TOP TWELVE IN PAEDIATRICS IN NEPAL

by

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This article is based on an analysis of approximately 17,000 cases seen in the Children's Outpatient Clinics of Kanti Hospital and Bir Hospital for a period of one year in each case, from December 1969 to November 1970. The main purpose of this exercise is to ascertain the leading diseases with which children are commonly brought to the outpatient clinics here. The result of our analysis as tabulated below has shown that the following twelve diseases form the top twelve diseases since they constitute about 84 per cent of the total number of cases seen:-

Diseases	Total No. of Cases	Percentage
I. Diarrhoeas	6129	36.15 per cent
II. Upper Respiratory Tract Infections	3089	18.22 per cent
III. Bronchitis, Bronchopneumonia and Pneumonia	2875	16.96 per cent
IV. Pertussis	562	3.32 per cent
V. Tuberculosis	369	2.81 per cent
VI. Skin Infections	367	2.17 per cent
VII. Urinary Tract Infections	328	1.93 per cent
VIII. Eye and Ear Infections	227	1.34 per cent
IX. Rickets	139	0.82 per cent
X. Rheumatic fever	102	0.62 per cent
XI. P.U.O.	61	0.41 per cent
XII. Meningitis and convulsions	59	0.31 per cent
Total	14307.	84.40 per cent

Diagram 1

These diagnosis have been made on clinical impression, no doubt, in the vast majority of cases as only selected cases are subjected to investigation from the outpatient clinics. Each of these twelve top diseases will be discussed below. This discussion will be limited mainly to their etiological aspects, their clinical peculiarities in this part of the world and the practical problems they pose from the point of view of their management in our outpatient clinics taking into consideration the limited facilities that exist in our paediatric outpatient clinics for their investigations and the acute scarcity of hospital beds for admission of such cases.

Diarrhoea:

This is undoubtedly the commonest disorder. It occurs throughout the year chiefly during summer. It is presumably the most important cause of infant mortality in our country. The common organisms responsible are dysenteric organisms, giardia intestinales, intestinal parasites e.g. roundworm, hookworm, etc. and possibly various viral agents. Thus it is evident that the vast majority of diarrhoeal disorders are of infective origin rather than parenteral causes which account for only a small proportion of cases.

Upper Respiratory Tract Infections:

It is by far the second commonest disease presenting in paediatric O.P.D. The vast majority of upper respiratory tract infections are due to virus, only a few cases of tonsillitis and pharyngitis are due to beta-haemolytic streptococcus. The usual presenting features are often cough, irritability, fever and refusal of feeds in small babies. However, presenting features depend upon the area of maximum involvement, causal agent and the age of the child. Indeed, the existence of upper respiratory infections are frequently discovered only by direct inspection of throat, because young children can rarely complain of sore throat. It is not usually necessary to prescribe antibiotics for this condition as simple measures such as aspirin to reduce the irritability or headache, and ephedrine nasal drop to clear nasal obstruction are sufficient but sometimes depending upon the severity of the case it may be necessary to prescribe suitable antibiotics. In older children because of the increased risk of complications such as rheumatic fever and nephritis it might be well advisable to prescribe a course of penicillin.

Bronchitis, Bronchopneumonia, and Pneumonia:

These conditions seem to be the third commonest diseases, commonly occurring in winter. Most cases of acute bronchitis are due to downward extension of upper respiratory tract infections or they may form part of clinical spectrum of diseases such as measles, whooping cough, influenza, etc. A wide variety of bacterial agents such as streptococci, Staphylococci, haemophilus influenza, pneumococci, etc. are responsible for bronchitis and bronchopneumonia. Localised pneumonia is more likely to be bacterial than viral, although all types of respiratory virus can infect the lungs occasionally but more often

they pave the way for bacterial infection. Mild cases of bronchitis may not require any active treatment but moderately severe case needs suitable treatment with antibiotic as it is rather difficult to clinically differentiate between bacterial and viral infections. Localised pneumonia is treated usually with penicillin whereas bronchitis and bronchopneumonia are treated with broad spectrum antibiotics as these are more likely to be due to mixed group of organisms. Simple cases of bronchitis, bronchopneumonia and pneumonia are not admitted provided they do not need oxygen therapy and treatment for other complications. However, in actual practice, in view of poor socio-economic reasons most of these cases which could otherwise be treated in the outpatient clinic do need hospitalisation. We always try to exclude tuberculosis in every case of chest infection especially if any member of the child's family is suffering from tuberculosis. If there is any doubt chest x-ray and other relevant investigations are carried out in the O.P.D.

Pertussis:

It is also quite a common disease in our O.P.D. especially during late autumn and winter seasons. By itself it is not a fatal disease but by virtue of its long course, irritating cough, prolonged ill health and complications it creates trouble not only to the doctor but also to the parents. The cough is so characteristic that the parents themselves volunteer with the diagnosis of whooping cough. Since the paroxysmal nature of cough is established only in late stage diagnosis is often missed in early stage when the condition is mistaken for simple cough and cold. Sometimes typical whoop may be absent and the child is presented as a case of vomiting and it is not uncommon to find a child with severe malnutrition and dehydration. It is doubtful whether broad spectrum antibiotics are of any value once the whoop has started. In the catarrhal stage broad spectrum antibiotics are valuable in preventing the secondary infections or in cutting short the period of illness.

Provided they are no intercurrent infections and child looks apparently well apart from the irritating cough, we usually prescribe cough sedative, antiemetics and vitamins. Severe cases of whooping cough with dehydration and nutritional disturbance are usually admitted in the hospital.

