DISEASES OF CHILDREN

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PREFACE

This book is intended for medical students and general practitioners. Emphasis has been laid on the common disorders of childhood, but rare conditions are included so that it can be used for reference. The care of sick children is essentially a matter of teamwork, therefore, the advice the doctor should give the nurse who is assisting him has been included. It is hoped that nursing tutors will also find this of value.

The steady improvement in the mortality rates for infants and children should not lead the student to spend less time learning about normal and sick children. Most paediatric centres now report increasing pressure on their beds and out-patient clinics. Amongst other reasons, this is related to a greater emphasis on special-care units and the needs of premature infants, a more active approach to the management of congenital malformations, and a wider recognition of the needs of the emotionally disturbed child. Further factors increasing the demand for hospital beds are the loosening of family ties, whereby a grandmother is no longer available to nurse the sick child at home, and the frequency with which mothers go out to work.

A wide knowledge of the child in health and disease is essential for the family doctor, a large proportion of whose patients will be children. An ability to look after children is one of the keys to successful general practice, reputations being made more rapidly by success with children than in any other way. The problems of sick children in general practice and the needs of the general practitioner have been largely derived from nine years experience as a consultant paediatrician in a large provincial area where it is possible to achieve a closer relationship between consultant and general practitioner than in a teaching hospital.

Paediatrics is changing fast, so that there is now much greater emphasis on the neonatal period, this being reflected in the number of pages devoted to this age group. The pattern of disease is also changing in older children; for example, in children over one year of age accidents are the most frequent cause of death, while cancer, although rare, is now the most common natural cause of death.

The sick child must be studied within the context of medicine as a whole;

this book anticipates a knowledge of general medicine in its readers. Stress is laid on the frequent occasions when the child's reaction to disease differs from that of the adult. The fact that the temperature of a newborn baby with infection is as likely to fall as to rise is an example of such a difference.

There is no separate chapter on Tropical Diseases. Many of the diseases of the tropics are the same as those in temperate climates, but their pattern is different because of alterations in the environment or in the response of the individual to disease. Other diseases, which used to be confined to tropical areas, and were often, therefore, left out of textbooks designed for use in temperate climates, have been incorporated within the systems affected. Nowadays, immigration and the speed of travel requires that every practitioner should be competent to recognize and treat these disorders. For the same reason a geographical history is described as part of normal history taking.

The more frequent references to West Africa, particularly Nigeria, than to other tropical areas result from a year spent working there. For the same reason a number of illustrations are of African children. It is hoped that an approach to paediatrics through a study of sick children both in temperate and tropical countries will assist students and doctors in both areas.

London, January 1964 HUGH JOLLY

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CHAPTER 1

HISTORY TAKING AND EXAMINATION

When the patient is a child the doctor's approach is of especial importance since diagnosis is more difficult if the child is upset. If both parents come with the child, both should be allowed to enter the consulting room so that a better picture of the family is obtained. This must be stressed to hospital nurses who still tend to allow only one parent to accompany the child. If a grandparent or close friend comes with the mother they also should be allowed into the consulting room, since if they feel it important enough to come they are obviously of consequence in the child's life. Moreover, a wider picture of the family may be obtained by this means. One can be certain that if a grandmother argues with her daughter in front of the doctor, even more does she do so at home! When taking the history, the doctor must decide whether it would be better for the child to stay outside rather than hear himself discussed.

The mother should be put at her ease so that she is able to describe her child's problems in her own words and without hurry. The 'question and answer' type of history fails to give the real picture of the child's illness and should only be used at the end in order to fill gaps in the story.

The consulting room or surgery should look as much like a toy shop and as little like an operating theatre as possible. An array of chromium-plated instruments may impress the mother but only frighten the child. If the nurse is required to hand the doctor an instrument she should, if possible, only hand the one required and not produce a whole tray of frightening instruments.

HISTORY

In taking a medical history students are usually taught to inquire about the main complaint first, and then to go into the previous history and family history. With children, it is an advantage to learn the family and previous history before coming to the chief complaint. The doctor must try to obtain a picture of the patient in his home setting and it is helpful if this has been built up before discussing the main illness. The elderly mother of an only child will have a very different outlook from the mother who has had many children. These are facts which should be learnt at an early stage in taking the history.

Family History

It should be the duty of the receptionist to record the father's occupation and the religion of the family in addition to the usual routine details. The religion may well be relevant to the child's problem, but if requested by the doctor it becomes a much more personal question than if recorded with other routine matters by the receptionist. She should also record the child's date of birth and his present age. These should be carefully checked as mothers are very apt to give the age at next birthday.

