



2059

Guidelines for the MBBS Students during their Paediatric Posting

Department of Child Health
Maharajgunj Campus
Institute of Medicine



Department of Paediatrics
Maharajgunj Campus

MBBS Programme

Faculty Members:

- Dr. Ramesh K Adhikari Professor, Dean, Institute of Medicine
- Dr. Prakash S Shrestha Professor; Head of the Department
- Dr. Pushpa R Sharma Professor, Co-Ordinator MD (Paediatric) Programme
- Dr. Fakir C Gami Associate Professor; Co-Ordinator MBBS Programme
- Dr. Laxman Shrestha Assistant Professor
- Dr. Shiva Shrestha Assistant Professor
- Dr. Sudha Basnet Assistant Professor

Activities:

- Theory classes.
- Bedside clinical classes.
- Problem based seminars.

A. Theory Classes:

Theory classes will be held every Sunday, Tuesday and Thursday in the academic building room no 3 between 12 .00 to 1.00 PM. These theory classes will be taken by respective teachers as follows:

Topic headings	Teachers
CNS disorders Nutritional disorders Adhikari	Prof. Ramesh
Respiratory disorders Gastrointestinal disorders Hepatobiliary disorders	Prof. PR Sharma
Neonatology including birth injuries Chromosomal disorders Congenital malformations	Prof. PS Shrestha
Collagen disorders Endocrinal disorders Genitourinary disorders	Dr. Fakir C Gami
Cardiovascular disorders Rheumatic heart disease Haematological disorders	Dr. Siva Shrestha
Infectious diseases (except Respiratory) Basnet	Dr. Sudha
Preventive paediatrics Emergencies (including poisoning) Childhood disabilities School health programme	

B. Bedside clinical classes:

TOTAL WEEKS:12

COURSE OBJECTIVES:

During the Paediatric posting, it is anticipated that the student will consolidate the paediatric knowledge with the skills which will be acquired in this posting. On completion of the Paediatric posting, the student should be able to:

1. Obtain a comprehensive and focused history from a child and his/her family regarding the health and illness of infants, children and adolescents
2. Perform comprehensive and focused physical examinations of infants, children and adolescents
3. Synthesize the data derived from the history, physical and laboratory assessments and formulate a problem-oriented approach to the child's presenting problems
4. Apply an understanding of the normal growth and development of infants, children and adolescents to clinical problems and appreciate the impact of illness on that growth and development
5. Apply knowledge of basic science and clinical epidemiology to the diagnosis and management of clinical paediatric problems
6. Demonstrate an approach to the common health problems of infants, children and adolescents including their assessment, diagnosis and management
7. Implement the important strategies of health supervision that pertain to infants, children and adolescents, including disease and injury prevention, anticipatory guidance and screening
8. Demonstrate an understanding of the influence of family, community and society on the child in health and disease
9. Demonstrate the attitudes and professional behaviours appropriate for clinical paediatric practice

Bedside clinical classes will be conducted in Kanti Children's Hospital daily between 9.00-11.30 AM.

Students should wear apron and they should have name tag. Student should bring with them stethoscope, clinical thermometer, measuring tape, hammer and torch light. They should not bring small pocket note book given by drug companies. Each student will be given respective bed numbers. Students will be responsible to write case history, examination findings and suggested investigations in the note book. At least 12 case summaries should be submitted to the department at the end of their posting.

In the first day of the posting students will be oriented about: teaching/learning activities, Kanti Children's Hospital, distribution of beds, principles in paediatric clinical examination, and materials needed to bring during this posting. In the first week students will be demonstrated in history taking and clinical examination skills. Special emphasis will be given in formulating questions for history taking. Following examination skill will be demonstrated:

Methods of performing clinical examination in child with:

Nervous system	Prof RK Adhikary
Respiratory problem	Prof. PR Sharma
Cardiovascular problem	Dr. S Basnet
Gastrointestinal problem.	Prof. PS Shrestha
Urinary problem	Dr. Fakir C Gami
Musculoskeletal problem	Dr. Fakir C Gami
And evaluation of a neonate.	Prof. Prakash S Shrestha

From the second week onwards students will present the cases in rotation for discussion. During the discussion special emphasis will be given in eliciting the clinical signs and correlating the findings of history with it. In every case the appropriate investigations will be discussed. Each students will present at least three cases. Students will attend the neonatal unit of TUTH at the 10th week of their paediatric posting.

Teaching faculties and weekly schedule

Following teachers are responsible for conducting the clinical bedside classes in Kanti Children's Hospital in the following week days:

Days	Teachers
Sunday	Dr. S Shrestha Problem oriented approach seminar
Monday:	Dr. FC Gami
Tuesday:	Dr. S Basnet
Wednesday:	Prof. PR Sharma
Thursday:	Prof. R K Adhikari
Friday:	Prof. PS Shrestha

Format for the presentation in the bedside clinical discussion by students:

- A. Presenting complaints: in chronological order.
- B. Medical history and its subcomponents:
 - a. History of present illness; b. Past illnesses, treatment and allergy history; c. birth history; d. immunization history;
 - e. developmental history;
- C. Nutritional history
- D. Family and socio-economic history
- E. Clinical examination: Vital signs; anthropometric measurements; general surveys (pallor, cyanosis, jaundice, etc)
- F. Regional examination
- G. Specific system examination

METHOD OF EVALUATION:

Student evaluations will be based on clinical performance assessments and a written examination at the end of the rotation (see Annex A). Students are required to pass the clinical evaluations to obtain a pass in Paediatrics Posting which will be held during the 11th week of their posting. In this examination students will have clinical examination (one long case and one short case).

During the clinical examination following points will be observed:

1. Approach to patient.
2. Correlating symptoms/signs with pathophysiology.
3. Demonstration of clinical signs.
4. Suggested investigations to reach the diagnosis.
5. Plan of treatment.

C. Problem based seminars:

Every Sunday there will be a seminar on a given problem. Students will be given a problem case three days prior to the date. Remaining parts of history, examination findings and investigations will be supplied in the seminar in the triple jump methodology. In this seminar students will discuss the hypothetical diagnosis, differential diagnosis, important historical questions, examination findings, investigations and treatment. This seminar will be held at the meeting hall of the Health Learning Materials Centre between 9.00 – 11.30 AM. Following problems will be discussed in the Problem oriented approach seminar: a child with cough or difficulty in breathing, a child with low weight for age; a child with swelling of feet, a child with convulsion and fever; a child with diarrhoea; a child with weakness of limbs; a child with rash; a child with severe pallor a child with joint pain; a child with fever, a neonate with jaundice; a neonate with poor sucking

RECOMMENDED TEXTBOOKS

1. Nelson Essentials of Paediatrics, Richard E. Behrman, Robert Kliegman, W.B. Saunders Company, Third Edition, 1998, 846 pages
2. Ghai's Text Book Of Paediatrics
3. Care of new born. Meharban Singh
4. Pocket Book of Practical Paediatric Problems; Sharma PR; Health Learning Material Center; 4th Ed.

GENERAL REFERENCE TEXTBOOKS

1. Nelson Textbook of Paediatrics, Behrman, Saunders, Fifteenth Edition, 1996,
2. Paediatric Medicine, Mary Ellen Avery and Lewis R. First, 1994, Second Edition, Williams, and Wilkins,
3. Principles and Practice of Paediatrics, Oski et al, 1994, Second Edition, J.B. Lippincott, 2368 pages
4. Primary Paediatric Care, Hoekelman et al, Mosby, 1992, 1795 pages.
5. Rudolph's Paediatrics, Rudolph, Twentieth Edition, Appleton & Lange, 1996, 2337 pages
6. Fundamentals of Pediatrics, Rudolph's, First Edition, Rudolph & Kamei, 1994 701 pages

GUIDE TO PAEDIATRIC HISTORY-TAKING AND EXAMINATION

HISTORY-TAKING

Hospital is very often a new and worrying experience for parents and children. Often children are given fear of a doctor for injection and white apron syndrome is known case. Allow for this and for limitation in their vocabulary of

illness. The child has few if any standards against which to measure his new experience. Diagnosis in many systems rests mainly on what you learn from listening to and talking with a parent about his/her child's illness. The process of obtaining an account of that illness—commonly called “the history taking”—is most productive if you treat it as a conversation. As in most conversations, the process works best if discourse is friendly, takes place between people who respect each other, is unhurried and has a focus or direction.

SOME TACTICS IN PREPARING FOR THE CONVERSATION

A clinical conversation rarely starts out easily. The parent wants help and understanding but he/she may be impeded by unexpressed fears or guilts. The history taker wants information but he/she may be impeded by haste or distractions. You, the history taker, normally control the conversation and it is your responsibility to minimize such impediments. You can achieve this by several simple maneuvers. These may seem to be no more than common sense and courtesy (as indeed they are) but it is surprising how often they are neglected.

Arrangement of the Conversants

You should see to it that you and the patient/parent are situated in the position that is normal in people who are talking seriously with each other. This means that you must both be seated comfortably with your heads at the same level. When one conversant's head is far above the other's it implies a dominance that can inhibit easy talking. People who are conversing as equals rarely talk face-to-face, with their faces parallel. Such a position is associated with confrontation, interrogation, interview, and intimate conversation but not with formal conversation. A slight obliquity in the faces of the participants is natural and important. Conversations are rarely easy over barriers like desks and tables. The participants should be separated only by empty space. The amount of space is important-

about 3 feet seems right. More or less separation of the participants impedes good conversation.

