously of very great importance, as it may in itself directly affect mentality—for example, spastic diplegia resulting from birth trauma.

When dealing with children who show no gross or obvious defect, physical or mental, examination is concerned with search for inconspicuous abnormalities—defects which, though inconspicuous, may yet have important bearings on the mental status. Thus it is important to decide if there is any suspicion of chronic toxæmia—intestinal, tuberculous, or rheumatic. Is there

any reason to suspect such a latent constitutional condition as may conduce to nervous and mental symptoms—for example, backwardness at school work, dullness, variability? Is the nasopharynx healthy and free from infection, or is there a history of recurrent catarrh, enlarged cervical glands, or otitis? Are the eyesight and hearing normal, or so nearly so as to cause no possible trouble with school work in a large room? Very minor degrees of abnormality may yet cause trouble in a big class, and a child reprimanded for apparent inattention, naughtiness, or impudence may be driven to apparently abnormal and peculiar reactions.

Are the deep reflexes normal? It is not uncommon to see cases of birth trauma which have been so inconspicuous in their physical effects as even to escape treatment by the orthopaedist, or which have been treated by him for minor local deformities. A clear epileptic is, of course, outside the borderline group, whether the epilepsy be idiopathic or secondary to birth trauma, primary amentia, or infantile cerebral paralysis. But occasional fits spread over years and brought on by acute circumstances, and the rare occurrence of pyknopsy, sometimes leave the matter of mentality so far open. A definite history of encephalitis lethargica likewise places a child beyond my present scope, but in conduct cases an indefinite history may clinch a diagnosis made on the appearance, manner, and behaviour of the child.

After a thorough examination, then, some defects may have been found, but there may still be uncertainty regarding mentality, and it remains to decide if the symptoms or conditions complained of in the individual child are within the bounds of the normal. There is no sharp dividing line between the normal and the feeble-minded, or, as it is stated in the recent report of the Mental Deficiency Committee (p. 92), "the defective merge into the normal by insensible gradations."

There can at present be no accurate scientific line of division between the two classes. In the ordinary private practice of our profession we require unequivocal evidence of mental subnormality before giving an opinion that a child is mentally defective—feeble-minded. This medical standard, which certainly exhibits reluctance to signalize or stigmatize as defective, may be regarded as giving the benefit of the doubt to the child, excluding from definition as abnormal borderline children, lowering the boundary of the normal. With the advance of research and knowledge in psychological medicine, with the recognition of claims for specialized education, and with national acceptance of responsibility for the care of irresponsible persons, attempts have been made to define with greater accuracy the borderline between normality and defect, and statutory definitions have been formulated by the Board of Education and the Board of Control.

In the Elementary Education (Defective and Epileptic Children) Act, 1899, defective children were defined as children who "not being imbecile and not merely dull and backward, are by reason of mental or physical defect incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable, by reason of such defect, of receiving benefit from instruction in such special classes or schools as are in this Act mentioned." This section was included in the Education Act, 1921, and stands to-day.

The Mental Deficiency Act, 1927, defined four categories of mental defectives—idiots (the lowest grade), imbeciles, feeble-minded persons, and moral defectives—and the definition of feeble-minded persons is as follows:

"Persons in whose case there exists mental defectiveness which, though not amounting to imbecility, is yet so pronounced that they require care, supervision, and control for their own protection or for the protection of others, or, in the case of children, that they appear to be permanently incapable by reason of such defectiveness of receiving proper benefit from the instruction in ordinary schools. . . .

"For the purposes of this section 'mental defectiveness' means a condition of arrested or incomplete development of mind existing before the age of 18 years, whether arising from inherent causes or induced by disease or injury."

It will be noted that in the definitions regarding children, whether by the Board of Education or the Board of Control,

the predominant note in the test of the child is benefit from school—scholastic progress. This appears to exalt to pre-eminence a secondary though important element in diagnosis. The suggestion has now been put forward in the report of the Mental Deficiency Committee that "the only really satisfactory criterion of mental deficiency is the social one." If this be adopted it should bring the statutory definition closely in line with the definition in general medical practice, while, with newer methods available, doctors are in a position to define with greater precision.

Having, then, made a thorough physical examination of the borderline mental child it is necessary to investigate his temperamental and social characteristics, these being dependent upon his emotionality and general intelligence.

