A Paper

ON

PRACTICAL PROBLEMS IN PAEDIATRICS*

BY

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In medical practice every age has had its own peculiar difficulties, and its particular problems to be solved, in the advancement of science and the furtherance of the well-being of society. In no department of medicine are the problems of to-day more conspicuous than in paediatrics.

Consequent upon the founding of special hospitals for children about seventy years ago a vast amount of new knowledge has been gained concerning the diseases peculiar to children, their prevention, and their treatment. Many recent discoveries of prophylactic promise in general medicine have their greatest value in practice when utilized in infancy and in childhood. The dictum that prevention is better than cure is being forced on the nation as a practical proposition, largely by the authority of members of our profession in official positions.

The evolution of democracy in our country has been powerfully influenced of late by financial and economic conditions. This evolution has, on the one hand, altered, and to some degree levelled, social status, while greatly limiting financial resource, and, on the other, has been associated with important fundamental changes in our hospital systems, both voluntary and controlled. Both types of hospital are at the opening of a new page in their history, and by combined work will have opportunities of benefiting children such as never before existed.

Finally, with such development of conditions and of opportunities, evidence has accumulated pointing to the need for alterations in the training of medical students so as adequately to fit practitioners to carry out paediatric, and more particularly prophylactic paediatric, work. These are important considerations for our attention.

DIETETIC PROBLEMS

The work of the Mellanbys, Helen Mackay, and others in this country, and of workers elsewhere, has opened a new chapter in paediatrics. We have attained a higher level of knowledge regarding phases of malnutrition in infants and in young children, and for the time much of our attention has been attracted to vitamins and to mineral salts. We know much of the importance of vitamins and of iron for young children, and we know that without them growth and nutrition suffer and infection readily occurs. Following these discoveries, there has been put ready to our hand a very large number of agents by which these substances can readily be administered. From New Zealand to Toronto a wide selection of diets is offered us to choose from. We live in the vitamin era. But particularly necessary when dealing with infants and young children is it for us to remember that the discovery of vitamins does not vitiate previously ascertained scientific facts. No antipodean cream or other mixture can compensate for impaired digestion. The great majority of our babies are born healthy and will grow up strong if fed on simple food, with such additions as will not interfere with digestion but may be necessary because of maternal or environmental conditions. Thus, in the case of infants under our supervision, we do not fear scurvy or rickets unless in markedly exceptional cases—for example, coeliac disease. When we are faced with an early case of rickets the primary

desideratum remains restoration of normal digestive power. Then we have to seek for our vitamin D—our proper salts percentage in the blood—our adequate supply of body calcium. To this end we employ irradiated ergosterol, haliverol, artificial sunlight—one or more, or all—but we do not risk disturbed digestion by popular remedies or masses of fats, or use parathyroid. Endocrine secretions are widely in use, but it is, however, almost always wise to avoid such use if satisfactory results can be obtained by dietetic means. The administration of iron we know often has marvellous results in the cases of little children who are weakly, but the advance in knowledge regarding the relation of copper and iron, and the marketing of such combinations, has greatly furthered our power of benefiting anaemic children.

It is impossible to avoid feeling that in some cases valour outruns discretion in the prescription of glucose. In our young days we heard much of "carbohydrate indigestion"; later we faced "acidosis" as the popular complaint, and it almost looks as if another swing of the pendulum were due before long. Diet and habit change with passing years; reaction follows action, and reaction often tends to be excessive. The discovery of the vitamin content of foods, while clarifying our vision of health and disease, sometimes induced dietetic indiscretion, particularly in connexion with fatty foods, and to-day, in attempting to avoid the Scylla of excessive fat, it sometimes looks as if there were danger of sailing near the Charybdis of excessive sugar. It is even possible to have too much of such a good thing as sunlight!

INFECTIONS AND IMMUNITY

As regards acute infections, great advance has been made in recent years in the discovery of specific tests for susceptibility and in the production of immunizing agents.

