

MAINLY FOR STUDENT NURSES**CASE STUDY**

By Miss ALEYKUTTY C. PHILIP,
Junior Nurse, M. M. C. Hospital, Vellore

Patient. Indian boy, aged ten months.

Diagnosis. Empyema.

Chief complaint and its duration. Dyspnoea; rapid, moist breathing; rapid pulse; slight cough; and high fever (20 days). Fever irregular and intermittent.

Other outstanding symptoms. Frequent movements of bowels, four or five times daily. Formation of an abscess in the axilla, and fever due to the abscess. Due to fever, respiration was hurried, pulse rapid, fatigue, emaciation, urine scanty and diminished, sweating, and grey skin. The baby cried and moaned all the time, and was irritable when the cheeks flushed, and had the appearance of one suffering from septicaemia.

Possible cause of symptoms. The baby was fed artificially and not by the mother. This is the cause of many diseases in children. Artificial feeding was given without diluting or making up the deficiency. The child got sick, due to indigestion; fever lasted for 20-21 days, which led to pneumonia and finally to empyema.

Important factors in family or social history, influencing the development of the disease. Father a farmer; alive. One sister died due to multiple abscesses. Mother was ill soon after child-birth, was not able to nurse the baby properly. Living in a small hut, without a proper supply of fresh air and without any proper hygienic arrangements. While the baby was having high fever, there was nobody in the house to nurse him properly. Careless nursing led to pneumonia. Empyema occurs much more frequently in children than in adults, and is commonest after pneumonia.

Patient's mental attitude, personality, financial and family worries, health habits, previous illnesses and operations. Always in a state of discomfort. The pupil of the right eye dilated, and with the appearance of a squint. (Being an infant, no financial or family worries.) Healthy looking, but anaemic—no previous illness—only the history of an abscess in the axilla. Operations—none at home—repeated chest aspirations after coming to the hospital.

Physical findings and other significances. Fontanelles not closed, being a child of ten months. Heart—right border $\frac{3}{4}$ " external to sternal region—sounds very rapid—due to the diseased condition of the pleura and also due to high fever. Right lung—harsh—vesicular breathing heard—due to formation of pus on the opposite side. Left lung—absolute dullness over the left side—breath sounds markedly diminished—heart pushed to right—later breath-sounds absent—suspected empyema—a collection of pus in the left pleural cavity—the fluid collects between the lung and the chest wall. Abdomen—slightly distended—due to gas; also due to infection of frequent motions. Spleen—not enlarged—normal condition. Liver—palpable.

Laboratory findings and significances. Blood—haemoglobin 46% Sahli—low—shows that the baby is anaemic. 6th May—W.B.C. 15,200 per c.c.—high—shows infection. After M. & B. 693 therapy—7th May W.B.C. 13,000—8th May W.B.C. 21,200—19th May W.B.C. 31,000—very high—not affected by drug. Differential count—P.M.N. 65%—Lymph 32%—L.M.N. 3%—Eosin 0%.

Urine and faeces—no abnormalities.

Operation procedures and pathological findings, if any. While at home, no operations. After coming to the hospital, repeated chest aspirations, using Potain's apparatus. Withdrew yellow thick pus with bad smell. Smear from pus taken and found staphylococci. Smear culture taken and found staphylococci.

Doctor's orders for patient.

Medication: Alk. mixt. 1 dr. t.i.d.
 Mixt. bronch. sp. dr. 1½.
 M. & B. 693 1/2 tab. 4-hourly day and night.
 Cod liver oil ms. x (innunction) daily.
 Sodium bromide—grs. v.

Treatment. Repeated chest aspirations by using Potain's apparatus. Antiphlogistine over the swollen area. Tinct. benzoin inhalation. Enema for distended abdomen.

Diet. Fruit juices. Albumen water—glucose 25% 3 oz. in 24 hrs. 1/2 S. saline. Water. Milk mixture: 2 parts milk, 1 part water, 1 dr. sugar, 4-hourly.

