Diseases of Children

GL JOLLY

FIFTH EDITION

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Preface to Fifth Edition

The major change in this edition is that Dr Malcolm Levene has joined me as co-author. For the book to continue to keep pace with modern paediatrics it was clear that I should be working with a younger paediatrician rather than alone. Dr Levene worked with me in the Department of Paediatrics at Charing Cross Hospital and is now Senior Lecturer in the Department of Child Health of the University of Leicester Medical School. We share a similar concept of paediatrics and he has a special interest in neonatology. The basic approach to the subject has not changed.

Progress in paediatrics has necessitated the addition of new material throughout the book but an increase in size has been prevented by the removal of material no longer required.

Studies continue to show an insufficiently high standard of history taking and a lack of skill in understanding what lies behind a patient's anxieties. Many doctors still fail to communicate sufficiently with patients and parents of patients. The fault lies in the training they have received. Video studies of students at the beginning and end of their training have shown a similar lack of skill in history taking in both groups, despite the much greater knowledge of medicine in the second group. This subject is therefore discussed still more fully, together with the need in paediatrics to see the child's problems through the child's eyes.

Community and Hospital Paediatrics have grown closer together during the past few years and the work of consultant paediatricians is much less confined to hospital. This change has influenced some of the emphasis. For example, the handling of the handicapped child must have a shared community and hospital component.

The underlying theme remains that paediatrics must be viewed on a world basis and that tropical paediatrics as a separate subject is outmoded. Medical students, whether in developing or developed countries, need to be taught the same paediatric content although the emphasis may vary. Students in Britain must be as competent at handling sickle cell disease as those in Africa. The same goes for malaria, to prevent the tragic loss of returning travellers from failure to make the correct diagnosis. Malarial prophylaxis has become more difficult with the emergence of resistant strains in many parts of the world. This aspect is therefore discussed more fully.

The most exciting progress in world medicine since the last edition has been the total eradication of smallpox. To be able to remove this subject and the need for vaccination from the contents of the book is little short of miraculous.

On the debit side, child abuse, both physical and emotional, appears to be on the increase. Lack of understanding of the factors leading to this tragedy is widespread among

the general public who by a greater and more sympathetic awareness of the problem could help to reduce it. All those in the caring professions, especially those in daily contact with the problem, such as doctors, health visitors and teachers should regard education for parenthood as a vital component of their work to help parents understand more about child development.

Modern intensive care of very low birth weight babies has been dramatic in its success in causing their survival. This has inevitably meant the death, after some days or weeks, of babies with whom parents and staff have become closely identified in circumstances of great stress. Possibly this is the occasion for the closest partnership between staff and parents and an indication of how much is to be gained by working together. On the other hand separation of parents from an acutely ill infant can be a factor in child abuse.

A number of new subjects have been introduced including Reye's syndrome and glue sniffing which has now become a major problem, especially in young males.

HUGH JOLLY

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Fig. 15 is reproduced from an article by Hugh Jolly in *The Practitioner* (1956), **176**, 369. Fig. 25 is reproduced from an article by Hugh Jolly in the *Proceedings of the Royal Society of Medicine* (1959), **52**, 300.

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Contents

1

History Taking and Examination

When the patient is a child the doctor's approach is of especial importance since the diagnosis is more difficult if the child is upset. Both parents should be encouraged to come with their child. A request to this effect should be printed on the appointment card. If a grandparent or close friend comes with the mother they should also be allowed in the consulting room since, if they are important enough to come, they occupy a relevant role in the family and in the child's life. Moreover, they may make it possible to gain a wider picture of the family. One may be certain that if a grandmother argues with her daughter in front of the doctor, even more does she do so at home!

It reduces the alarm felt by parents and patients if the doctor comes out of the room to meet them and introduce himself. Remaining seated in a chair is discourteous and can be alarming. The doctor should always shake hands—a gesture which can also be very informative. An apology if they have been kept waiting makes all the difference. Equally a warm receptionist who knows how to assure parents that they will be given as much time as is needed even if the patient before is taking a long time can make all the difference in helping them to relax.

When taking the history, the doctor must decide whether it would be better for the child to go out to play rather than to hear himself discussed. However, he should always come into the consulting room in the first place to prevent fear of the unknown while waiting to be called. A wise doctor will often anticipate the parents' wish to talk on their own. Some parents feel too embarrassed to make the request with the result that they may withhold important information. Further understanding of the child can be obtained if he is asked to draw while he is out of the room.

The child needs to be put at his ease and made to feel welcome. He is usually greeted first, provided this is unlikely to embarrass him. The greeting sometimes takes the form of a complimentary remark about his clothes or showing him one of the toys. It may be appropriate to tell the child your name and then to ask his. Alternatively, a question such as 'do you go to school' may be easier for him to answer. The aim is to become friends and help the child to make contact with the doctor.