In speaking of immunity we talk of a still largely unknown quantity, and a specific test postulates knowledge of a specific infecting agent. Even in the case of diphtheria, where the infecting agent is definitely known and both specific testing and immunization are proved in the mass to be of great value, it cannot yet be claimed that the subject of individual reaction to test or immunization is fully understood. Still more doubtful is the position as regards scarlet fever and other acute infective fevers, but progress along such lines has been very considerable, and great hope for the future lies in its development. There are difficulties peculiar to each particular infection.

Of two outstanding conditions, in one, acute anterior poliomyelitis, we know the virus, but have extreme difficulty in getting sufficiently early clinical diagnosis as to render specific injection of great practical therapeutic utility; while in the other, rheumatic infection, we have not yet an accurately determined specific virus, nor, despite many contentions, an accurately defined clinical condition.

Flexner has recently written of the American investigations in which parental blood is injected intramuscularly with a view to prevent acute anterior poliomyelitis infection, and has discussed the underlying theoretical basis for such action—namely, that a widespread subclinical immunization of the adult population is constantly proceeding. The position is extraordinarily interesting and important, and may prove to be a most valuable advance in prophylactic medicine.

PREVENTIVE TREATMENT

In all directions we can note the trend towards preventive treatment in medicine, and with increasing clarity are the results of preventive activity and propaganda to be observed. The work of the paediatric physician is

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to-day to a considerable degree very different from that of twenty years ago. Much of it still is, and obviously always must be, purely therapeutic in nature; but on the other hand the numbers are greatly increased of those coming, both in hospital and in private practice, mainly for the purpose of prevention. Diffusion of knowledge among the laity concerning the principles and practices of prophylactic medicine has been carried out persistently and with ever-increasing vigour. The means employed, the methods adopted, and the nature of information given in the course of such lay instruction have often been open to very severe criticism, but the result to-day is the existence among the general public of a considerable superficial knowledge of medical terms, of symptom-complexes, of the dangers of disease in childhood, and of theoretical methods of prevention and treatment. In the mass the idea of prevention has come to hold a much larger place in the mind of the nation than heretofore, and, so far, the diffusion of medical information among the public has been justified. Buttressing such information are the obvious good results of preventive medicine—intensified since the war, but insistently pursued since the opening of the century. In addition, enormous stimulus to prevention has developed through the provision of extended facilities for obtaining it—for example, cheap or free milk provision, rest homes, convalescent homes, free immunization, etc.

Two intensive campaigns—anti-tuberculosis and orthopaedic—have been conducted during this century, each having a fundamental object of wide sociologic import—namely, such development of therapeutics as to lead up to prophylaxis.

In both instances important consequences have been the enfolding within "medicine" of many, if not all, of the mental and physical activities of the child for a prolonged period—possibly years. Both the tuberculosis specialist and the orthopaedic specialist require complete control of the patient, and with such environmental dictates scholastic education must necessarily be given an appropriate and special place. Thus have been developed special residential schools for physically defective children, and country hospitals with special schools. By these means large numbers of children now have opportunities, not only of regaining health and strength, but at the same time of becoming both educationally and physically better fitted to face life.

Of types of children most needing prolonged medical institutional care with schooling none is so outstanding as the rheumatic. Forming this class are usually mentally alert children in whose cases early and prolonged care will commonly prevent the development of heart disease. But treatment and special schooling, to be efficacious, must be prolonged for years, and lacking such full care the chances of permanent improvement are greatly diminished. Special care and medical supervision of rheumatic children in their homes can, however, certainly be associated with very satisfactory progress and the prevention of serious cardiac effects. The most important factor in obtaining such satisfactory results is the presence of a good mother, and by good mothering in this connexion one means such control and guidance of everyday affairs of life as will keep the child at the highest possible standard of health and immediately combat the commencement of illness.

