

gentle persuasion that our Health Visitors can win their confidence,—occasionally we fail utterly for a time. This week I visited such a home,—who are now willing for our help,—following the death of the former patient and the breakdown of that patient's son. May we ask for any suggestions that you may have for the Home Visiting Service?

No Doctor or Nurse so long as she is practicing can get away from the tuberculosis case. We would like to urge every nursing school to put in a good course in tuberculosis, unless there is one already. Ten lessons is not too much, and they should contain some lessons on home economics and sanitation. A good knowledge of tuberculosis will also help the nurse to protect herself against massive infection, and disease.

In Conclusion: Infection is all but inevitable for our nurses in general hospitals. This can be detected by the simple tuberculin testing, which should be repeated every year. Whether tuberculosis disease will follow depends upon two main dangers; which are largely avoidable: (1) Frequent massive dosage of bacilli, through careless or ignorant handling of the coughing and possibly tuberculosis patient and his excreta and (2) the lowering of resistance and general well-being of our nurses.

We plead for a better training in tuberculosis for all nurses. This would not only protect themselves, but it would help much in the general anti-tuberculosis program which is being launched through the earnest efforts of Lady Linlithgow. Cooperation of existing hospitals and dispensaries by setting aside small wards for the hygienic, medical and surgical treatment of the clinic patient, is very much needed. The training for home visiting—the third necessary branch of an adequate anti-tuberculosis unit, is a problem for which we tuberculosis workers invite advice from your Association.

## MEN NURSES' SECTION.

### PULMONARY TUBERCULOSIS.

*Mr. Samuel, Nellore (Man Nurse).*

*Pulmonary Tuberculosis.* It is a highly infective and infectious disease. The disease is commonly distributed all over the world. It was supposed the Moses the Prophet pronounced the disease as a curse on the Egyptians for disobedience. Tubercle Bacilli is the cause for the disease.

The diameter of the organism is  $1/80,000$  of an inch and length is  $1/6,000$  to  $1/16,000$  of an inch. It is so minute, cylindrical in shape that we cannot see it with our naked eye. When a consumptive coughs, several hundreds of Bacilli suspend in the air for 30 minutes within a radius of 15 to 30 inches from the patient. An advanced consumptive ordinarily expels 7280 millions of organisms in a day. The organisms retain their virulence for 6 days in moist sputum and 6 months in dry sputum.

Therefore, great care should be taken with regard to prevention and infection of the disease. Infection is ordinarily brought about

by ingestion *i.e.*, by drinking infected milk, food etc. Moist droplet infection during hard cough, speaking and sneezing is also an important cause. Flies also carry the organisms and transmit the disease. Hereditary tendency for the disease is doubtful, but children often get the disease since they are exposed to massive organisms during infancy. There are two kinds of the disease namely Bovine and Human.

*Symptoms common and characteristic in pulmonary tuberculosis.*

The patient becomes pale, inactive and decreases in weight. The patient feels restless, slight temperature and a bit marked in the evenings. Repeated colds one after another, hacking cough, mucoid in character, later on purulent, blood stained and typical mammular sputum is seen in advanced cases. Dyspnoea, haemoptysis, pleurisy or high temperature are commonly present. Gastro-intestinal troubles do occur—loss of appetite, indigestion, constipation, diarrhea etc. Sweating is marked and clothes are drenched with sweat and, due to the same, intermission in temperature takes place during early morning hours of the day. Breathlessness, sleeplessness, pharyngitis, laryngitis are also present.

*Treatment and nursing care.*—Infectious precautions should be taken, isolate and keep the patient in the open air. In cases of febrile condition, the patient should take absolute rest for several weeks even after the temperature has come down to normal. He should take fresh air, rich and fatty diet, (avoid preparations made with spices). When the patient has disinclination towards the meal, the nurse should persuade the patient to take the amount of food he really requires. Nourishing drinks and sweets should not be taken between meals. Patients suffering from Tuberculosis are strictly ordered to take absolute rest. Therefore the nurse who works in the Sanatorium should teach the patient the importance of rest and help the patient in every direction. The bed should be well-made, when giving food or bath, the patient should be carefully handled. While doing so the nurse should appear business like and at the same time spare a moment to speak and smile and keep the patient happy and interested and hence the treatment in some cases otherwise dreaded becomes a pleasure to be anticipated. Patients under absolute rest should be treated very carefully. The nurse should impress upon the patient the importance of absolute rest. News paper reading too should be prohibited. Patients are often kept in open air. Therefore they should be protected from cold with sufficient required clothing, since overclothing sometimes results in sweating.

One of the important aims of the treatment is (i) to relieve the patient from tonimea (ii) to make the patient get sufficient strength to withstand the resistance of the disease. When temperature is normal, weight and other signs become stationary, the patient should be given graduated exercise. And the nurse should see that the patient does not decrease in weight and there should be no deviation in temperature from the normal. Increased sputum and cough is of not much importance in this connection. If the weight decreases or the temperature rises from the normal, the patient should be given absolute rest for several weeks.