All this is helped by not wearing a white coat and by arranging the consulting room or surgery office so that it looks more 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 frightens the child. Parents should be seated on the same side of the desk as the doctor and not opposite him.

The parents should be put at their ease so that they are able to describe their child's problems in their own words and without hurry. Ideally, parents and patients should be

given the feeling that the doctor has no-one else to see. An unhurried interview creates an atmosphere which encourages parents to feel they can ask questions and to give their views of his problems as well as explaining their ideas on the likely outcome of his problems. The 'question and answer' type of history fails to give a real picture of the child's illness and should only be used at the end in order to fill gaps in the story.

HISTORY

In children (and perhaps in adults) the medical history often provides more information than the clinical examination. The importance of learning how to elicit physical signs has been over-emphasized to medical students in comparison with the time spent on learning to take a good history. More skill is required in taking a history than in carrying out a clinical examination. Above all it is essential to learn how to listen as opposed to how to question. If the history is taken in an insensitive manner, parents are less likely to take notice of subsequent advice from the doctor.

Studies (Maguire & Rutter 1976) have shown that senior students displayed the same lack of interviewing skills as those less experienced, despite their greater clinical knowledge. There are many reasons for this, not least that many teachers place insufficient emphasis on history taking and do not spend time checking the student's history. Others feel it inappropriate that students should be present because of the intimacy involved.

Students have the tendency not to enquire beyond the first problem presented since they feel it likely that this is the main problem. They also have a tendency to assume that the main problem is organic.

Vague data should not be accepted, particularly words which could have many meanings. This is especially the case when a technical word is used such as bronchitis or dermatitis which must be defined by the patient. Even everyday words such as diarrhoea or constipation may be misunderstood by the parent. Many mothers in developing countries use the word diarrhoea for abdominal pain.

Leading questions and jargon must be avoided and although it is important not to hustle the patient or parent it is essential to control the interview so that the patient does not ramble on irrelevantly. The student or doctor then looks (and is) bored leading to a further breakdown in communication with the parent. This is an occasion when it is appropriate to interrupt the parent.

It is therefore essential to look interested—a sloppy position adopted by the doctor suggests a lack of interest as much as closing the eyes.

Students tend to avoid questions which may lead to their embarrassment, especially those relating to marriage and divorce, sex relationships, social life and mood. This relates to a feeling that they are prying but professional skill acquired from training obtains the information without the patient feeling that the question has been prying.

Students are also liable to leave the subject when they find an area of discussion has caused the patient distress. But far from avoiding the area it is essential to enquire further

since they have touched on the core of the problem. This illustrates a major aspect of professionalism. In social circumstances such a development should elicit comfort whereas in a professional situation it is essential to explore the problem if the patient is to be helped. This can be achieved in a gentle manner, avoiding the direct question 'why have I made you cry' but rather 'something I have said has caused you some distress, could you tell me what it was?' No verbal or non-verbal clue must be missed. Patients often bring up subjects because they want to talk about them but are unable to say so directly. If a patient said that he felt low it would be appropriate to ask how this affected him or what exactly he meant. It is also important to determine the effect of the problem on the rest of the family.

Make sure you understand the meaning behind everything the parent says and play back your impressions of their problems to them, thereby ensuring that your understanding of their history is correct.

Symptoms of illness in babies are usually non-specific; loss of appetite is a major symptom of serious illness, especially infection. In a baby severe disease of the renal tract may cause failure to thrive only, there being none of the symptoms characteristic of the adult with urinary disorders. Only as the child gets older does illness produce more specific symptoms.

Children are not mini-adults; their response to disease is often totally different. The major contrast is that a child is growing and it is this and much else besides which places paediatrics in a different world from adult medicine.

The description which follows is intended for those who see children referred to them by family doctors,* whether they are seeing them in hospital or in consultative private practice. Under such conditions the consultant, registrar (resident), houseman (intern) or medical student is without the GP's advantage of knowing the family background and the child's social and home circumstances. The vital link for bridging this gap is the GP's letter or telephone call which should give the reason for referral, the results of any investigations performed and the treatment including dosage of medicines prescribed. It is helpful to be told whether it is the parents who have made the initial request for a second opinion. The letter need not give lengthy details about symptoms since the hospital doctor will check these himself but it should include intimate information, such as the fact that a mother is unmarried, which the doctor in hospital should be protected from stumbling on without warning.