The subject of mothering leads to consideration of another aspect of paediatric work very intimately connected with family relationships and maternal care. Originated in America, there have of late years been developed in this country special clinics for "difficult" children—child guidance clinics. Here temperamental, mental, and even moral peculiarities and difficulties are the outstanding features presented in the history, and

the forms of "guidance" necessary may be very variable and referable to almost any factor in environment, but should always be prefaced by complete physical examination and the establishment of sound health. Child guidance clinics are doing valuable work—work which often cannot otherwise be carried out—but detailed investigation at them should always be preceded or commenced by thorough examination by a paediatric physician, as this may render further investigation unnecessary.

Prior to the development of the school medical and infant welfare services in the early years of this century, most of the environmental work immediately connected with medicine, when carried out at all, was done by voluntary agencies, but of late years official prophylactic medical work under the guidance of the Ministry of Health and the Board of Education has increased enormously. In connexion with both these services prophylactic work under the medical officers has steadily become wider in range and more intense in character. Children to-day are cleaner, better clothed, and better fed than ever before. Ante-natal clinics are now provided, not only for the purpose of safeguarding the mothers with regard to their forthcoming confinements, but also to secure that their dietaries shall be regulated so as to supply any deficiencies which might adversely affect the newborn baby.

With the existence of ante-natal and child welfare clinics and their accessory activities a very extensive preventive system is in being. Not only has the infantile mortality rate sunk greatly since the beginning of the century, but we see much less frequently the gross forms of various diseases. Ordinary minor complaints are dealt with earlier, severe scurvy and rickets are becoming uncommon, florid congenital syphilis is almost rare.

Disease is being dealt with at a much earlier stage, so that after-effects do not occur, or are minimized, and, consequently, there is an average higher standard of health for the bulk of the children and a greater likelihood of health in adult life than heretofore. Undoubtedly some weakly lives are saved which previously would have been lost, and whose preservation lowers the general standard. But, while this is so, it is quite wrong to argue that too much to-day is done for the poor child, and that as a result the weakest stamina and poorest blood is being preserved. For the acutely sick child it is impossible for too much to be done. The prolonged care of subnormal children and the prophylactic care of those in average good health has resulted in advance in physique and a higher general standard of scholastic attainment than previously in spite of the saving of lives in earlier years. The standard of physical health of young children has risen and is rising, and preventive medicine is showing definite results of national value. As the child grows older medical, scholastic, and social attention continues to be focused upon him. He is helped to avoid a great many of the serious medical and surgical dangers of childhood; special classes and special schools nurture him scholastically; child guidance councils and mental welfare associations are at hand to help him, and, if he be certifiable as feeble-minded, particularly careful supervision is provided for him.

A MULTIPLICITY OF INSTITUTIONS

It has been said by at least one eminent judge and the head master of a renowned public school that the physique of the nation is declining, and is practically in desperate straits. It is not possible to accept such views, and lengthy medical experience shows the contrary to be the case. Such erroneous opinions are partly due to incorrect appreciation of medical terms and consequently of changing medical standards and the meaning of statistics.

Undoubtedly, however, there is just now an unprecedented multiplicity of institutions and agencies dealing with children, and we all know that "too many cooks spoil the broth."

An attitude of observant neglect towards a child is most certainly an important and necessary feature in healthy development when coupled with what our far-seeing American ambassador in London told us the other day was the strongest Anglo-American bond of union—namely, a rich supply of common sense.

The existence of facilities for assistance through manifold agencies encourages a tendency not only to lack of discrimination and a loss of focused view on the part of parents, but also, not infrequently, acts as direct incitement to wander from one possible source of aid to others. Departmental medical work has extended from routine advisory examination to the treatment of disease, and there has been great development in the notification, segregation, and care of large groups of cases in connexion with controlled institutions. Thus has arisen in some respects overlapping, and even competition, in supervision, and so far as medical instruction is concerned some degree of difficulty. The present time is, of course, a period of transition, and it is essential that in future the voluntary and the controlled hospitals should mutually co-operate and ultimately form a complementary whole, subserving the interests and needs of all classes of society.

