Pediatrics

Nursing Care of Children with Encephalitis

By

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One of the diseases to which the children become unfortunate victims is encephalitis. We have been admitting a large number of children with encephalitis of varying degrees of severity. They are brought to the hospital with a history of illness at home of 12 hours to 14 days duration. Their ages vary between one to 11 years. At the onset, headache, fever, and vomiting are present in most children. Later convulsions occur; coma, paralysis, and involuntary movements all occur in different patients. Many of them are unconscious on admission.

When these children are brought to hospital with such histories, what are the responsibilities of the nurse in helping these children and their parents? One immedite concern is to avoid stimulation in so far as possible. A quiet room is provided for doctor to make preliminary physical examination and to complete the immediate investigative procedures, such as lumber puncture and venapuncture, quickly and successfully. These are essential for him to make the diagnosis, to estimate the present mental and physical status of the child, and to prescribe treatment.

The diagnostic aid which is most helpful and reliable is the lumber puncture. Repeated lumber punctures also help to indicate the prognosis. The corabro-spinal fluid will be slightly increased in pressure; on microscopic examination it shows an increase in polymorpho nuclear leukocytes, slight increase in protein, sugar and chlorides.

These children need to have their blood taken once a fortnight and lumbar puncture done twice a week to know the progress they are making. The nurse caring for the patient needs to master those skills necessary in setting up the trays as well in keeping the child in position during the procedure. Subdural taps are also done infrequently.

The nursing care of these children presents a real challenge. Apart from their special individual needs, the children present many problems which they share in common. On the basis of these common needs and problems, the following objectives have been developed to help us give continued care to these children.

1. To give rest to the central nervous system by minimizing external stimulation.
2. To maintain and/or improve the general nutritional condition.
3. To prevent pulmonary complications.
4. To help parents to understand and accept the probable outcomes of the child's illness.
5. To prevent other complications, specifically orthopdic defects, constipation, and retention of urine.
6. To maintain good skin circulation and tone.

The direct and indirect contacts which are involved in taking care of such patients cause stimulation to the central nervous system. That stimulation prevents the rest that is needed for recovery and may result in further damage through convulsions.

How in a big general ward can adequate rest be provided? The quietest corner in the ward can be selected for the

bed location. The nursing care of each child can be planned in such a manner that long intervals of rest are provided ; that is, treatments and nursing activities can be grouped together so that they are done at one time. For example, the temperature, feeding, administration of medication, and changing of bed linen might be done between 8 a.m. to 9 a.m., then the child allowed to rest before the next group of activities is carried on. This certainly will minimize the stimulation from direct contacts. All professional and non-professional workers in the ward as well as the parents of the children need to understand the reason for rest so that they will work together as a team to achieve the set goal.

Since these children may be unconscious, they are dependent on the nurse to meet all of their physical needs and to make all pertinent observations. Feeding is an another major factor in their care. The nutritional status on the whole is very poor ; they tend to vomit frequently. To improve the nutritional state, taking into account their growth needs as well as the effect of the disease on nutritional needs, is a great problem. The feedings are liquid since they must be given usually by intragastric tube. The tube is left in place and changed once in 48 hrs or 72 hrs ; if it gets blocked or comes out, it is replaced as necessary. The feedings are prepared for the individual child for a 24 hour period on the basis of his calorie and fluid requirements, and are stored in the ward refrigerator. A definite time schedule for each feeding allows for rest to the alimentary tract, and insures that the nutritional needs will be met. The feeding is done very slowly because of the irritability of the central nervous system and the tendency to vomit. If the nurse sits down during this process, she is more apt to relax and to feed slowly. If there is repeated vomiting, intravenous fluids may be necessary.

The liquid diet is composed of a milk mixture, consisting of whole milk, skimmed milk powder, eggs, sugar or jaggery, ghee, water, and orange juice. The amount of these foods for the individual depends upon his particular nutritional needs. Supplementary vitamins are given also. With this diet the nutritional status of the children improves despite long weeks and even months of illness. The skin which tends to be dry and easily damaged improves ; the muscles become firm and there is a gain in weight.

The dangers of pulmonary complications are evident. When these unconscious children vomit there is danger of aspiration ; even without vomiting, the possibility of aspiration of saliva and mucus is great. A flat position without a pillow is desirable. The sidelying or prone position, where there is no respiratory distress, helps a great deal to promote drainage of secretions and to prevent aspiration of foreign matter. By keeping the air way clear there is opportunity for efficient exchange of gases and a good supply of oxygen for body cells. Suction of the nose and throat is sometimes necessary. If there is nasal congestion, ephedrine nasal drops will help to reduce the oedema and secretions. Raising the foot of the bed on fairly high blocks facilitates additional drainage, while changing the position frequently promotes adequate expansion of all lung tissue.

In taking care of these patients, it is necessary to meet the emotional needs of the parents. It is natural for them to be worried and anxious about their children. It is a long term illness ; the possible outcome is not favourable. Among the children treated here only one boy had complete physical and intellectual recovery. Many had impairment of intellect but good physical recovery.

The things about which the parents ask are : when will their children talk, swallow and take food by themselves ; their fever, the spasticity of muscles, the involuntary movements disappear.

How can professional workers help these mothers ? Anyone can be trained to make up the bed neatly or take the temperature, but helping the parents to accept their children's conditions and the outcome is a much more difficult professional task. The most valuable way we can help them is to talk with them ; give them an opportunity to express their feelings about what the

child's illness means to the family. Through this process, they can be prepared to make adjustments to the new demands and limitations which the illness has imposed on them. Helping them to solve their own problems is the best help.

What can be done to maintain good posture and prevent orthpædic defects in these children ? Their muscles often are spastic. A firm even bed prevents undesirable curving of the spine. Using a padded foot board and splints prevents foot drop and contracture of limbs. Graded passive exercises and massage of limbs helps to maintain the muscle tone. Changing the child's position frequently also helps.

Hyperpyrexia, retention of urine, constipation, or infections are other complications which are anticipated and prevented if possible. If they occur, instituting the necessary treatment early will do much to keep them under control. The nurse needs to be an observant one to detect the beginning signs and symptoms of such untoward problems.

In treating these children our reponsibility does not end on their day of discharge. Well kept and accurate records of the child's progress not only help in giving continued care in the hospital but can be used as a basis for follow-up work. It is the responsibility of both medical and nursing personnel to see that these children are followed up regularly to watch their improvement and to guide the parents in their children's growth and development.

It takes a professionally competent nurse to meet all the needs of these helpless children and their anxious parents. Much of the patient's progress, both during the acute illness and in his future development, depends on professional skill. There is no specific treatment for the viral encephalitises at present, so all the nurses' efforts are directed toward helping the patient in his personal fight against the disease and its effects.

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"Modern Nursing service includes not only care during sickness, but health education and health preservation for the individual, the family and the country."

To fulfil this objective a trained nurse must know what these communicable diseases are—what are their sources—how the infection enters human system—in which way the infection is transmitted from person to person—what happens to the organism once it enters the human system—how the infection can be avoided, and what the control measures are ?

I do not desire to go into these in details ,as I shall be trespassing on somebody else's ground, but I feel every nurse should know about environmental sanitation and be taught to practise and demonstrate these measures in her field of operation.

[*Note* :—Mr. Bose was one of the panel of speakers at the Calcutta Conference.—*Ed.*]