Since the GP will already know much of the family background his history in the busy surgery can be very much shorter. But if, as a student, he has not been trained in the technique of taking a comprehensive history he will, when busy, fail to pick out those salient features which are needed for a proper understanding of his patients. It is preferable that the GP should meet the family when they first join his practice, rather than when one

* The term 'family doctor' is regarded as the best description for those whose task is the primary care of families. It is considered as synonymous with the term 'general practitioner' but gives a clearer picture of the role of the doctor concerned. For ease of reading, the term general practitioner (GP) will be used in the text.

member falls ill. It is therefore ideal if one afternoon a week can be set aside for interviewing new arrivals in order to learn about the family. The need for this interview has increased with the reduction in home visits. Moreover, a home visit may not provide the professional atmosphere required for a detailed enquiry of family relationships.

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 inquire about the family and previous history before coming to the chief complaint. The doctor should 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 names and 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. Under other circumstances it may be necessary to inquire about a family history of allergic disorders such as asthma, hay fever or eczema, or whether there is a history of diabetes, rheumatic fever or tuberculosis in the family.

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.

While taking the family history it is always wise to ask the mother what work she did before childbirth and whether she still goes out to work. This not only furthers the understanding of the child's social circumstances and gives useful information about the mother, but also prevents the mistake of talking to a mother who is a doctor or a nurse as though she was a layman. To know the ages of the parents is helpful; elderly parents or parents with widely differing ages each have their own problems. However, care must be taken to avoid embarrassing parents who dislike mentioning their ages in front of their children.

Previous history

This includes details of pregnancy and labour as well as the child's previous illnesses. It is useful to start by asking where the baby was born, since this helps a mother to recall more

details of the birth. It also ensures that if the birth was in hospital its address is recorded should further obstetric information be required. The amount of time given to antenatal and birth history will depend on the child's age and the 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 preterm. 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.

Developmental history. The age at which the child passed the normal milestones of development is then determined, 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 to check only that the patient walked and talked within the normal period. When trying to establish whether the child is likely to have suffered brain damage at the time of birth or immediately afterwards, a number of questions may assist. The mother may know that special resuscitation measures were required or that he was nursed in an incubator for the first few days. She should be asked when she was first permitted to handle him: was he immediately placed in a cot beside her bed or was he kept in a special nursery for the first few days? Were there any feeding difficulties such as vomiting or a reluctance to feed? Did he require to be tube-fed? Did he become jaundiced?

The age of the baby when discharged from the maternity hospital is a good indication of his early progress. The baby who had to be kept in hospital after his mother was discharged is sure to have had some complicating factors.

Immunization details should be recorded, particularly BCG, since this alters the significance of a positive tuberculin test. Checking that the child has been fully immunized should be a natural item in the medical history of every young child. No opportunity should be missed for gentle and unobtrusive health education.

An inquiry should be made into previous illnesses 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.

It is wise to check on any information about allergies, particularly drugs such as penicillin, and whether he is on any regular drugs. Since some parents associate 'drugs' with narcotics it is better to ask about medicines, tablets or pills.

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.

Specific inquiry of a number of symptoms relating to general health should be made if these have not already come up during discussion of the main complaint. These relate to appetite, bowels, micturition, sleeping habits and energy. With children of school age it is often instructive to learn how they are getting on at school and whether the mother has discussed the problem with the teacher.

Students often find themselves overwhelmed by a mass of facts by the time they have finished listening to the complaints, and unable to judge the relative importance of what they have heard. To sort out this muddle it often helps to ask a mother which complaint she would choose to mention if she were only allowed to talk about one. What is needed is to determine the basic anxiety of the parents, though this point may only be reached during the discussion which follows the examination. Many parents are frightened about the possibility of a specific disease, such as leukaemia. This usually requires a direct question.

It is also necessary to determine why the child was brought to see you on this particular day, when the symptoms have been present for a long time. The answer to this question may unearth a deep felt anxiety.

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'

Although this has been given a separate heading, it should not feature as such in the child's notes. In any child's illness, social factors pervade the whole problem and may be learnt while taking the family history or any other part of the history. Family relationships

and feelings play such a large part in moulding a child's behaviour that these must be understood if the child is to be helped to the full. These aspects should be followed up as soon as they are mentioned rather than being disregarded until the end because they are to be put under a separate heading termed 'Social History'.

Environment plays its part but is often over-rated to the extent that the 'social history' is merely a 'housing history'. Little time should be spent asking about houses because feelings are so much more important. A mother can be relied on to bring up environmental factors such as overcrowding or damp if she considers them relevant, whereas a direct question about the number of rooms is liable to lead to a request for a certificate to take to the housing manager for rehousing! Details of the parents' financial status may be helpful, though much of this can be surmised from knowing the father's occupation and the home address.