Stigmata can be very misleading, but the manner and appearance of a child at ease and under examination often give valuable information. There is to be noted, perhaps, a shambling or furtive gait and manner, or the child may be exceptionally facile, smiling, docile. He may exhibit a noticeable lack of shyness, or have a superficial vivacity without fixity of idea or purpose; or, on the other hand, with a superficially bright appearance, be irresponsible and reticent, have blank eyes, and be inane and meaningless in manner.

From home history is to be discovered if he exhibits in ordinary degree the common home virtues and vices, or in what way he manifests peculiarity. It is often hard to judge from this history, and too much reliance cannot be placed on isolated statements. If striking they arouse suspicion, but insight into the environment is as necessary as into the child's temperamental manifestations. He should, of course, disclose signs of ordinary home affections—should not, for example, be wantonly cruel to the baby, and should not be notoriously spiteful and destructive or aggressive. He should not be too naughty and uncontrollable, but equally he should not be too good. As Stanley Hall writes of a boy approaching the teens; "Morally he should have been through many if not most forms of what parents and teachers commonly call 'badness,' and Professor Yoder even calls 'meanness.'"

Peculiar habits are, of course, noteworthy, and suspicious—such, for example, as pica, indiscriminate spitting, cutting or biting, sticking pins into people, etc. On enuresis and night terrors little importance need usually be laid, but "wanderings" away from home require careful investigation and are an important symptom.

What initiative is shown in scholarly or hand work, in the laboratory or workshop, in games or gangs? Can he reliably carry out instructions, go messages, correctly account for change? Does he adhere to a purpose and carry it out? Has he any special aptitudes? Is he to an ordinary degree amenable to discipline or punishment? Does he co-operate with others, or is he solitary among his fellows? This is a most important point of information, and it is a most suspicious sign if a physically healthy child is solitary at school or only plays with those who are markedly his juniors.

What information can be obtained from the child regarding home and school conditions? What is his explanation of alleged peculiarities—has he a possibly satisfying explanation? While, regarding school work, there are many points on which information is important no point is more important than the fact—if it is a fact—that the child is solitary at school. Such a condition means that the child is failing in the social test—a test of far greater importance than any merely scholastic one, any test dealing with the acquisition of knowledge of the three R's. Scholastic backwardness is no more a proof of mental defect than it is of genius, but in cases of mental defect scholastic backwardness is a common sign. It is important, therefore, to know the child's capacity in this direction, the class he is in, and the progress he is making. How much schooling has he missed? Is he competent in an average class for his age, or how much is he retarded? How does he do in hand work? Apart from any tests it is of first importance to learn such facts from school. The opinion of the teacher as to the mental status is most desirable, but the facts of scholarly progress are essential—the exact position attained in reading, writing, and arithmetic.

These facts having been obtained, there remains for investigation the response to tests of scholastic and general intelligence.

The Binet-Simon tests as commonly used are certainly of great assistance in defining the degree of intelligence when these tests are faithfully and intelligently carried out—otherwise they may be most misleading. The scholastic standard set in the associated tests commonly used is, on the whole, I think, high. There is no special difficulty in carrying out the tests, but the value of their results depends on strict adherence to instructions. In fact, there is a right way and a wrong way in which to carry them out, and they are worse than useless unless carried out in the right way.

As regards guidance in the care of borderline children, the doctor naturally advises about physical treatment. He must also act as guide in home and school management, and make clear to parents the methods peculiarly suitable for the child. Is there call for restraint or stimulation, exercise or rest? Is it encouragement—is it punishment? If the latter, what is the place of corporal punishment? It is common for children with an inconspicuous physical ailment or defect to be "naughty," and certainly corporal punishment is illogical and bad treatment for them. For most borderline mental children corporal punishment is likewise bad, but I cannot agree that there is no place for such treatment.

The advances of modern psychology and the probings and criticisms into so-called mechanistic physiology in relation to mental processes have introduced into the life of the child an intensified atmosphere of psychical attention which is not only common among the educated classes but is developing rapidly in the form of schemes—child guidance, mental hygiene, social welfare—for the benefit of the less well-to-do.

In the case of the wealthier brother, parent, school-

master, and doctor usually together decide the course of events, and it is well that the doctor guide the school-master by information regarding the make-up of the child if the child requires special attention. For the poorer brother it is no less necessary that the doctor should guide the ship of health—bodily and mental—but for this child, with possibly more stormy seas to sail, there is at the same time more tendency to divided command.