These important arrangements can be established by the positions of tables and chairs in the examining room. At the bedside they must be improvised. You should sit down to put your head close to the level of that of the parent. It is better to sit on a low stool. It is not at all bad manners for you to sit on the edge of a bed: It imparts a familiarity and informality that can facilitate conversation.

The Presence of Other People

The clinical conversation is essentially one-on-one, and it normally involves matters that the patient/parent may consider private, so other people should usually be excluded from the room. When patients/parent request that another person be present you should honor the request; relatives can be helpful in adding or confirming elements of the history. In case of older children, please ask the child if he/she needs to be seen alone. In such a case you should not hesitate to arrange for a later interview with the patient alone to clear up specific points if you think that is necessary.

In teaching hospitals, the presence of students, who are strangers to the patient, may impede communication. This problem can be reduced if you introduce these people and explain the reason for their presence. You must always ask permission for the presence of such neutral observers (it is rarely denied). If you sense that observers are significantly interfering with the conversation you should ask them to leave. As in the case when relatives are present you may want to arrange for a subsequent interview alone. As a student you must introduce and give reason for history taking. You have to decide whom you will listen?

THE ELEMENTS OF THE CONVERSATION

The Opening Conversation: it leads to presenting complaint

After you are seated you should begin the conversation in such a way as to indicate that you are not in a hurry. **In paediatrics**, most of the time the history will be given by the parent. It is the parental observation that will be narrated to you. The points parent want to highlight may not be important for you. You should then lead to the matter of concern by asking the parent/patient an open-ended question indicating that you want to know why he/she has come to this health facility. Is this is the new visit or the follow-up visit?

The phrasing of this opening question is important, for it may shape the whole subsequent conversation. If you don't know why the patient has come, ask "What can I do for you?" If you already have an idea of the nature of the complaint bring that up at once by forming your question appropriately. If you ask the usual neutral question when you already know the general complaint, you risk making the parent/patient, who usually knows if you already have some preliminary information, think that you are forgetful or distracted. If you know anything at all of the reason for the visit, make it clear at the beginning that you know or remember at least a little.

Once you have indicated that you expect the patient/parent to tell his story most parents/patients will launch some kind of an account of the illness. This is occasionally quite long and detailed, but it is usually brief or incomplete. Some people will ramble off course. If this happens you should interrupt, picking up the thread of the story and getting the parent/patient back on course.

Parents/patients will rarely volunteer to you all you need or want to know. Usually this opening account will give only a general idea of the major complaint with an incomplete chronology. Bedside logic requires far more information than most patients volunteer. They cannot be expected to know what may be important to you. You should allow the patient/parent to complete the opening statement as far as he seems to want to go, for it will contain at least the

skeleton of the present illness. Let him finish what he has to say. The flesh of the present illness must be obtained in a subsequent part of the conversation, the Middle Conversation.

The Middle Conversation: leads to history of present illness

The Middle Conversation is impossible to describe or to dictate, since it must be shaped to fit each case, but three general principles are often neglected.

First, you must maintain a normal degree of eye contact with the parent/patient as you would do in any other focused and personal conversation. Second, you must never take notes in the Opening and the Middle Conversations. Note taking converts a conversation into an interrogation and it makes the parent/patient think that you aren't interested enough to try to remember his story, even for a brief time (during your final examination this may take a long time) Third, you must not tolerate any interruptions during the Opening and middle Conversations. Interruptions will be interpreted as an indication that you are distracted or in haste.

During the Middle Conversation you determine many important features of the present illness, outlined below. These features are the critical ones in bedside logic and it works best if you obtain them fully at the first opportunity, so you must not neglect or truncate the Middle Conversation. Most errors in bedside logic arise from neglect of the Middle Conversation.

In the Middle Conversation you ask specific questions that you need an answer to. Here, you begin to test your hypotheses about the disease process. You explore your ideas of the organ systems involved, the nature of the pathological process and the extent of that process. You generate questions to test your ideas as they develop: This is the essence of bedside logic.

It is important to avoid asking leading questions, those in which the form of the question implies an expected answer, since some parents tend to tell you what they think you want to hear. Your questions must be put in such a way that the patient understands that the possible responses, “yes,” “no,” and “sometimes” are all equally important. Thus a specific question about common cold accompanying an ear pain might be stated, “I need to know whether or not your child ever get common cold with pain. Tell me if it ever occurs or never occurs or sometimes occurs.” It works well to offer the patient choices to show that you have no preference for the response.

There is another problem with leading questions of the kind that are formed to indicate the expectation of a negative answer. When you ask, for example, “Your child never have vomiting with the pain does he?” you may be misled by the answer. If vomiting does not accompany the pain the usual native Nepali-speaker will respond “No,” meaning “No – he does not have vomiting with the pain.” The other-speaker (for example) may respond “Yes,” meaning “Yes-I agree with you when you say that he does not have nausea with the pain.” This problem may well exist as a linguistic variant in other languages

The End Conversation

When you believe that you have exhausted the possibilities of the Middle Conversation you begin the End Conversation. This consists of a recitation by you of the story of the illness as you understand it so far. You repeat your understanding of the story of the illness, asking the parent/patient to correct you when you are wrong. Give the parent/patient the chance to add anything. Ask “Have I missed anything?” or “Is there anything I have said that is not quite correct?”

In this End Conversation not only are you trying to establish the complete story as you understand it, but also you are letting the parent/patient know that you are

beginning to formulate your ideas of what may be wrong. Your positions are temporarily reversed: He is listening and you are talking.

For this reason you must be careful to recognize the unexpressed fears and guilts of the patient/parent, for in the End Conversation he is beginning to find out what you think. There are two important things to keep in mind in this connection.

First, parent/patients who have complaints that they themselves do not understand often fear that their child have a fatal illness.

Second, patients often conceal information from you that may be important, usually related to something that they are ashamed of like peculiar dietary practices or giving medicines by themselves.

It is useful to introduce such matters at this time. If appropriate, it is helpful for you to say, for example, that the story suggests to you that the problem might be related to some drugs or medicines that the patient might be taking and that you want to know about them. If such sensitive matters are brought up by you in this End Conversation in a matter-of-fact way and you indicate why you are asking about them, most parent will respond freely. It is much better to get into such things in the End Conversation than to reserve them for the more interrogatory or confrontational setting of the routine questioning of the drug history

In this way, the End Conversation can be used to lead into the other elements of the history that are usually organized as the drug history, the past history, the family history, the developmental history, and so on. It does not matter in what order these latter elements of the history are obtained. It is easiest if they are explored in whatever order seems natural.

In patients with respiratory illness there is often a past history of several similar illnesses. Getting these straight in the Middle and End Conversations can sometimes be

difficult, in such cases you may find it helpful to review nasal polyp or abnormal shape of the chest during the physical examination, when each findings point to the past illnesses that led to it.

You should use the End Conversation to begin to bring the parent/patient into your thinking process so far as you think that to be desirable at this point. Here you tell the parent, in effect, what other matters are important to you. This will lead naturally to a discussion of other matters that otherwise might seem to him to be unimportant.

The Rest of the History

The most important elements of the other parts of the history—the Past History, the Family History and so on—will emerge in the three Conversations described above. You should, however, cover the routine elements that have not come up. This should be done after the End Conversation.

WHAT IS IMPORTANT TO THE PARENT/PATIENT, AND WHY?

parents want problems solved. You must learn what these problems are. The main problem is usually the major symptom. In general a patient/parent will only volunteer to you what concerns him most. This may not be what most concerns you, but you must listen to what the parent/patient says first, for this tells you both what he considers to be important and what most bothers him. This is the function of the Opening Conversation.

At some point you must discover why a particular aspect of the history concerns the patient most and you should not hesitate to ask why. “Why does this diarrhoea concern you so much?” or “Why do you worry so much about this diarrhoea?” are questions that often yield answers which illustrate the magnitude of the problem or reveal specific fears or hitherto-concealed elements of the history. You may ask “What do you think is causing your problem?” This question often brings out previously unexpressed fears and

sometimes give you an unsuspected lead to correct understanding.

WHAT IS IMPORTANT TO YOU?

Patients/parent rarely appreciate what is important to you. You uncover this in the Middle Conversation.

In talking with patients you should pay attention not only to the answers to your questions but also to specific nonverbal communications. The meanings of some behavioral responses—not making an eye contact (autistic child), unstable child (ADHD) and the like—are obvious. Others are more subtle: head nodding, wheeze, stridor, hair changes, severe malnutrition, swollen face. By constantly watching the patient, you may pick up many important clues in “body language” like chorea, tremor, crossing of legs .

Simple format for history taking

Date: History taken from:

Place of residence within last one month:

Child's name: age: sex:

Race (can be very relevant, e.g. in haemolytic anaemias):

Presenting complaint:

Allow parents to tell the story in their own words. Practise making notes while looking in the witness's eyes. It is important to look really interested and not just to sound it. Be aware also of the child at this stage: his activity, sounds, expressions, interest. Then extend the story in the context of the range of possible diagnoses which the initial remarks suggest. Have any drugs been given, and with what response? If parents use “feverish” “wheezy”, “diarrhoea”, “constipation” ask them to describe what is meant. Be precise about dates. Very often older children can tell you

their complaints in their own words more precisely than their parent, so do not forget to ask children using simple children language.

Systemic enquiry

Central nervous system:

change in activity or mood, floppiness, posture, walk, co-ordination, vision, onset of headaches. "Fits" must be described in great detail, including time of episode, triggered by temper or temperature? colour change, associated incontinence, tonic, clonic, etc.