The child's place in the family is learnt, together with the ages of any other children and whether they have suffered from any notable complaints. For example, a recent history of measles in one of the other children is of importance when seeing a child with a rash. A family history of fits is particularly significant if the child is brought for the same reason. To know the age of the parents is helpful; elderly parents or parents with widely different ages each have their own problems.

Specific inquiry should be made as to whether any children have died and whether there have been any miscarriages. Consanguinity should be determined in view of the influence of genetic factors in disease.

Previous History

This includes details of pregnancy and labour as well as the child's previous illnesses. The amount of time given to antenatal and birth history will depend on the child's age and his complaint. More detail will be required if the patient is brought for mental retardation, fits or congenital malformations which could be related to disease or drugs in pregnancy, or difficulty in labour. The birth weight must be recorded and whether birth was at term or premature. Detailed information about feeding must be obtained for all infants but, even with older children, it is an advantage to know whether or not they were breast fed. The manner in which this question is answered, as well as the answer itself, will often give useful information about the mother. The duration of breast feeding should be asked since some mothers will state that they have breast fed their children, when in fact this was only while they were in the maternity hospital.

It is helpful to ask whether the child has had vitamin supplements, such as cod liver oil and orange juice. This question is not so much to look for the possibility of a vitamin deficiency as to discover whether the mother has a conscientious approach to the feeding of her baby. The over-anxious mother who states on slender evidence that her child cannot take cod liver oil may be revealed by the answers given to this question.

The age at which the child passed the normal milestones of development is then recorded, although mothers often find difficulty in recollecting these

facts. In the case of a baby or a retarded child the information must be detailed, whereas in other children it may be necessary only to check that the patient walked and talked within the normal period. Details of immunization and vaccination should be recorded.

Finally, an inquiry into previous illnesses should be made and, if necessary, a specific inquiry about the infectious fevers such as measles, rubella and others. These are so often forgotten by the mother or merely recorded by the doctor as 'usual childish complaints'. An absence of this detailed information is particularly irritating in the case of children in hospital when another patient in the ward develops an infectious fever. If this happens it is necessary to know at once which of the other patients are at risk and need to be isolated. A direct question should be asked as to whether the child has had any operations. Mothers often regard the removal of tonsils and adenoids as routine and forget to mention the fact.

History of Present Complaint

Detailed information should be obtained about the child's illness which is recorded systematically so as to give separate paragraphs and headings to each new dateline, rather than giving the whole history in essay form. Thus:

4 weeks ago	Onset of cough.....
3 days ago	Sore throat.....
Yesterday	Rash .....
Today	Convulsion.....

On no account should days of the week be written in the history since they give no indication of the duration of the disease. A common oversight is to forget to record the date on which the examination is taking place. Care must be taken to go far enough back in the history to discover when the symptoms first began or whether similar attacks have occurred before. Related earlier illnesses, such as a recurrent sore throat in a child with nephritis, should be given in this part of the history, whereas if unrelated they should be recorded under previous illnesses.

Geographical History

An inquiry should be made into the child's recent whereabouts. In these days of air travel and holidays abroad, failure to ask this simple question can lead to a deadly disease like malaria being overlooked. Even if the patient has not travelled in a tropical area he may have acquired a disease from contact with someone who has.

Social History

As much detail of the patient's home circumstances should be obtained as seems reasonable to ask. Facts relating to overcrowding are always of importance and details of the parents' financial status may be helpful though much of this can be surmised from knowing the father's occupation and home address. The information one is attempting to glean is the sort of knowledge that would be discovered at a glance from a visit to the home. This information would be a valuable preliminary to the rest of the patient's history, but it is better left to the end when the parents have gained confidence in the doctor and will not feel that he is asking unnecessary personal questions.

So far it has been assumed that the history has been taken from the mother or whoever is accompanying the child. But the doctor must not forget to ask the child himself about the symptoms, and even the very young can give most valuable information.

With children whose diagnosis is not apparent on the first visit and especially those under investigation in hospital, it is always helpful if a repeat history is taken. The mother of a child in hospital can often give a much clearer history at the second attempt than at the time of the child's admission, when flustered and anxious.

EXAMINATION

In childhood, inspection plays a greater part in the examination than at any other age. This has been going on throughout the taking of the history, and the child is encouraged to play with toys which should be plentifully supplied in the surgery or consulting room.