Such would form a co-ordination within what may be termed pure medicine, but beyond this is growing the recognition of need for a wider co-ordination in the completion of medical work. There is fortunately an ever-increasing spirit and practice of harmonious co-operation between medicine and education—the two are becoming closer and closer linked.

"THE WHOLE CHILD"

Modern medicine teaches that health and disease in childhood cannot be considered apart from a purview of all the activities going to form the life of the child, and that scholastic education and life at school have very important bearings on general well-being. The doctor recognizes the claims of education not only in providing nurture and a means of development of intrinsic value, but he has also come to recognize that education, when suitably modified and arranged, is frequently of very great assistance in furthering the purely medical welfare of the child. With knowledge of the various forms and types of education now offered must come active search for the best in any individual case, and not only close collaboration with the educational authority, but the proffering of expert advice. The calls on medical knowledge regarding many environmental factors in the life of the child are increasing in latitude and in importance, particularly with respect to psychological relations and reactions, and in order to give authoritative advice and assume just responsibility the doctor requires expert knowledge and special training.

It is being appreciated that prophylactic paediatrics is the basis of sound health and virility in the nation, and that each individual child requires special individual attention. Useful advice from a medical practitioner can only be obtained when he or she has received a full course of training in what is really a very large and distinct subject. Thus he must learn not only something of the special characteristics of children in health and disease and of the special applications of modern medicine to them, but also something of the scholastic, mental, and general environmental factors which powerfully influence their development and health. At present the bulk of medical graduates receive no such comprehensive training, and there are still various internal medical influences

which militate against putting this into practice. But such development surely will come, and the path to it is already blazed.

Along with proper instruction will come a readjustment of avenues of approach to the subject of child care and a more intimate collaboration of all agencies for the welfare of children. The need for this is great—the opportunity seems at hand. With lack of recognition that the medical care of children in health and disease is a great complete subject there has resulted in the past much difficulty in control and confusion in the practice of child care in the mass. Even through such times of difficulty the beneficial results of the enormous amount of attention devoted to the welfare of children by the State, corporations, associations, hospitals, etc., and by private individuals and parents has been marked. But it has been incomplete through divided responsibility, and it has often been so incoordinated as to involve unnecessary energy, thought, worry, activity, and expense.

Surely now we can look forward to the dawning of a morrow when paediatrics will be recognized as a unit of the first importance in medicine, and when pessimistic wailings with regard to the future ability and stamina of the nation will be conclusively refuted.

TRANSITORY ARTHRITIS OF THE HIP-JOINT IN CHILDHOOD

AN INVESTIGATION OF ARTHRITIS OF THE HIP IN NINETY-SEVEN CHILDREN

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The desirability of an early and exact diagnosis of arthritis of the hip in childhood is beyond dispute. From time to time we see children with the clinical signs of arthritis of the hip—a limp, limitation of movement by spasm, and perhaps pain; but with only a few days' history of trouble, no signs of general illness, and a normal x-ray appearance of the joint. We probably see such children earlier than we did in the past as a result of better education of the public as to the serious possibilities of joint pains and limping in children, and an increased watchfulness of school and public authorities. These children must be watched and investigated carefully, for the possibility of an early tuberculous infection must always be borne in mind.

If seen among the out-patients in the orthopaedic department at St. Thomas's Hospital, the practice in recent years has been for such children to be admitted to the ward for observation. Some of them become normal within a few days, are discharged, and remain normal. On the other hand, if the signs persist the child is transferred to the country hospital at Pyrford. At Pyrford the child is treated under open-air hospital conditions, with such local treatment to the hip as seems indicated for each individual, simple rest in bed in most cases, and traction on the joint or fixation with abduction and traction on a hip frame when the symptoms are markedly persistent. All such children are regarded as being possibly tuberculous until proof of some other condition becomes manifest, or until they settle down completely. The period for which they are so observed varies from a few weeks to several months, according to individual progress. They are regarded as "observation hips." Certain others, sent to Pyrford under like conditions by