Alimentary system:

appetite, feeding pattern, evidence of weight loss, vomiting (amount? nature? effortless? projectile? Salivation? Difficult to swallow? how far does it go? stained with blood? bile?), constipation, diarrhoea, character of stools (bulk, frequency, colour, mucus, blood, etc.), apparent pain, any excess thirst.

Cardiovascular system:

cough, breathlessness on exertion, central cyanosis, apathy and (in babies) slow feeding and weight loss; fainting episodes and palpitations in older children.

Respiratory system:

discharge from eyes, ears or nose, sore throat, cough and its characteristics; breathlessness, stridor, wheeze and observed precipitating factors (e.g. exercise, dust, animals); cyanosis.

Haemopoietic system:

pallor, listlessness, breathlessness, bleeding, bruising, lumps.

Genito-urinary system:

change in urinary frequency, pain on micturition, force and continuity of stream, loin pain, character of urine (including unusual smell or colour), late onset of enuresis, rash, itch, bleeding PV.

Endocrine system:

growth; need of new clothes and shoes; build - getting stouter or slimmer; head-aches; abnormal thirst and urine volume; breast or genital changes; apathy; vision; birth-marks.

Skin:

new marks or spots: eczema; superficial lumps.

Past History:

Mother's health during pregnancy

Place of birth

Gestational age at birth (full-term or number of weeks pre-term)

Mode of delivery

Birth weight

Problems around time of birth

Breast- or bottle-fed

Achievement of developmental milestones

Previous illnesses (in chronological order)

Infectious disease contacts

Details of immunisations

Allergies and drug hypersensitivities

If the child has been in a hospital elsewhere

Family History should be taken eg:

Father 32 years (plumber) asthma and hayfever

Mother 29 years (housewife) no health problems but has younger brother with Down's syndrome

Children -

The child being examined aged 8
twins aged 4

spontaneous abortion at 14 weeks

N.B. Consanguinity may be relevant to recessively inherited conditions and is much more common in certain racial and religious groups.

Social History:

Type of house/flat, including number of rooms, number of occupants (including relatives and lodgers), nature of heating, existence of damp, mode of cooking, animals near the place of residence

Parent(s) employed or not.

Examples of questions for history of present illness:

How old is the child? Congenital infections, storage disorders.

Where is the place of residence? Malaria, kalazar,

Does the child have fever?

For how long? Malaria, kalazar, typhoid, TB,

Does it come every day? Infectious mononucleosis and

Is fever associated with rash, other viral infections, leptospi
runny eyes or red eye? roicterohaemorrhagica.

Infective hepatitis

Is it associated with purpura? Malignant diseases, sepsis.

Does the child have jaundice? Infective hepatitis, Hodgkin's.

Delayed developmental mile

stones of life? Lipid storage disorders.

Is the child plump? Glycogen storage disorders.

Tactful attitudes and questions may elicit a history of single parenthood, partners, alcoholism, drug abuse.

Cigarette smokers: number and how many a day (relevant to children's respiratory infections).

Name of school: is the child happy there? does he have particular friends or enemies? is he bullied on way to and from school? what does he enjoy best: games or studies?

Document culture, including race and religion.

Hepatosplenomegaly

Make sure the room and your hands are warm.

Try to keep on the same level physically and in the words and tone used.

Always talk to the child before touching. Talk about toys, clothes, other siblings, etc., until many of the child's fears are overcome. Possibly start with gently holding and looking at his hands or feet and continue to talk quietly and gently through the examination.

Contrary to past teaching, it may be possible to examine a partly clothed child provided all the body is seen (step by step).

Use blankets/sheets to cover legs while chest is being examined and trunk while external genitalia are being examined.

Sensitive children may best be examined initially on a parent's knee, until they become more confident. With frightened or uncooperative children be opportunist in examining whatever part is offered or available.

Leave uncomfortable procedures (otoscopy, throat, rectal examination*, etc.) to the end. Be aware of the child's response to you.

* Rectal examination should only be undertaken with the agreement and presence of a senior staff member.

Inspection and General Assessment:

Paediatric examination begins as the child enters the room: disproportion; dysmorphism; unusual walk; strange behaviour. A child asleep in a parent's arms is a gift from heaven: do not move or waken him. Look at the frequency

Examples of examination findings:

Propped-up position	Cardiac failure, portal hypertension (huge ascitis)
Thin built	Tuberculosis, malignancy
Plump	Glycogen storage disorder.

and depth of breathing; feel the fontanelle; slip a warm stethoscope below clothes to auscultate the heart; ask mother to adjust her position to attempt flexion of the child's neck; very gently palpate the abdomen for organomegaly and other lumps.

Height

Weight plot on appropriate centile chart

Head circumference

State of hydration - general condition, eagerness to drink, skin pinch and sunken eyes. Skin - texture, colour, birthmarks, spots, bruises, oedema, rash: describe distribution, colour, and whether macular, papular, macuiopapular, vesicular, bullous, pustular, petechial.

Mucous membranes (as an approximate estimate of haemoglobin). Very occasionally helpful with profound anaemia.

State of nutrition - axillae, abdomen, thighs, loose skin and creasing; "skin suit too big for child"; skinfolds., oedema

Pulse

Temperature

Blood pressure, using an appropriate cuff (i.e. the width of the cuff should cover 2/3 of distance from shoulder to elbow).

Pallor	Malignancy, thalassaemia
Cyanosis	CCF
Jaundice	Infective hepatitis, cirrhosis, Thalassaemia.
Oedema	CCF, cirrhosis, malignancy
Clubbing	Cirrhosis, SBE, tuberculosis
Purpuric rashes	Malignancies, cirrhosis. congenital infections.
Lymphadenopathy	Malignancy, kalazar.
High fever	Typhoid, malaria, kalazar, malignancy, SBE, infective Hepatitis. Infectious mononucleosis
Maculo-papular rash	viral infections, typhoid,
Joint swelling, bony tenderness	Malignancy, collagen disease
Eyes: congestion	Viral infections, infectious mononucleosis, leptospirosis
Cherry red spots	Lipid storage disorders
Keysherfisher ring	Wilson's disease
Mouth	
Bleeding gum	Malignancy, kalazar
Chest:	
Murmur	CCF, Glycogen storage, SBE rheumatic
Basal creps	CCF, visceral larva migrants
Effusions	CCF, visceral larva migrans, collagen.
Abdomen:	
Tender liver	viral hepatitis, amoebic, bacterial, CCF
Non tender	malignancy, thalassaemia storage disorders, kalazar, malaria

Ascitis Cirrhosis, tubercular, visceral larva migrans, malignancy.
Prominent abdominal
veins cirrhosis.

Abdominal pain:

Acute onset: Intestinal / ureteric colic
Worms, food allergy, diabetic ketoacidosis, obstructions, calculus, visceral infarctions

Chronic onset Organomegaly, ulcers, constipation, functional

Associated symptoms:

Rash urticaria, HS purpura, collagen diseases, leukaemias, HUS

Fever shigellosis, hepatitis, UTI, basal pneumonia, tuberculosis, typhoid, pyelonephritis

Diarrhoea enteritis,

Vomiting gastroenteritis, hepatitis, colic

Difficulty breathing, cough cardiac failure, pneumonia, asthma

Constipation Chronic functional, intestinal tuberculosis, hirshprung, hypothyroidism, intussusception, volvulus.

Jaundice infective hepatitis, sickle cell anaemia, cholangitis,

Haematemesis PUS, portal hypertension, Malignancy

Distension of abdomen intestinal obstruction, ascitis,
Visceromegaly,

Scar marks Trauma, past operations- bands, faith healers applications of heat for colic.

Dark coloured urine trauma, porphyria, haemoglobinuria,

Severe dehydration renal vein thrombosis

Eyes - bitots spot, xerophthalmia, strabismus, conjunctivitis, cataract, fundoscopy, comment on visual acuity.

Respiratory Examination:

Mouth-breathing: check nasal airway.

Inspect again for central cyanosis and finger/toe-clubbing. Record rate of respiration. Are accessory muscles of respiration being used? Is there chest indrawing?

Nostril-flaring? Describe the chest shape, including pigeon-chest, hyperinflation, Harrison's sulci, sternal recession, and pectus excavatum. Is indrawing present? Where?

Listen - especially for the predominantly inspiratory sound of croup, or the prolonged expiratory wheeze of asthma; record any cough.

Careful percussion, comparing opposite sides, MAY occasionally identify extensive consolidation or effusion, and may confirm the hyper-resonance on the side of a pneumothorax. There is local stony dullness with a pleural effusion or empyema.

Auscultation: Are breath sounds equal bilaterally?

Rhonchi? Where? What pitch? What phase of respiration?

Crepitations? Where? What quality? When? Altering with coughing? Vocal resonance may help in the co-operative older child. The inexperienced may suspect that signs are asymmetrical but cannot judge which side is abnormal. Gentle careful palpation of chest movement will often help the examiner identify the abnormal one.

It is often helpful to leave the following part of the examination until last BUT IT IS ESSENTIAL.

Palpate the whole neck and occiput for masses, especially for enlarged lymph nodes. Is there a goitre? Look closely at both eardrums Do not ask "Could I look in your ear please?" Ask "which ear would you like me to look in first?"

Record any discharge, and appearance of tympanic membranes.