Tuberculosis:

It is one of the major problems faced daily in the O.P.D. In our practice both human and bovine types of infections are quite common. Tuberculosis in our country presents mainly as cervical adenitis, pulmonary lesions, tabes mesenterica, tubercular meningitis, miliary tuberculosis and so on. Since it is a major problem in our day-to-day practice we always try to exclude tuberculosis either clinically or by investigations in suspected cases. As a rule, any child suspected to be suffering from pulmonary tuberculosis is usually referred to Central Chest Clinic for further investigations and management. Cases of tubercular meningitis and miliary tuberculosis are invariably hospitalised but tubercular enteritis and cervical adenitis can be treated in the O.P.D. provided there are no coexistent tubercular lesions and other complications.

Skin Diseases:

The common skin diseases we come across in our O.P.D. are scabies, impetigo; furunculosis, ringworm, eczema and seborrhoeic dermatitis. Napkin dermatitis, psoriasis, etc. are not commonly seen. Cases other than simple forms of skin diseases are referred to Dermatology Department.

Urinary Tract Infections:

It is one of the diagnostic problems we face in children because of the non-specific character of the symptoms and because of the difficulty in collecting urine in infants and children. As a result, many cases of urinary infections are missed or diagnosed late. Usually the clinical presentations are pyrexia, increased frequency of micturition, dysuria and abdominal pain, but it is very difficult to elicit these symptoms from young children. Not uncommonly they present with vomiting, P.U.O., and diarrhoea. As such the diagnosis of urinary tract infections usually depend upon the index of clinical suspicion. We usually send the urine for examination in every suspected case and treat them accordingly. We try to follow up these cases as far as possible.

Rickets:

It is still an important clinical problem in our country and it has been always a disease of poor rather than rich. We know that milk and cream, butter and eggs are the only common food providing the satisfactory source of Vitamin D and Calcium. These foodstuffs are lacking in our children's diet over here to compensate to some. But for sunlight and oiling the baby which is customary in our country there would have been greater incidence of rickets. Almost all types of rickets we see in our practice are due to Vitamin D deficiency. We recall having seen only case of Vitamin D resistant rickets in a boy of 8 years. It is our practice here to treat rickets initially with massive doses of Vitamin D parenterally to saturate the blood followed by oral intake. We prescribe Calcium also along with Vitamin D.

Rheumatic Fever:

Despite apparently favourable conditions for streptococcal throat infections in our country the incidence of rheumatic fever as revealed in our present statistics is, surprisingly enough, not quite appreciable probably because the parents tend to overlook mild cases of joint pain as a growing pain. Cases of rheumatic fever are admitted in the hospital.

P.U.O.

The incidence of such cases is not easy to determine as there is no accepted definition and the clinicians differ in their criteria to label it. We usually regard a temperature of 101 degree Fahrenheit (38.3. C) or more for five or seven consecutive days

without any localising sign before embarking on routine investigations. It is our feeling that most of such cases may be of viral infections. Such P.U.O. cases are generally admitted in the hospital.

Convulsions and Meningitis:

Although these conditions are not as common as the diseases mentioned above they pose diagnostic problems for us and they cause panic to the parents. It is rarely possible to make a diagnosis of the cause from the nature of convulsions because most convulsions in children look alike with the exception of petit mal and infantile spasms. The common causes of convulsions we see are due to high fever, meningitis, idiopathic epilepsy, and tetanus. All cases of convulsions are admitted in the hospital for investigations and management.

Eye And Ear Infections:

These conditions are not dealt with here as they are invariably referred to Eye and E.N.T. Outpatient clinics except for some simple forms of Eye or Ear infections. The figure shown here does not represent the true incidence of those diseases as most of these cases attend the above clinics directly.

Conclusion:

It has to be pointed out that the top twelve diseases described above do not represent the major paediatric diseases or problems in Nepal. They are by far the twelve commonest diseases. For example, smallpox and diphtheria are two major diseases that occur in children in our country both in terms of mortality and public health importance but these do not comprise the common cases that are seen in our outpatient clinics. Similarly some diseases commonly seen in the outpatient clinics such as gastroenteritis, tuberculosis, meningitis, etc. constitute what may be termed as major diseases. At the same time it is worthy of note that malnutrition which any paediatrician will agree as being one of the commonest conditions seen in our outpatient clinics has, curiously enough, missed its legitimate place in our present list of top twelve diseases as no such diagnosis has been recorded in the outpatient register except perhaps in a very few cases. The reason for it being not recorded is, we think, two fold: firstly, it is such a common condition amongst children in our country that we tend to overlook it— in fact, it will not be an exaggeration to remark here that every third or fourth child we see in our outpatient clinics has concurrent malnutrition in varying degrees. Secondly, the vast majority of cases of malnutrition that we see in the outpatient clinics are overshadowed by other complications or afflictions such as diarrhoea, pneumonia, tuberculosis, etc. for which the child is usually presented in the O.P.D. with the result that diagnosis of these secondary conditions are recorded in the register rather than that of the primary condition of malnutrition.

Since our conclusions or findings are based on the figures taken from Kanti and Bir Hospitals it may be argued here as to whether these twelve diseases presented in this paper as being the commonest conditions seen in children are applicable for the country as a whole. We have no outpatient statistics from different parts of our country in order that we may be in a position to assert or refute this relevant point of argument, but we believe that although the pattern of diseases may be somewhat variable in different parts of our country chiefly between the hilly and terai regions these twelve diseases will be, by and large, the commonest diseases all over Nepal, the only difference may be in their individual preponderance.

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