Babies and toddlers are especially likely to cry when undressed; they are therefore partly undressed in a warm waiting-room before entry. It is clothes such as vests and jerseys, which must be taken off over the head, that particularly make him cry; the removal of coats and blankets causes much less disturbance. Pants are left on, since children feel acutely embarrassed if the removal of a blanket or dressing gown finds them stark naked.

In the children's out-patient department the nurse has a greater part to play than with adults and must be on the alert to assist the doctor, but not obtrude herself and thereby frighten the child. The mother should be left to undress the child who may be nervous of strangers. The nurse must anticipate the doctor's requirements and be ready to hand instruments such as the spatula so that he does not have to break contact with the child and be less able to prevent him from crying. She may be required to amuse a fretful child but not by means of loud conversation or a noisy toy.

The examination of the child cannot be systematically carried out from top

to bottom as in an adult, since all those manœuvres which are unpleasant and liable to upset the child, such as the examination of the ears or throat, must be left to the end. The doctor must be prepared to vary his routine to suit the child, and it may well be necessary to examine the back of the chest before the front, or the abdomen before the chest. This variable routine has the disadvantage that parts of the examination may be left out, but this can be prevented by a strictly systematic method of recording so that it is immediately obvious if any part of the examination has been overlooked.

Small children should, as far as possible, be examined on their mother's lap. The child can always be moved to the couch for further examination, but

FIG. 1. Examination of the child starts with the hands.

this may make him cry so that as much information as possible should be obtained beforehand while he is quiet on his mother's lap. If the child is asleep in his mother's arms much of the examination should be completed before he is woken up. The sleeping child may give the doctor the best chance to determine the type of respirations, the anterior fontanelle tension and to examine the abdomen and fundi.

An examination of the hands makes a good starting point (Fig. 1). It is

unlikely to upset the child who will already be used to seeing adults shake hands, and has the advantage of ensuring that this important examination is not forgotten. A great deal of information can be obtained from the hands, including simple observations such as whether they are unnecessarily dirty or whether the nails are bitten.

Babies and toddlers are easily upset and should not be stared at, since this causes them to lose confidence and cry. It is always wiser to look at the centre of a baby's forehead than to stare him in the eyes. A young child may be made to feel more at home if the doctor keeps up a 'running commentary' during his examination. The doctor asks questions as he goes along but if the child fails to answer one he should immediately pass on to another. A child can become acutely embarrassed by the silence after the doctor's question and

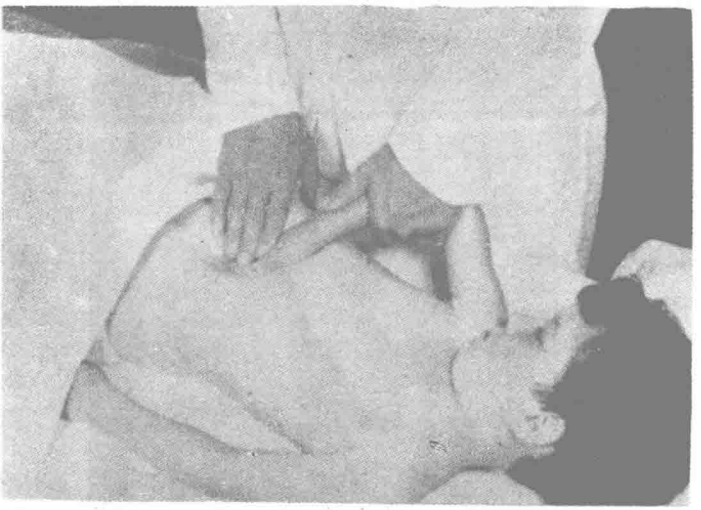

FIG. 2. A fretful child who refuses to stay quiet for ordinary abdominal examination will often permit palpation through his own hand.

start to cry, whereas he may be reassured by the doctor's ceaseless chatter and thereby be prevented from crying. A child who has been crying during the examination will usually stop when he is being dressed. If the manœuvre of reclothing is drawn out, much valuable time, without crying, can be gained for further examination while his mother is slowly replacing his clothes.

In the examination of the chest, auscultation should precede percussion since the latter is more likely to upset a child. A diaphragm type of chest piece has the advantage that it can be slid from place to place more easily than the bell-end, thereby causing less disturbance, though there are occasions

in listening to an abnormal heart when a bell-end is essential. If the child is fretful his confidence can often be gained by pretending to examine his mother's chest first. He is also more likely to accept the stethoscope if the end is first placed on his arm. If the end of the stethoscope is cold it should be warmed in the hand before use.