Obtain a brief but adequate view of the oropharynx. This is often best done on a parent's knee (depending on the child's age). If a spatula should prove necessary, then a mother's hand firmly on the child's forehead may help while the child's hands are restrained by her other arm. Note appearance of buccal mucosae, gums and dentition: look for clefts, (including submucous), thrush, Koplik's spots, ulcers or erythema over soft palate and palatofacial pillar

Cardiovascular Examination:

Inspect for central and peripheral cyanosis (the latter may be quite reliable if skin is warm and veins well filled), record any tachypnoea or tachycardia and look for old operation scars. Palpate both radial pulses and note any disorder of rhythm. Feel both femoral pulses and the right radial and femoral pulses together: low volume femoral pulses and radio-femoral delay may indicate coarctation of the aorta. Palpate the apex beat and (using the palm of the hand) check for a praecordial heave or thrill.* Blood pressure should be measured in all children: in those with CVS disease, it should be recorded in all 4 limbs.

* Also slip a finger in the suprasternal notch - a thrill is commonly present here in the presence of aortic stenosis.

Auscultate at the apex to identify the heart sounds - you may need to feel the carotid pulse simultaneously to be sure of the timing. ALWAYS listen at the apex, left lower sternal edge, aortic area, pulmonary area, left infraclavicular region, AND POSTERIORLY. Listen to the right anterior chest to exclude dextrocardia; should dextrocardia be suspected, try to answer the question: "is it really so or has the mediastinum been displaced by pressure or traction?".

Examples of commonly heard murmurs are:

1. Benign flow murmur - heard centrally in early and systole and may be musical or vibrating in quality. If quiet may be localised.
2. Venous hum - heard in the neck and infraclavicular regions, but alters with position of the patient and may disappear on compression of the jugular veins.
3. Ventricular septal defect - may be loud and heard widely over the chest especially LLSE to apex, and filling the whole of systole.
4. Persistent ductus arteriosus - often a musical cadence, spilling from systole into diastole, and associated with full, bounding pulses.

Note 1. The best signs of cardiac failure are tachycardia and tachypnoea. Peripheral oedema and hepatomegaly are LATE signs. Growth rate, general demeanour and exercise tolerance (e.g. during feeding) are valuable indices of cardiac status.

Note 2. Heart murmurs are often graded as follows:

Grade 1	very soft
Grade 2	Soft
Grade 3	easily heard
Grade 4	easily heard, plus a thrill
Grade 5	very loud
Grade 6	audible without a stethoscope

Abdominal Examination:

Inspect for distension, movement with respiration, visible peristalsis, skin laxity or dryness, or any superficial abnormalities, e.g. umbilical hernia. Palpate the abdomen gently with warm hands and using the WHOLE flat of the hand. At no time is reassuring talk so important as now,

and if possible have parents close by. Watch the child's face closely for apprehension or reaction to pain, particularly as gentle but deep palpation begins. Crying children relax the abdomen briefly during inspiration, allowing a fraction of a second to obtain information. Palpate with gentle fingertips for the liver (1 cm below the costal margin may be normal), the spleen (which tends to enlarge down the left flank, particularly in younger children) and both kidneys (which are often felt in slim co-operative children). Record local tenderness guarding, or the size, position and quality of any mass. This is often best done by a simple diagram of the child's abdomen. Percuss for a distended bladder, and auscultate the bowel sounds. Rectal examination with 5th finger but only if indicated and with supervision from trained staff.

Genitalia:

Female: external inspection only, looking for stage of puberty enlargement of clitoris (e.g. adrenogenital syndrome)
perineal rash or excoriation
vaginal discharge (on pants)

Male: size and shape of penis
hypospadias +/- chordee
balanitis
position of testes
inguinal hernia (reducible?), hydrocele (check trans-illumination to differentiate from haematocele).

Pubertal development grading:

Stages 1 and 5 are fully infantile and fully adult respectively. You need remember only stages 2, 3 and 4.

a) Boys: Genital (penis) development	
Stage 1:	testes, scrotum and penis as in early childhood, testes 2 ml.

Stage 2:	some enlargement of testes and scrotum, testes >3ml.
Stage 3:	early lengthening of penis
Stage 4:	enlarged penis in length and breadth, with glands development
Stage 5:	adult genitalia

b) Girls: breast development	
Stage 1:	As in early childhood
Stage 2:	Breast bud
Stage 3:	Breast and areola enlarging
Stage 4:	Areola and papilla form a secondary mound distinct from enlarging breast
Stage 5:	Mature

c) Boys and girls: pubic hair	
Stage 1:	no pubic hair
Stage 2:	sparse growth of hair each side of penile root or on labia
Stage 3:	darker coarse hair meeting on symphysis
Stage 4:	adult hair, no spread to medial surface of thighs
Stage 5:	adult in quantity and type with spread to medial surface of thighs

Examination of Central Nervous System:

Observe closely the child's alertness, willingness to play, happiness, irritability.

With an unconscious child record response to stimuli, e.g. light touch, firm stroke to skin, shining of bright light.

Write down examples of his capabilities, e.g. pursues ball under table, plays peek-a-boo, imitates car engine, enjoys make-believe, talks articulately ("mummy, look at the doll"), etc.

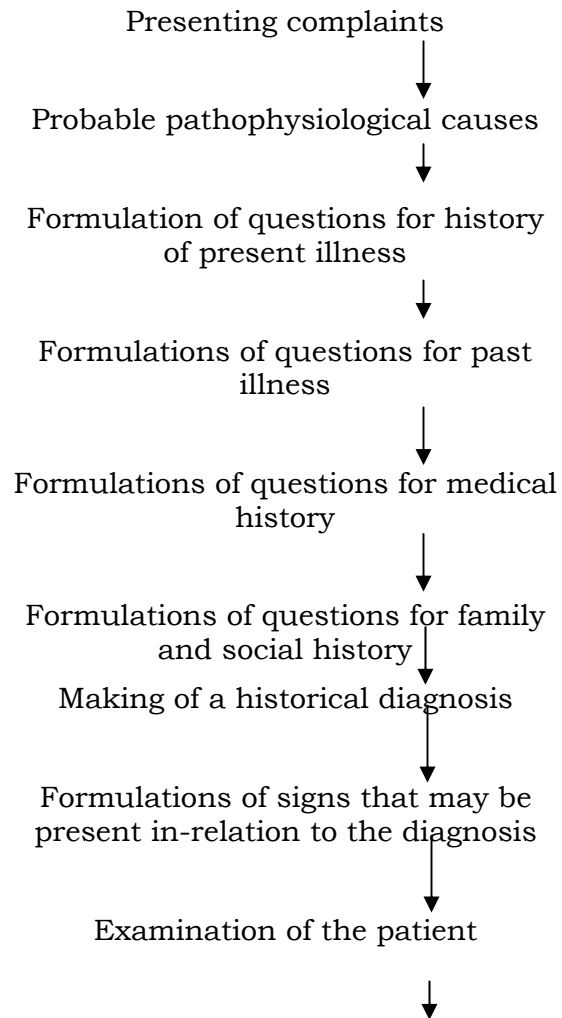
Record apparent asymmetry, unsteadiness while walking/ running/ sitting, or any inco-ordination when reaching for toys. Is the gait abnormal? Are there abnormal added movements, e.g. jerks, athetoid writhing movements, salaam attacks, episodes of blankness, or unusual postures?

Assess tone. Does he feel floppy? Is there muscle-wasting or fasciculation? Is there hypertonia of a particular muscle group, e.g. high adductor spasm (scissoring) in spastic diplegia? Is there associated clonus?

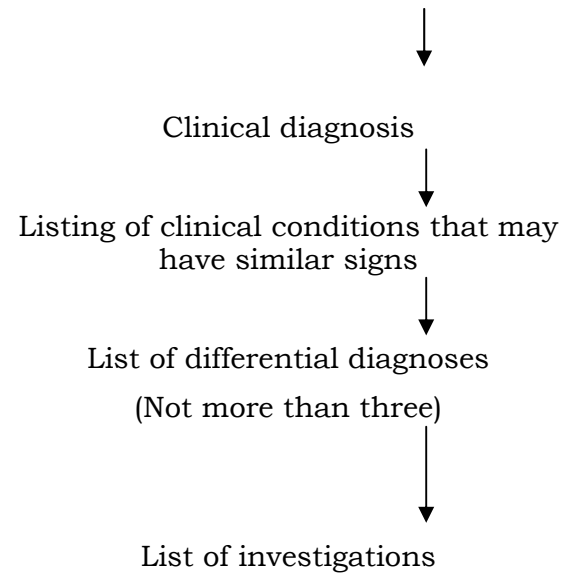
Test power. Informally by observing child kick a football, lift a box of bricks i.e. effortful activity appropriate to age. More formally a systematic documentation of neck, trunk and limb power may be necessary, including flexion, extension, rotation; where appropriate compare right with left.

Assess reflexes, including jaw, biceps, supinator, triceps, knee, ankle, plantar. Sensation is often difficult to test reliably and consistently, particularly in younger children. Record any cranial nerve defects. N.B. Optic atrophy, strabismus and palatal weakness may be caused either by local defects, or as part of the spectrum of cerebral palsy.

Steps in making a diagnosis and identifying the treatment



Correlating the historical data with examination data



All junior and senior interns should report to Dr. Siva Shrestha upon their arrival in the department.

What the Junior interns should do ?

1. Take complete histories/ perform complete clinical examination in OPD and indoor and present to senior intern.
2. Attend MCH immunization clinic in Wednesdays and attend Nutrition clinic on Mondays.
3. Attend clinical/ Journal club meetings.

What the Senior interns should do?