Haemoptysis is a complication of the disease, when met with, the nurse should remain by the side of the patient and help him to sit down calmly, clean the mouth and remove every trace of blood. Report to the physician incharge instantaneously and keep the emergency tray ready for use. Absolute rest is very important. If the bleeding is severe, watch for any signs of shock, if so, treatment for shock may be given. Bowels should be kept active by the use of saline. Small quantities of ice water may be given. The patient should be protected from anxiety and excitement. Visitors should be restricted. The nurse should create absolute confidence in the patient that the occurrence is but an ordinary complication however serious. Medicines such as Calcium lactate, morphia and others are given.

When breathlessness happens, the nurse should help the patient to sit down, support the chest and head and seek for any relief. Medicines are also given for the same. The nurse should sympathise and help the patient so that he may be mentally satisfied. Pain in the chest is ordinarily of two varieties. (i) muscular pain (ii) pain due to pleurisy. The nurse must make an instantaneous report to the physician in charge. Apply liniment to the effected part and rub gently and cover the part with cotton or lint. Apply also H. W. Bag. Strapping of the chest also gives relief.

When patients get nausea and vomiting, the nurse must find out whether it is due to any change of taste as patients often like their own taste and preparations. Adjust the diet. Try small quantities of beef extracts, peptonized milk, arrow root congee, Bengers food etc. Smaller quantities of water also given. Indigestion and diarrhea are also result. Change the diet and see that food materials that help to check the complications are given. Medicines also given to check the complications.

Laryngitis, pharyngitis are also important complications in pulmonary tuberculosis. Alkaline mouth washes and inhalations should be given. Hard and irritating food is prohibited. Protect the patient from cold. The patient should not talk and he should have sufficient rest for the effected organs. The nurse should teach the patient the importance of silence.

Sleeplessness and night sweats is another trouble in pulmonary tuberculosis. The patient is kept awake due to enormous sweats and the clothing is drenched. Intermission in temperature occurs during early morning hours of the day due to the same. The nurse should see that the patient is not over-clothed and should wipe off the sweat or give bath and put on dry clothing. Belladonna is sometimes given to check the night sweats. In cases where temperature rises during evenings, sponging should be given to reduce the temperature and see that the patient feels comfort.

*Getting up.*—When patient is permitted to walk the nurse should take utmost care and see that the patient does not exert and really walks the prescribed length.

*After Discharge.*—The nurse should teach the patient the importance of absolute rest, rich and fatty diet and fresh air. The patient

should not forget the mode of life attained in Sanatorium and should continue the same even after discharge for several years. The nurse must teach the patient about prevention and infection of the disease. The patient should go and rise from bed early. The patient should be very careful after discharge.

### MALARIA.

*Mr. James Simon.*

Malaria, one of the Tropical diseases, is transmitted by the bite of an anopheline mosquito. The malarial parasite, which is the cause of the disease, is a protozoa or an unicellular organism, which possesses two distinct life cycles. One, the asexual cycle, takes place in the human body and the other, the sexual cycle, in the body of an anopheline mosquito. When a man is infected through the bite of a mosquito, these malarial parasites, called the Trophozoites are found within the red blood corpuscles, in which these undergo multiplication by simple division. Eventually these parasite-laden red blood corpuscles burst, letting them free in the blood serum. Each of these new trophozoites enters into the fresh red blood corpuscles, and each in its turn undergoes the same cycle of multiplication. This sort of multiplication that occurs in the human body is known as asexual cycle or Schizogony. This phase of the rupturing of the corpuscles, when trophozoites are set free, coincides with a malarial paroxysm. Now and then certain cells known as sporonts are produced from a few of these trophozoites. They are two in kind, male and female sporonts. These sporonts can be fertilized and undergo sexual development only in the body of an anopheline mosquito. So next, when this type of mosquito bites an infected man and sucks blood, these sporonts enter the stomach of the mosquito. The male cells develop filaments and the female cells have a raised portion in which they have a fertilizing aperture. This union causes fertilization. As a result of this sporoblasts are formed, undergo development and burst, releasing innumerable sporozoites, which find their way to the salivary glands of the mosquito, and finally to the human being when he is bitten by means of proboscis of the mosquito.

*Etiology.* The predisposing causes are intemperance, exposure to night air, bad hygiene and general depression. The cause of this infection was first discovered by Laveran in the year 1880, and the discovery of the mode of transmission was one of the most brilliant achievements in all medicine by Sir Ronald Ross who after laborious examinations of different kinds of mosquitoes, determined that the Anopheline mosquito alone acted as Malarial Carrier. The anopheles mosquito is distinguished from other mosquitoes by spotted wings and by the fact that when at rest, the rear portion of the body is raised above the surface level on which they rest.

*Geographical distribution.* In Europe, Southern Russia and certain parts of Italy are now the chief seats of the disease. It is rare in Germany, France and England and the foci of the epidemics are becoming yearly more restricted. In the City of New York even