Purpose of medication, treatment, diet, etc. Alk. mixt. 1 dr. t.i.d. (sod. bicarb. and pot. iodide): to neutralise acids, to decrease high fever, and to prevent acidosis. Mixt. bronchialis—given in diseases of the respiratory tract (in dyspnoea) where there is violent cough. M. & B. 693, 1/2 tab. 4-hourly in an alkaline medium: sulphopyridine—specific against streptococcal infections. Cod liver oil innunction—is absorbed into the skin, and makes up for deficiency of vitamin D. Sodium bromide, grs. v p.r.n.: being a hypnotic, depresses the nervous system, induces sleep, and gives rest to the patient, which is very essential.

Treatment. It is urgently necessary to remove the fluid responsible for toxæmia; and until it is thought that the mediastinum is fixed, this is done by repeated aspiration. This gives great relief to the patient and makes breathing easier. Afterwards, drainage is established, by inserting a catheter in the pleural cavity, by means of a canula, and arranging (for suction) for siphonage through a tube leading into a vessel containing antiseptic. After a week, an opening was made and an open rubber tube inserted to drain the pus. Steam tent inhalation was given for difficulty in breathing.

Diet. Fluids at first, due to high fever. Glucose to stimulate the organs. As the temperature subsides, artificial feeding continued, as a substitute for mother's milk.

What nursing service will be most beneficial to the patient? How and why? Absolute rest is essential to give rest to the already diseased lung. The baby must be nursed in a quiet and well ventilated room, free from draught. The respiration and pulse must be watched. If there is dyspnoea oxygen is given. The

dressing should be renewed as often as necessary, and the tube changed on the 3rd day. Great care should be taken not to infect the wound more than it is already infected. The patient must be allowed to lie on the affected side, raised on pillows (Fowler's position), to give rest to the other lung. Special care to the skin; by means of daily cleansing sponges and attending to the back. Prevent bedsores. Keep bowels open—two or three watery motions daily—as constipated bowel strains the heart and finally the lung. Sedatives as often as necessary, to give rest. Nursing care as in a febrile case.

What, if any, sanitary and hygienic measures will contribute to the prevention of the disease? As empyema arises as a complication of pneumonia, special care while the baby is suffering from pneumonia. Plenty of fresh air. Good hygienic surroundings. Food, way of living, cleanliness, have to be improved. After aspiration, care must be taken to prevent infection from the fluid. The instruments must be boiled. Great aseptic care must be taken while doing the operation and after operation. Special attention to mouth to prevent infection of internal organs.

Full account of the disease, with references given to sources from which information was received. The baby was admitted on 5th May 1941 at 6.30 p.m. to the children's ward. The baby was drowsy and seriously ill. Fever 104.2° . Pulse and respiration very rapid. Baby had dyspnoea and was cyanosed. Abdomen was large and somewhat doughy. The ward nurses suspected this to be a case of typhoid, because of the drowsiness and high fever and the condition of the abdomen; but the doctors on examination found out that it was a case of advanced empyema.

Temperature remained high till 9th May (for four days). Found staphylococci from the smear and culture from the pus. So doctor decided to try M. & B. 693, $1\frac{1}{2}$ tab. 4-hourly, day and night. The child did not have vomiting or any other intolerance symptoms, but the temperature remained up to $100-101^{\circ}$ F. until the third week.

At the beginning of the second week, the region around the aspirated area was swollen and pus was leaking.

During the fourth week, the baby began to improve, but there was still a little watery pus through the drainage tube.

Later, at the end of the sixth week, the child was cured from all kinds of illness—no pus from the aspirated area—normal temperature, pulse and respiration—no dyspnoea whatever—regular movement of bowels. Haemoglobin increased to 66% Sahli from 46% Sahli. Began to take feedings well. Quite healthy in every way. Doctor removed the drainage tube and the wound healed. The baby was cheerful and happy all the time, and was sleeping soundly during nights. Was discharged from hospital on 21st June 1941.

As I was nursing the child from the very beginning I had all the information as well as experience. The physical findings were received from the history card written by Dr. Helen Samuel and Dr. Freda Paul. Some general information from Nursing Text-book by Miss Pearce. Family history and previous illnesses from the baby's own mother.