1. Take histories/ do complete clinical examination if there are no junior interns. Supervise the junior interns on history writing and examination.
2. Fill up the lab. report forms/ draw blood as required for investigations.
3. Present cases with above mentioned investigations when appropriate to MD resident/Medical officer
4. Attend clinical/ journal club meetings.
- 5 Assist MD resident /house officer in resuscitation of Newborn once a week by staying as a first on call with MD residents/ house officers. They should make their own roster and it should be approved by respective consultant.
6. Keep log book of their daily activities and present to consultant before getting certificate of their posting as intern
7. Follow-up of admitted patients

USE the SOAP, SOAPIE, or SOAPIER documentation formats, you should follow a structured method to write narrative progress notes. These formats are part of the problem-oriented medical record system of documentation, which describes patient problems on multidisciplinary progress notes. If you use the **SOAP** format, you'll document the following information for each problem **S**ubjective data: information the patient or family members tell you, such as the chief complaint. **O**bjective data: factual, measurable data you gather during the assessment, such as observed signs and symptoms, vital signs, and lab test values. **A**ssessment data: conclusions based on the collected subjective and objective data and formulated as patient problems or nursing diagnoses **P**lan: your strategy for relieving the patient's problem, including immediate or short-term actions and long-term measures.

In all clinical settings, They will be responsible for taking complete paediatric histories and performing physical examinations, as well as formulating differential diagnoses and plans of management. All patients seen by them will be reviewed by a paediatric resident.

They will be expected to research each assigned patient's disease by the use of appropriate texts and journals..

Appendix A: Guide for the Student Evaluation

Evaluation is done based on the daily performance during the clinical posting (8 marks), submitted 12 history cases (5 marks) and the unit examination of the theory classes (7 marks) by the individual teachers. These marks will be combined and will be for the internal assessment mark.

Criteria for clinical Skill

This is not for neonatal examination. Headings might differ according to the situation.

STUDENT'S Name and roll no: _____

Initial Encounter:

- Introduce self
- Wash hands
- Observe general appearance, including nutritional status, hygiene & comfort level
- POSITION CHANGE:

Appendix B: Guide for the Student Evaluation Criteria for History taking Skill

**This is not for neonatal history taking.
Headings might differ according to the
situation.**

- Introduces himself to the parent.
- Talks with the child
- Takes consent from the parent.
- Speaks politely, clearly using simple language.
- Uses open ended questions.
- Asks relevant questions to the presenting complaints.
- Asks for associated conditions relating to the presenting problems.
- Asks for the signs that could have been observed by the parent
- Asks child if can narrate.
- Formulates questions that will probably gives back good information to make diagnosis.
- Finds calorie intake of the child during the illness and previous to illness.

- Finds risk factors for respiratory and diarrhoeal disease, immunizations status, and deworming status.
- Narrates summary to the parent and asks if he has missed any information which they want to tell.

Signs seen during the MBBS paediatric posting.
Please give one star (*) every time you see a sign.
Please show this to your teacher every week.

Name of the student:..... Paediatric posting date:.....

Splenomegaly	Hepatomegaly	Lymphadenopathy	Ascitis	Prote (froa
Abnormal movement	Macrocephaly	Hypotonia	Slow skin pinch	Eag dr
Microcephaly	Cranial nerve palsy	Paresis/paralysis	Exaggerated jerk	Ne righ
	Transudative fluid	Straw colour fluid	Chylous fluid	

Pallor	Cyanosis	Jaundice	Clubbing	Odema
Wasting	Tachypnoea	Macular rash	Pustules	Purpuric rash
Wheeze	Stridor	Ronchi	Vesicular Breath sounds	Bronchial Breath sounds
Propped up position	Raised JVP	Systolic and diastolic murmurs	Dull percussion node	Reduced air entry
Flaring alae nasi	Grunting	Capillary refill time	Bulged fontanalle	Convulsion

Exudative fluid	Stunting
Echymosis	Chest indrawing
Crackles	Unconsciousness

PRESENTATION GUIDELINES FOR RESIDENTS, HOUSE OFFICERS AND STUDENTS.

At the Bedside clinical round or the clinical case discussion seminars.

Before presentation follow the following rules

1. Never present the case if you have not taken the history and examined the patient.
2. Always stand on the right side of the patient and towards the head end of the bed.
3. Stand in front of consultant/senior faculty.
4. Hold the case notes in the right hand.
5. Never keep another hand in pocket, do not lean in the bed.

6. Keep smiling.
7. During presentation never become quiet for more than 30 seconds.
8. Speak softly but loud enough to be heard from the foot end of the bed.

Make an effort to present cases without the aid of the chart, without reading the chart notes verbatim. If there are three or fewer admissions to be presented, then an extemporaneous oral presentation is a reasonable expectation of an intern or resident. A physician should and must have the intellectual capacity to present a case from memory.

9. Follow the following order for presentation:

Start as: My patient is Pushpa Raj Sharma, aged 8 months from Palpa presented to this hospital three days back with the presenting complaints of fever for 10 days and convulsion for 10 minutes one days back. Pushpa was alright 10 days back when his mother noticed

.....

- Presentation

History:

- Gender(it may be awkward if the child is old enough to understand his/her sex), age, race, place of residence, presenting complaint (in the chronological order), and relevant HPI (include systemic review), PMH, medications, birth and development history, immunization history, nutritional history (always refer to the calorie: required and received by the child), personal history (school), social history, family history (include contact and consanguinity).
- **Do not** meander randomly from one problem to another in your presentation. If a patient has more than one problem to be included in the present illness, give a full report on just one problem at a time. **Do not** repeat information that was already included in the HPI in PMH.

Physical exam:

Do start with a general description of the patient's appearance and the degree of distress, if present.

- Present vitals, (in an unconscious patient mention the Glasgow coma scale) anthropometric findings (always relate to the percentiles), and physical exam findings (some times negative findings are equally important).

Do give a particularly **detailed, precise, and complete** report of the examination of the organ that is involved in the present illness (e.g., Do not state simply that lungs are "clear" in patient admitted for pneumonia; rather specify the quality of breath sounds, and specify the presence or absence of wheeze, crepitations, percussion nodes).

- **Do not** take time to state your interpretation of physical findings while reporting the physical exam. When you are reporting the physical exam, just state the facts. When you are stating your assessment of the patient's problems, then you can give your interpretation of the facts.

- Lab tests and Imaging
 - What was done for the patient upon presentation?
 - Relevant past blood labs and chemistries and images
- Clinical Diagnosis
- Differential diagnosis
 - What (at least) three things may this patient most likely have?
 - What diagnosis can you not miss!
 - Use the presentation, history, labs and images to argue for and against the differential
- Hospital course
 - How was the patient managed for their hospital course?
 - Were there crucial turning points?
- Treatment
 - Medical , referral, psychosocial or behavioral management
 - Follow-up
- Discussion
 - Comment on all aspects on the patient care, paying special attention to areas where there might have been alternative methods of care. You may also engage some of your faculty to comment as to how they might have managed this patient.

- Preventive measures
 - Present known screening and preventive methods
 - This is one of the key sections in this Case Presentation. Use research publications, and references to illustrate your point.
 - Please offer (at least) three suggestions for improving medical care for minorities.

GUIDELINES FOR THE DISCHARGE SUMMARY

The following guidelines are directed towards improving the quality of the contents of the discharge summary.

"DIAGNOSIS"

1. **Do list final diagnosis.** Symptoms, physical signs, and abnormal laboratory values, which should be included among **problems** on your problem list, are not necessarily **diagnoses**. For example, anemia is not a diagnosis. Nutritional iron deficiency anemia is a specific diagnosis. If a patient has an anemia that has eluded explanation, then an appropriate discharge diagnosis is "normocytic anemia of unknown etiology" rather than just "anemia".
2. **Do list all active problems.** For example, if an electrolyte imbalance is resolved during the course of the hospitalization, or is present only transiently, then **do not** list it as a final diagnosis.
3. **Do not** use abbreviations in the list of final diagnosis. The list of diagnosis is read and codified by non-medical personnel in the medical records department. Although some abbreviations are readily recognizable, it is easier for everyone if abbreviations are not used for diagnosis. (In general, the use of abbreviations anywhere in the chart should be minimized.)

"SUMMARY"

1. **Do** write a **very** brief, cogent history and physical exam. There is, after all, a full admission work-up in the chart, and there is no need to rewrite the history and physical exam in the discharge summary. Often, it is appropriate to just list the relevant findings within the discussion of

specific problems, instead of writing a separate abstract of the history and physical exam.

2. **Do** write the summary like a progress note. List each problem separately and write a separate paragraph to describe the hospital course of each problem.

N.B. It is appropriate to include within the text of the written summary discussion of both "final diagnosis" and other significant problems. For example, a patient was admitted for pneumonia, and during the course of his illness developed convulsion that required anticonvulsant therapy for two days, but that resolved by the time of discharge. The final diagnosis should include pneumonia, but **not** seizure disorder. However, the written summary should indicate that the hospitalization was complicated by the need for anticonvulsant therapy (how much, what type of anticonvulsant, etc.) for two days (indicating the presence of hypoxia, for future reference).

3. **Do** list all pertinent tests and their results. Also, list what results, if any, are pending.
4. **Do** specify whether a problem improved, resolved or continued unchanged.
5. **Do** specify the justification for the final diagnosis, unless it is immediately obvious.
6. **Do** list all medications that the patient is being told to take upon discharge.
7. **Do** mention what, if any, follow-up in clinic -- and which clinic-- has been arranged.
8. **Do** make a special effort to be **legible** and **neat!!!** The discharge summary should clearly and easily communicate information. It should not obfuscate information. Remember other hospitals can imagine your knowledge and your hospitals efficiency.