The difficult child, the "maladjusted" child, the conduct case, may be a physically and mentally normal child, likewise so may be the dull and backward child. But many of all types are not. It is necessary in all cases where difficulty or doubt as to conduct or mentality arises that both the physical and mental capacity of the child be determined, and that full inquiry be made into all circumstances of the environment, material and mental. For this latter work, when done by child guidance clinics, psychologists and psychiatric social workers are essential, and team work is invaluable.

Two important points have, however, to be remembered. All children—and particularly borderline children—can have too much attention, can have their paths made too clear for their own good. Whether these children require to be dealt with by team work, or only the care of an individual, the medical man is the only suitable person to control the case.

With the diffusion of superficial medical information, however, there is a tendency for both physical and mental borderline children to be dealt with in association with very tempered medical control, and to take his rightful place in guidance the young practitioner must be fitted to aid both puericulture and pedagogy by defining indications for each borderline case. For the young graduate to carry out this work efficiently he must be fully and widely trained in the functions of normal childhood and in the beginnings of childish disease and disorder.

PAPILLOMA OF THE BLADDER.*

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THE name papilloma indicates a tumour made up of hypertrophied papillae, and is a generic term applied to any of the warty growths of the body. A vesical papilloma is, however, a unique tumour, having no counterpart in human pathology outside the urinary tract, and one about which the most divergent views are expressed by men of standing in urology, a fact which I will illustrate as I proceed. Two problems invite brief preliminary discussion.

1. Do all papillomata if left to themselves eventually undergo malignant transformation?

It is a prevailing opinion that whilst many papillomata are definitely malignant in the earlier phases all the so-called benign papillomata are to be regarded as pre-malignant tumours, and if left untreated they will in course of time undergo malignant degeneration and destroy life, a view which was first advanced by Civiale, the French urologist. Statements to this effect occur without discussion in many leading textbooks, and the assumption forms a working hypothesis to which, I think rightly, we all conform, giving an allegiance which in practice is desirable because it produces a degree of vigilance and solicitude which would not otherwise be attained, and which helps to safeguard many patients in whom recurrence does actually occur. It is a view, however, which is not by any means universally accepted. Nitze himself, on an experience of 177 of these tumours, was emphatic in his view that most papillomata are actually benign, and considered that by christening them "Zottenkrebs" (tufted cancer) Rokitsky had caused much confusion. Again, Syring in 1911, during a careful study of this subject, found

astonishingly little evidence in support of the hypothesis of metaplasia. For the present the question remains an open one, but recent literature tends to support the views of those earlier writers who regarded all papillomata as definitely malignant. It is hard, however, to agree entirely with this view, for many cases are on record running for ten years or more—in my own series there are three—and cases are reported by Fenwick and Geraghty having histories extending over twenty years and ultimately ending fatally from carcinoma. The long history in such cases appears to me definitely to preclude malignancy in the earlier period, whilst, on the other hand, their termination suggests that even very benign tumours will eventually take on malignancy.

2. How shall the nature of the growth be decided?

The problem of differentiating a simple from a malignant papilloma, or of deciding at what stage a simple papilloma has taken on malignancy, has baffled both clinicians and pathologists. It is remarkable that after all these years the criteria of malignancy are still uncertain. There is much divergence of view in the copious literature regarding papillomata as to whether they shall be judged by their clinical or by their pathological features. At the outset I would invite your consideration of the desirability of attempting a pathological diagnosis. The uncertainty of the pathological opinion regarding these tumours is almost a byword, and different pathologists have not infrequently reported differently on the same section. It has happened, in the experience of many surgeons that a tumour has been reported as malignant and its recurrence as simple; or that a tumour reported as simple has destroyed life by metastasis; or again, that of one reported malignant a clinical cure has been achieved. Further, a tumour regarded by the pathologist as simple has recurred in the suprapubic scar as a malignant growth and has destroyed life.

It is not uncommon for two papillomata to be encountered in the same bladder, of which one is apparently benign and the other malignant. Moreover, it is stated that malignancy may be observed in one part of a tumour

* Read in opening a discussion in the Section of Surgery at the Annual Meeting of the British Medical Association held in Manchester, July, 1929.