Some children, particularly those with functional symptoms, may lead the doctor to discover a number of emotional factors within the family to account for the child's symptoms. For example, a child's abdominal pain may turn out to be functional and closely related to the incompatibility of his parents or possibly to the recent loss of one of them. A mentally handicapped child causes severe stresses within his family and may thereby be the cause of the symptoms which take one of his siblings to the doctor. A child presenting with a minor illness may bring into the open some basic family problem, in fact the child's illness may be used as a pretext, whether conscious or subconscious, for asking advice about family illness. Sometimes it is the fear of a family illness such as tuberculosis which brings the child to the doctor (see p. 15). Clyne (1961) reviewed the reasons for night calls made by a group of GPs in London. He emphasized the frequency with which 'the child is the presenting symptom' of a disturbed family and that this call, although ostensibly for the child, is really for some other member of the family wanting advice. Moreover, the calls, although very common during the day, occurred more frequently at night.

Hopkins (1959) described one family in which, over a period of 40 months, both physical and emotional disorders (asthma, eczema, enteritis, depression, anxiety state, sinusitis, migraine, abdominal pains influenza, bronchitis and more) recurred in different forms, being linked inextricably so that chain reactions were set off between the several members of the family. Such a report emphasizes the need to study family illness as a whole in order to uncover its causes and shows how meaningless a single episode in one of the members of this family might seem to the doctor working in isolation in the hospital or office. It is this sort of information which should be included in the GP's letter when referring a patient to hospital.

Apley (1963) uses the term 'family patterning' for many disorders which run in families, pointing out that many genetic and environmental factors in disease are inseparable, both contributing to the moulding of the individual. Preventive paediatrics must be increasingly concerned with family carriers of illness, not only in the physical field but also in the emotional, intellectual and social fields. A mother who as a child was made to worry because she did not eat as much as expected, thereby being forced to eat more, is likely to have her personal computer set so that she pressurizes her child in the same way.

It is essential to follow up all children who fail to keep their appointment with the doctor. This may unearth social as well as physical reasons for defaulting. It is those who refuse help who are most in need of it.

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; even the very young can give most valuable information.

With children whose diagnosis is not apparent on the first visit, 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 when flustered and anxious at the time of the child's admission.

History taking sounds complicated but becomes easier with practice. Patients want to help the doctor and it is the clues they give which are so easily missed in the early days as a student. Fear of omission by the student is great so it is reasonable to have a crib sheet or an aide memoire. This need not be hidden because the patient or parent will understand its need and appreciate the care the student is taking. Lawyers certainly refer to books in front of clients. The important point is that the student has introduced himself and his role, rather than masquerading as the consultant, causing the parent surprise at his youthfulness.

A list such as that given below soon becomes second nature so that omissions are rare:

Family history
Father: age and occupation
Mother: age and occupation now or previously
Children in chronological order with names and ages
Also deaths including miscarriages, stillbirths and terminations
Family illness and allergies

Previous history
Place of birth
Pregnancy, labour and birth weight
Perinatal problems and method of feeding
Developmental history and school progress
Immunization
Previous illnesses including allergies

History of present complaint

Geographical history
Note no separate social history (see p. 6)

EXAMINATION

The method of examination will depend on the severity of the illness. An acutely ill child must first be checked that his airway is safe, his cardiovascular system stable and whether

he is conscious. With an ill child the history taking and examination take place concurrently. More often a child is not desperately ill and the doctor is consulted in a non-urgent capacity. When seen as an outpatient much of the examination of a child has been taking place while listening to the parents giving their story of the problem. A glance should tell whether the child looks well, mildly ill or seriously ill. By the time the history is finished the doctor should have formed a shrewd idea as to whether the child is developmentally normal, a routine part of every child's clinical examination. The time is also used for evaluating the parents' feelings for their child from the way they handle him. An understanding of family relationships is still more apparent if the patient is accompanied by his brothers and sisters.

Arrangements for routine measurements vary with the preferences of individual doctors. It is usual for the nurse in an outpatient department to record the child's weight and height and to perform tests of the urine, including glucose, protein and pH. If the child is frightened by being measured it is better to postpone the investigations until after he has been seen by the doctor. Parents should be instructed to bring a specimen of the child's urine with them since many children are unwilling to pass urine in the unusual surroundings of a doctor's surgery or hospital outpatient department. Routine temperature taking is usually unnecessary, this being better left to the doctor to carry out during his examination if considered necessary.

Inside the consulting room the mother should be left to undress a young child since he is liable to be nervous of a stranger doing this. However, the clinging type of child will sometimes allow the doctor to help, even though he refuses to let his mother undress him. Asking a child if you can listen to his chest usually leads to his agreeing to letting you help him undress. It is unnecessary to have a nurse routinely in the consulting room, but it is important that one should immediately be available for special occasions, such as helping with a hearing test.

The examination of a child cannot be systematically carried out from top to bottom as with an adult, since all those manoeuvres 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, as this may make him cry, 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 tension of the anterior fontanelle and to examine the heart, abdomen and fundi. A crying baby can be quietened by being given a feed.

It is best to examine an older child standing up first, since some will be frightened by being made to lie on a couch even though later they will agree to it. An examination of the