Remember: the discharge summary for is extremely important. A good summary provides concise and accurate information and ensures a degree of continuity of care for the patient. A haphazard or nonchalant summary is an unnecessary obstacle. A bad summary forces the reader to take the time to go through the interrogation with the parent and parents may not know the hospital medical events.

A discharge summary should be accomplished before the morning of discharge. It should be a written summary on a specially prepared summary sheet and must be signed by the third year MD

resident. If the patient has been hospitalized for more than three days, the summary must be dictated. All summaries must contain:

- a. Chief complaint
- b. Relevant HPI, PMH, Developmental, medications, birth and development history, immunization history (in brief)
- c. Relevant admission physical exam (in brief)
- d. Pertinent laboratory data
- e. Diagnostic impressions
- f. Hospital course
- g. Condition on discharge
- h. Medications, diet, disposition and allergic reactions
- i. Discharge follow-up including the **DATE OF THE NEXT FOLLOW-UP CLINIC**
- j. Final diagnoses in order of importance to the patient's hospitalization

GUIDELINES FOR CONDUCT AT BEDSIDE ROUNDS FOR FACULTY

Bedside rounds, whether during daily morning rounds, ward attending rounds, or consultation rounds, are an integral part of any training program. Bedside rounds, in contrast to sit-down conferences, require particular attention to a code of behavior that can best be labeled "**Professionalism**". The following guidelines are meant to emphasize certain points of professional behavior for all participants of bedside rounds.

1. **Do not** laugh, side chat or discuss other things at the bedside. This is simply "unprofessional" and should never be done.
2. **Do** greet the patients guardian and say "hello to a child". However the child is small show some gesture so that parent think you are really there to care his/her child. It is very bad form to go to a patient's bed and talk about him or her, but not to him or her. It is inexcusable to not even say, "Namaste".

3. **Never** refer to any patient in disparaging terms in public! What is said in private is a matter of personal conscience, but what is said in public is a matter of professional ethics.
4. Assume that the parent of unresponsive patient, or the patient with an altered mental status could possibly understand what is said at the bedside, and maintain professional decorum in front of all parents.
5. **Do** talk with the older children about their illness. Describe what is his/her illness.
6. **Do** maintain the patient's personal privacy and dignity as much as possible.
7. **Do not** argue at the bedside. If an earnest difference of opinion becomes apparent, continue the discussion outside the room.
8. **Do** use appropriate language at the bedside. Know what to say and what not to say at the bedside. For example, never say "cancer" or "tumor" or "bad prognosis" in front of a patient who has not yet been diagnosed and told of having cancer.
9. **Do** talk to the patient. Before leaving the bedside, translate the medical discussion into an appropriate explanation for the parent.

Remember: even if the patient being discussed is not physically present, other patients in the room will hear the discussion and will more than likely talk among themselves, talk to the patient in question, spread rumors, etc. If any patient is within earshot, all the rules of professional behavior apply.

Department of Child Health

Student Evaluation

Date Evaluated:

You may or may not write your name.

For all of the questions below please insert the appropriate number that best fits your response:

0 = terrible, unacceptable, definitely no
1 = poor, marginal

2 = average, acceptable
 3 = good, very satisfactory
 4 = superior or excellent, definitely yes

- a. teaching ability
- b. availability
- c. enthusiasm

1. Rate the overall quality of this posting:
2. List and evaluate your Faculty:

- a. Dr.
 - a. teaching ability
 - b. availability
 - c. enthusiasm
- b. Dr.
 - a. teaching ability
 - b. availability
 - c. enthusiasm
- c. Dr.
 - a. teaching ability
 - b. availability
 - c. enthusiasm

3. List and evaluate the MD Resident/House Staff with whom you had closest contact:

- a. Dr.
 - a. teaching ability
 - b. availability
 - c. enthusiasm
- b. Dr.
 - a. teaching ability
 - b. availability
 - c. enthusiasm
- b. Dr.
 - a. teaching ability
 - b. availability
 - c. enthusiasm

4. Rate the MD Resident/house Staff in general regarding:

5. Rate your interaction with Full-Time Faculty. Explain:
6. Rate the degree of direct supervision regarding review of your history and physical findings, progress notes, etc.

Who usually did this?

7. Please rate the following:
 - Orientation
 - Patient Load
 - Ambulatory Experience
 - Teaching Rounds
 - Teaching Conferences
 - Degree of cooperation from Full-Time Staff

8. Rate your interest in this field:
 - a. before taking this paediatric posting
 - b. after taking this paediatric posting

9. Rate the organization of this paediatric posting:

10. Was the method of evaluating your performance explained to you at the beginning of this paediatric posting?

Did you receive adequate feedback on your performance during the course of this posting?

11. What do you consider to be the appropriate length of time for this posting?
12. What did you like least about this posting?

13. What did you like best about this posting?

14. Comment on the lecture series at your hospital site:

15. Do you have any comments or suggestions?

Please return this evaluation to: Prof. Pushpa Raj Sharma, Department of Paediatrics, HLMC.

Examples for the Paediatric Cases:

A. Problems:

1.

A 6 year old girl developed swelling of the left knee. She had been well that morning at home, but then complained of pain in her left knee, which subsequently became swollen.

There was no history of trauma. There had been no recent illness, her appetite was good and she did not suffer from dysentery. She was admitted 5 months back in Kanti Children`s Hospital for respiratory problems.

She was born by lower caesarean section as the mother had as the mother had two previous LCS. The neonatal period was normal. Her developmental mile stones were normal. The two other siblings were healthy. She is fully immunized.

Examination:

Height 118 cm.

Weight 20 kg.

Not clinically anaemic.

Pyrexial 37oC axillary.

Pulse 92/min; B.P. 95/60 mm of Hg.

Breath sounds normal.

Abdomen non tender. No hepatosplenomegaly.

Tonsils enlarged not infected.

No rash.

Left knee: swollen, inflamed, tender, with restricted movement.

Investigations:

Hb 9.2 G%

WBC 10,000/cmm; N 73%, L 24%, E 3%,

Platelet adequate.

X-ray left knee soft tissue swelling.

Questions:

1. What is your most probable diagnosis?
2. Mention two other differential diagnosis.
3. What other investigations you will ask for?
4. Will you admit this patient in a hospital?
5. What drug will you prescribe before getting further investigation reports?

Answers to problem no 1.

1. Stills disease.
2. Septic arthritis, rheumatic arthritis,
3. ESR; rheumatoid factor; antinuclear factor; ASO titre;
4. This patient can be treated from OPD.
5. Acetylsalicylic acid; 450 mg every six hourly.Ô
0*0*0*

2.

A eight year old girl was admitted from OPD. She had a dry cough for three weeks, starting with a mild pyrexia, sore

throat and headache. She was being treated from OPD with ampicillin, cephalosporin and chloramphenicol with out any improvement. Since two days she has developed mild macular erythematous rashes over the trunk. She had become anorexic and lost 1.5 kg in weight.

Her previous health was good. There are four siblings and all were in good health. Her father had recently a chest infection treated with antibiotics but is now well. Her mother had tuberculosis at the age of 23 years. She was fully treated and is off the medicines since last six years.

This child is fully immunized.

Examination:

Height 1.44 m.

Weight 27.1 kg.

Temperature 37.2oC axillary.

Pulse 92/min. Respiratory rate 58/min. B.P. 110/60 mm of Hg.

No cyanosis.

Heart sounds normal.

Crepitations at right base. Percussion dull at right base.

Fauces congested. Tympanic membrane mild congestion.

Small mobile non tender tonsillar lymph nodes.

Investigations:

Hb 11 g%, WBC 6400/cmm, N 64%, E 2%, L 30%, M 4%.

Chest X-ray nodular opacities at the right lower zone with small right pleural effusion.

Mantoux test negative.

Pleural fluid clear, 2 wbc/cmm, culture no growth.

Urine analysis normal.

Stool ova of ascariasis.

3.

A 3 week old neonate was admitted from the emergency room of Kanti Children Hospital with the history of vomiting. He had been well until one week before admission when he had begun to vomit 4-5 times daily. The vomiting was not related to feeding and was not projectile. The vomitus contained neither blood nor bile and there was no accompanying diarrhoea. The child was breast fed exclusively. Her pregnancy was normal and terminated spontaneously. Birth weight was 3.462 kg. There were no neonatal problems. This was the first child of parent.

Examination: Weight 3.003 kg; Rectal temperature 37.3oC.

Clinically dehydrated mild

Pulse 164/min; regular. Respiratory rate 42/min.

Normal chest sounds.

Abdomen not distended. Liver one cm and spleen not palpable.

Bowel sounds normal.

Normal male genitalia with both testis descended.

Reflexes normal.Ô

0*0*0*

Investigations:

A test meal did not reveal any visible peristalsis.

Hb: 12.9g%; WBC 4300/cmm. Differential count normal.

Sodium (serum) 125 mmol/l. Potassium 7.1 mmol/l.

Urea 12.3 mmol/l. Urinary 17 oxosteroids 0.8 mmol/l

(4-24 mmol/l

4.

A 8 year male child was seen in the OPD of Kanti Children Hospital with the complain of mild pain in the right hip preceded by a mild fever and common cold of one week duration. He had similar type of illness three months earlier which subsided with paracetamol.

His paternal grand father suffered from osteoarthritis and maternal grand mother suffered from rheumatoid arthritis. He has two siblings both of them are in good health.

Examination: Height 105 cms. Weight 16 kg.

Pulse 96/min; Blood pressure 100/60 mm Hg.

Heart sounds are normal.

Right hip limitation of active and passive movement.

All other joints are normal.