If a fretful child will not permit thorough palpation of the abdomen he can often be persuaded to co-operate if the doctor places the child's hand on the abdomen and then, covering it with his own hand, palpates through it (Fig. 2). During the first year of life the liver is relatively large and can be felt about two fingers breadth below the right costal margin. Rectal examination should always be left to last and, in carrying this out, the tip of the index finger should

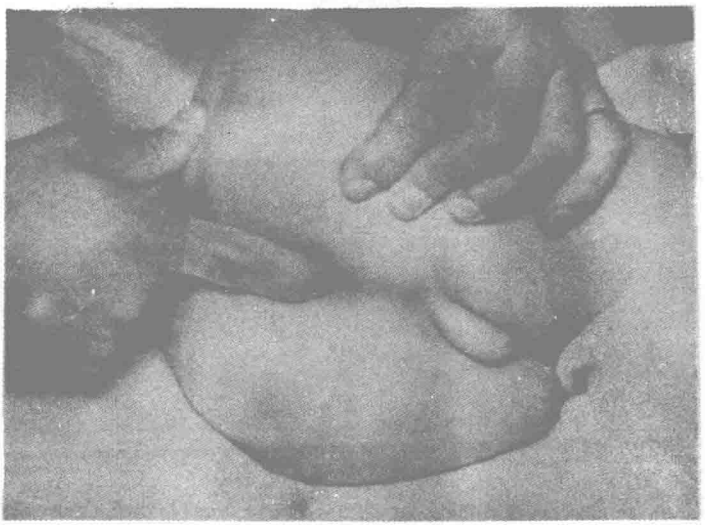

FIG. 3. Rectal examination. The finger is pressed flat against the posterior half of the sphincter before entering, rather than being inserted directly into the centre of the anus.

be pressed flat against the edge of the anus before insertion (Fig. 3). This method causes much less discomfort than insertion direct into the centre of the orifice.

In the examination of the central nervous system a great deal of time should be given to watching the muscles while the child is moving naturally. A simple method for the detection of neck stiffness in a child who can co-operate is to ask him to kiss his knee, this can be accomplished with ease by the normal child (Fig. 4).

Examination of the mouth and ears is left to the end because it is likely to make the child cry. The ears should be seen first as they cause less upset and before inserting a warm aural speculum the pinna should be stretched and drawn a little backwards. By this means the auditory canal is straightened and the external meatus widened so that the speculum can more easily be inserted. An aural speculum with a very small aperture is useless, even in babies, because so little can be seen through it. The largest size possible should be used and straightening the canal makes it unnecessary for the speculum to be inserted far.

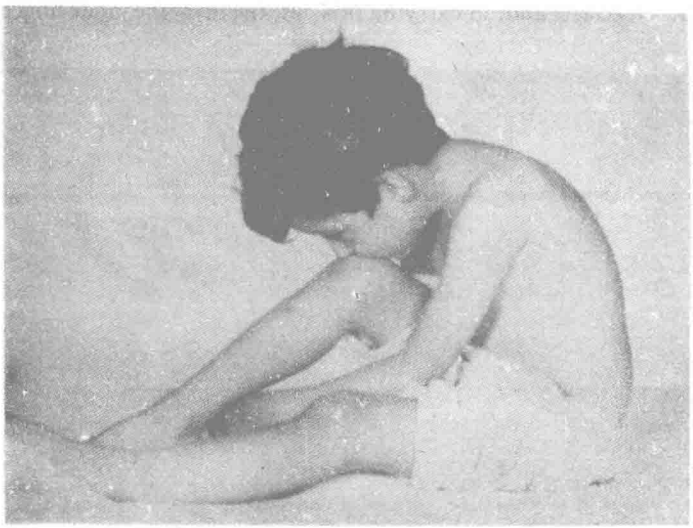

FIG. 4. To detect neck stiffness the child is asked to kiss his knee, a movement which is easily accomplished by the normal child.

Examination of the mouth and throat is likely to cause more difficulty than anything else in a fretful child, but this part of the examination must be thorough, even if it makes the child cry. If the child refuses to stay still he must be held correctly (Fig. 5). Whenever it is necessary to hold the child tight during the examination this should be undertaken by the mother rather than the nurse, as it is less frightening for him. Every doctor will acquire his own tricks to facilitate the examination; it should be remembered that many children can open their mouths so wide that, by protruding the tongue, a full view of the throat can be achieved without using a spatula. Some children gain the necessary confidence to open their mouth if they are allowed to hold the spatula themselves. Pretending to count the teeth will often hold the