Gait limp on right leg.

Investigations: Hb 10.5g%; Haematocrit 36%;

WBC 7,800/cmm; P 85%, L 15%;

ESR 20 mm first hour;

X-Ray hips sclerosis and partial collapse of the right femoral head.

5.

An 18 months old child was seen in the OPD for fever since 3 days associated with a cough and occasional vomiting. She was treated out side on the second day with oral cephalosporins one TSF eight hourly.

Examination: Miserable child. Temperature 38oC axillary.

No jaundice. Pulse 124/min. Respiratory rate 40/min.

Fauces were mildly congested. Bilateral wax . Tonsillar nodes palpable they were less than 1 cm and non tender.

Soft systolic murmur over left parasternal 2 ICS.

Breath sounds were normal.

Investigations:

Hb 8.3g%; WBC 18300/cmm; P 63%, L 31%, M 4%, E 2%;

Urea 5.4 mmol/l; Na 139 mmol/l; K 3.7 mmol/l;

Throat swab culture no growth;

Urine culture no growth; Urine WBC 10/cmm.

Blood culture no growth.

X@ray: consolidation of the right upper lobe.

She was treated with penicillin intramuscularly. Temperature settled after 24 hours. Thereafter oral amoxycillin was given. She again became pyrexial next day. Penicillin was restarted again the temperature settled. She started vomiting off and on. She looked Ô0*0*0* very miserable, withdrawn and anorexic. No new physical signs could be found on examination.

6. A 2 years old girl was admitted from the emergency room of KCH with difficulty in moving her right arm and leg. She had a mild cold during the previous days, and on the day before admission her mother noticed that she was not moving the right leg. On waking up the following morning, she had paralysis of the body which regressed within a few hours.

Before coming to the ER parents noticed clonic right sided convulsion with mild drowsiness and recurrence of the right sided paralysis. She had been full term normal delivery weighing 2.580 kg following a normal pregnancy. She sat at six months, walked at 12 months spoke baba at 7 months. She had measles and chicken pox at 9 and 15 months respectively.

Examination: Height 77 cms; Weight 10.9 kg;

Temperature 37.2oC axillary.

Fully conscious.

Sub total flaccid right sided hemiplegia.

Right facial palsy lower part affected mainly.

All other cranial nerves are normal.

Decreased right sided reflex.

Planters: right extensor; left flexor.

Investigations: Hb 11 g%; WBC 6800/cmm; P 56%, L 40%, E 4%;

Platelet 210000/cmm

Prothrombin time normal.

Blood culture no growth.

Lumber puncture cells 386/cmm; L 76%, P 24%,

protein 60 g/l, sugar 80mg%.

7. An eight year old girl from Baglung was referred because of high temperature of gradual onset since last two weeks. She was treated with various antibiotics including cephalosporins, penicillin, amoxycillin. In Baglung urine culture showed E.coli which was sensitive to Nalidixic acid. She had 10 days treatment of nalidixic acid.

She did not have any major illness in the past. She was fully immunized. She has two siblings all are in good health. Over the last two days she has developed a temperature and been extremely miserable.

Examination: She was pyrexial and pale. Liver was palpable and spleen was 1 cm enlarged. All the joints appeared normal. Other systems were normal.

Investigations: Hb 9g5; WBC 10000/cmm; P 60%, L 40%.

ESR 58 mm in first hour.

Mantoux test was negative.

Blood culture no growth. Urine culture no growth.

Salmonella agglutination test normal.

Chest x ray normal.

Bone marrow reported as normal.Ô

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She was treated with ciprofloxacin for 6 days but the temperature did not subsided. She was noted to be pale.

A repeat blood count was as follows:

Hb 7 g%; WBC 11000/cmm; P 20%, L 80%.

8. A 14 month old boy has had a mild upper respiratory tract infection associated with occasional vomiting for the past 5 days, but for the previous 48 hours has severe colicky abdominal pain with bloody diarrhoea and lethargy. He was born at 36 weeks gestation by caesarean section

weighing 2.7 kg to a 21 year old mother who now has another 3 month old baby.

Apart from several upper respiratory tract infections and two episodes of diarrhoea, the child has been well.

Examination:

Height 72 cms. Weight 9.5 kg.

Pyrexial 37.2 oC (axilla).

Pulse 95/minute. Respiratory rate: 32/minute.

Hearts sounds normal. Chest clear.

Pharynx inflamed. Wax in both ear.

Abdomen diffuse tenderness, no rebound tenderness.

Rectal examination normal.

Irritable and restless.

No meningism. No central nervous system localizing signs.

Investigations:

Hb 7.5g%; WBC 10000/cmm; P 80%, L 15%, M 4%, E 1%;

Platelets 22000/cmm.

Prothrombin time normal.

Urea 12 mmol/l.

Creatinine 150 mmol/l.

Urine : RBC plenty; Protein 2+.

Stool occult blood : positive.

9

A 3 year old boy was admitted from the emergency room in the medical ward with the history of acute onset of noisy breathing. This has worsened over three hours. He did not has this type of

episode in the past. He was not eating any thing during this episode and there was no history of choking .

Examination:

Fever 38.5oC axillary.

Drooling, flushed, centrally cyanosed.

No rash.

Pulse 132/min. Respiratory rate 68/minute.

Inspiratory and expiratory stridor.

Suprasternal, sternal, and subcostal recession.

Restless, but conscious.

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Questions:

1. Mention three differential diagnosis.
2. In emergency observation ward how will you manage this child?
3. Mention three commonest bacterial pathogens that causes ARI.
4. What further investigation you will ask for?
5. Which antibiotic will you use? What is its dose?

Answers:

1. Acute epiglottitis; retropharyngeal abscess; ludwig's angina.
2. a. Oxygen by nasal canula at 2 litres/ minute.
b. Put an i.v line.
c. Hydrocortisone and chloramphenicol i.v.
d. Prepare for tracheostomy if the cyanosis does not relieved.
3. Haem. influenzae; strep. pneumoniae; staph. aureus.
4. Lat xray of neck.

5. Chloramphenicol. 50 mg/Kg/day.

10.

A 10 year old boy was seen in the OPD for the complain of sore throat since 5 days. He also had frontal headache and posterior neck pain. He was seen by a practitioner earlier in the week when a diagnosis of URTI was made for which oral cephalosporin was prescribed. On the day before coming to OPD he was seen in emergency department in view of his lack of improvement, and changed to cloxacillin. This boy was admitted in the medical ward.

Over the next 24 hours he had become progressively distressed with difficulty in breathing and with neck pain.

Examination:

Temperature: 38.5oC;

Distressed unable to lie down comfortably.

Pulse 100/min, regular with marked diminution in volume during inspiration.

Heart sounds normal, no added sounds.

Respiratory rate 40/min.

Breath sounds normal, no added sounds.

no other positive signs on examination.

He was observed overnight but the following morning there was no improvement and he was still complaining pain in neck. On examination he had shallow rapid breathing and on auscultation bronchial breathing could be heard in

a small area of the lower anterolateral chest of the right side. There was also a rough scratching sound in time with the heart beat heard at the lower left sternal border.

Investigations;

Hb: 10.3g%; WBC 11000/cmm; P 84% L 13%, M 1%;

11. A two and half months old male child presented with the history of bluish discoloration of lips and fingers since last two months. Since last one week he has cough on and off with episodes of excessive crying. He was born by normal vaginal dilivary at term in 0*0*0*

home. There were no perinatal complications. He was breast fed but had excessive sweating during sucking and could not continue sucking continuously for more than 5-10 minutes.

Examination:

Weight: 4 Kg. Length: 56 cms. OFC: 36 cms.

Pulse rate: 120/min. R.R: 30/min. Temp: 99.4 o F.

Central cyanosis present.

Apex beat: 6th left intercostal space lateral to the midclavicular line. No thrill. Heart sounds normal.

No murmur.

Mild hepatomegaly was noted.

Investigations:

Hb: 16.3 G%. WBC: 6700/ cmm. P: 46%; L:54%.

12.

Nine month old male child presented with the history of increasing abdominal distension since last 20 days. His mother had noticed abdominal distension since last 6 months for which she was

investigated in another hospital but no cause was found. There was no history of vomiting, jaundice, pallor, fever, constipation or bleeding from anywhere. His appetite was normal.

He was born in hospital at term by normal vaginal delivery with the weight of 2.5 Kg. There were no perinatal problems.

He was absolutely breast fed till 4 months and then weaned with lito. He began to smile at 2 months but sat with support a few days back. He is completely immunized. He has one brother of 3 years who is healthy.

Examination:

Length: 66 cms. Weight: 6.8 Kg. OFC: 43 cms.

Scalp hair sparse and brittle. Discrete cervical lymph nodes of less than 2 cms in the right post. triangle of neck.

Pulse: 100/minute. R/R: 24/min. T: 97 ° F.

Liver was 9 cms enlarged which was firm, non tender and smooth.

Spleen was 10 cms enlarged firm, non tender and smooth. No free fluid in the abdomen was noticed clinically.

Investigations:

WBC: 11,560/cmm. N 25%; L 74%; E 1%; Hb 9.6 G%.

PCV 31%; MCHC 31%; MCV 73.8%; Film: Hypochromic, microcytic. Hb F 1%. MP absent.

Ultrasonography: hepato spleno megalia.

Bone marrow: Hypercellular, adequate megakaryocytes, normoblastic erythropoiesis, M:E ratio was 10:1.

No parasites were found. Diagnostic cells (Gaucher's) were present.

Serum acid phosphatase: 46.5 KAU. (1.5 -3.5 KAU).

13.

12 year old male child was admitted from the emergency with the

history of fever since last 8 days, generalized skin rash for 5 days and irritability since one day. There was no history of vomiting, unconsciousness or convulsion. He did not have any episode of throat infection, dysentery or other illness in the recent past.

Examination:

Conscious but irritable.

T: 99.8 ° F (axillary). P: 120/min. R/R: 28/min. \hat{O}

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B.P. 100/70 mm of Hg.

Purpuric rashes were present over the abdominal wall.

Mild hepatosplenomegaly was noted.

No neck stiffness.

Investigations:

WBC: 3800/cmm; P: 55%; L: 45%; HCT 32%, Platelet: 18000/cmm.

CSF: RBC: 330/cmm; WBC: 0; Protein: 16mg%; Sugar: 51mg%;

Creatinine: 4.1mg/100 ml (0.9 - 1.4mg/100ml).

CXR: normal.

Blood culture: Salmonella typhi positive.

Bone marrow: ITP with hypoplastic marrow.

14.

An eight year girl presented in the OPD of Kanti Children's Hospital with the complaint of yellow dark coloured urine, pain in right upper abdomen and palpitation since two weeks. She also had loss of appetite since three weeks.

She also had the history of intermittent joint pain which was associated with palpitation and dry cough since last four years.

She could not run fast as her friends because of shortness of

breath. There was no history of chest pain. She did not have recent episode of sore throat.

Examination:

Temperature: 102 o F. Pulse: 120/min. regular with fair volume.

B.P.: 84/60 mm of Hg in supine position.

Height: 113 cms. Weight: 18 Kg.

Jaundice present. Oedema absent.

Apical impulse in 6th intercostal space in the anterior axillary line. There was systolic murmur in the mitral area.

There was hepatomegaly of 3 cms below the costal margin in the midclavicular line. Spleen was not palpable.

Investigations:

WBC: 13000/cmm; P: 52%; L: 48%. Hb:9.4 G%.

S.B. 130 mmol/L.

ASO titre: more than 400 U.

Urine and stool examination were normal.

15.

A thirteen year old girl presented in the emergency with the complain of abdominal pain, occasional vomiting, large joints pain and rashes over the extremities since last five days. She had sore throat one week prior to the appearance of these symptoms. There was no history of fever, cough, bleeding from any sites, altered sensorium or convulsion.

Her appetite is good, bowel and bladder habit were normal.

Examination;

Vital signs were normal.

Skin: Multiple purpuric rashes limited to the buttocks and

extremities.

Other systemic examination were normal.

Investigations:

WBC: 10,000/cmm; P: 67%; L: 32%; E: 1%; Hb: 12.4 G%; ESR: 13mm in 0*0*0*

one hour. Platelet: 1,95,000/cmm.

Urine: Albumin +; RBC 4-8/HPF.

Stool: Cyst of Giardia lamblia.

16.

A six year old girl from Nuwakot presented in the OPD with the complain of pallor, abdominal pain and occasional passing of black stool since last 2 months. There was no history of bleeding from other sites, fever, any medications or joint pain. She was delivered at home at term. There was no any perinatal or neonatal problems. She was absolutely breast fed till weaning at six months but continued to breast fed till one year of age. She was not immunized. There was no significant past history of any illnesses.

Examination:

Height: 92 cms. Weight: 10.6 Kg. Vital signs were normal except pulse which was 140 per minute.

Markedly pallor. No sternal tenderness. No oedema.

Systemic examination of respiratory, neurological, musculo-skeletal and genito-urinary system were normal.

On cardiovascular examination she had apical impulse at 5th intercostal space in the mid clavicular line and systolic murmur of 2/4 grade over the mitral area without any radiation.

On examination of gastro-intestinal system: abdomen was distended, no visible superficial veins, liver was 2 cms. palpable which was

smooth and non tender, shifting dullness was not present.

Investigations:

Blood; Hb: 4 gm%, TLC: P 40%, L 54%, E 6%, ESR 66 mm in first hour.

Platelet: 150,000/cmm.

Stool examination: Hook worm ova.

17. An 2500 gm male infant, was delivered vaginally after 38^oweek gestation. The apgar score at 1 minute was 6 and 8 at five minutes. He was immediately given to mother. Mother complained of difficulty breathing and bluish tinge over the face. On examination the neonate was cyanosed with marked subcostal indrawing during inspiration. He was immediately kept in headbox with oxygen and started intravenous penicillin and gentamycin. However his condition deteriorated and an urgent x-ray was done.

How would you proceed for the management?

18. A 2900 gm, 40^oweek gestation neonate covered with "pea soup" meconium is handed to you in the delivery room. He was already cried loudly but now appears well. How would you proceed?

- a. Start antibiotics intramuscularly.
- b. Start antibiotics intravenously.
- c. Intubate and aspirate the trachea.
- d. Observe for another few hours.

19. A 2900 gm, 42 week gestation neonate covered with green coloured fluid, delivered by caesarian section is handed to you. He has already cried loudly but now appears depressed on the

resuscitation table. He was given IPPV with bag and mask.

How would you treat this patient?

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20. Ram Prasad aged 11 months was brought in the OPD of Kanti Children's Hospital with the chief complaints of cough and fever of two days duration.

Ram was absolutely normal 2 days back when he developed mild fever. Since then he was not eating well and was irritable. Mother noticed mild nasal discharge and cough on that evening. His cough became worse during feeding and was dry.

He was born by normal vaginal delivery with the birth weight of 0*0*0*

2.2Kg at term. Mother had attended the ANC clinic and was advised about the care of breast and advantages of breast feeding. His neonatal period was uneventful. He was bottle fed from the beginning and used to get choking episode on and off. He is immunized with BCG, Polio and DPT. Mother and father both are smoker. He is the only child. Both parents work in a carpet factory.

On examination:

Weight: 7 kg. Temperature: 39.1^oC. Respiration rate: 62/minute when observed from distance. ENT: mildly congested nasal and pharyngeal mucosa. Ear drum was not visible because of wax in both sides. There was no subcostal indrawing. Chest: it was difficult to hear any added sound because the child cried when auscultation was tried. Other examination could not be performed because of crying.

21. An one year old female child presented with the history of

loose motions since last 4 weeks. The frequency of loose motions varied from 10-15 daily. The stool was loose and small in amount. It was greenish yellow to dark brown in colour in different occasions. There was no history of fever, vomiting, abdominal pain, melena, jaundice or difficulty in micturition.

4 weeks back he had acute onset of watery diarrhoea with the frequency of 10-14 per day with mild fever and vomiting which gradually subsided to present condition. Parent consulted a paediatrician who advised to give soya based milk instead of lactose containing milk.

On examination:

She was irritable, lethargic and in no distress. Height was 75 cms and the weight was 7.5 Kg and head circumference 46 cms. He had excoriation over the angle of mouth. Mouth was moist but there was loss of elasticity of skin over the abdomen.

Liver was 1 cm palpable below the right costal margin in the midclavicular line. Abdomen was mildly distended but there was no free fluid.

Laboratory data:

Haemoglobin: 9.0 gm%. Haematocrit: 30%.

WBC: 6500/cmm; P: 44%; L: 46%; E: 10%.

ESR: 36mm in first hour.

22. Deepak Sirohiya aged about 9 years from Janakpur presented with the history of fever and cough on and off since last one month. Parents have noticed difficulty in breathing since last two weeks and had significant weight loss within this period. There was no history of contact and was fully immunized. There was no history of haemoptysis.

He was treated at Janakpur with oral amoxicillin but without any improvement. He was brought in Kathmandu where following investigations were done and started antitubercular therapy.

Blood: TLC: 12000/cmm; P:64%; L:34%; E:2%.

Hb: 9.2g%; ESR:44mm in first hour.

Mantoux test: negative.

Chest x-ray: Left pleural effusion with shifting of mediastinum to right.

In spite of one week of antitubercular therapy his condition was not

deteriorated. He was seen in OPD of KCH.

On examination:

He was dyspnoeic and looked ill. Respiratory rate was 44/min.

No purpuric rashes were noted.

Axillary temperature was 37.6°C. Pulse: 96/min.

Left supraclavicular lymph node was enlarged (>1cm), non tender and mobile. Superficial veins were prominent over the left mammary and left lower side of neck. Left JVP was raised. Left axillary single lymph node was also palpable. Left side of the chest was elevated and the intercostal spaces were full. Apical impulse was not palpable. Air entry was diminished and left chest was dull on percussion. Spleen was enlarged to one cm below the left costal margin. Liver was not palpable and there was no free fluid.

An urgent diagnostic pleural tap was done and it was haemorrhagic.

180 ml of fluid was removed and all the fluid was haemorrhagic.

The laboratory findings of the fluid were as follows:

Cells:6900/cmm. Immature cells with very little cytoplasm.

Protein: 4.6g%. LDH: 1690.

Suggestive of malignant pleural effusion.

This child was referred to Tata Memorial Hospital Bombay for further followup.

23. Miss Nisha 13 year old presented with the history of fever since last one week. Fever was associated with chills. It used to subside with paracetamol. She used to take one tablet of paracetamol daily whenever the temperature used to come. She did not had history of sore throat, pain during micturition, cough or headache. She has returned from India about one and half month back.

On examination: She was well looking. Her vitals were normal. The only positive findings was palpable spleen.

Investigation:

TLC: 6500/cmm; P:60%; L:40%. Hb:10g%

Plasmodium vivax was seen on peripheral smear.

She was given one dose of Pyralfin. She still continued to have temperature.