

Protect Nurses against Tuberculosis

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THE treatment and prognosis of tuberculosis, have been revolutionized within the last ten or twelve years. However, the attitude of the general public, and the fear and prejudice against the disease, remain the same. This is true even of medical workers such as doctors and nurses. Parents dread the idea of their son or daughter working in a tuberculosis hospital. Recently, a father talking about his daughter, a newly qualified doctor, said that she had been asked to accept a post in a sanatorium, but he would not allow her to go there. He was honest in saying, "You see, though we are educated people, we still have the fear of the disease." This is true in many other instances. Why should I talk of others, when until recently, I would not even dream of going to work in a sanatorium. When I did go, I discovered that it was safe for me to work there. The idea behind it is that there is a risk of infection.

Is Tuberculosis Dangerous ?

Is it dangerous to work in sanatoria and tuberculosis hospitals ? It is important that we consider this question as both Government and Private Institutions are engaged in the fight against tuberculosis, and as treatment at home and in clinics, is becoming popular. We are faced with the problem of staffing these hospitals and enrolling workers for the anti-tuberculosis campaigns. There are not enough nurses to cater for the increasing needs nor to maintain the essential services of the health department. Can we afford to harbour this fear and prejudice in our minds, if we want to continue the work successfully ?

"Risk" is defined, "as the chance of bad consequences or loss ; exposure to chances of injury." Some hospitals give the staff a "risk" allowance while they are engaged in infectious hospi-

tals. Others do not, as they contend that when the right atmosphere is created, when the necessary control methods are taught and observed both by the staff and the patient, it is as safe as any other sphere of work. Take for example, the industrial workers who are constantly exposed to the danger of disease or injury. For them safety measures are taken, health programmes are instituted, and allowances are given, for security and health.

How about nurses and other medical workers who are constantly exposed to this infection ? During my short but valuable experience at the Sanatorium in Arogyavaram, my outlook and attitude widened, and I discovered that working in a sanatorium is a protection in itself, and one need have no fear of getting the disease. It is proved that nurses and other workers are exposed to greater risk of infection in the general hospitals or medical wards, than in the tuberculosis hospitals or sanatoria. In the general hospitals nurses take care of many unrecognized tubercular patients at close range, and so expose themselves to infection by direct contact. Therefore it is valuable to discuss the ways and means of protecting these nurses, and of maintaining their health.

Control Programme

In the control programme of tuberculosis, there are two phases of work to deal with. The first phase of the programme is the *detection* of infection, and the second phase is the *prevention* of infection among the personnel. The protection begins even before nurses enter the school of nursing or hospital, and is continued throughout her time there. Because of the fact that there are always some contacts, or those with latent infection, our programme begins with the new recruits to detect any infection.

The following methods are made into a routine procedure for the enrolling of the new candidates.

A. Detection of Infection

1. A careful X-ray examination. In many places microfilms in mass X-ray are taken but these are not of value in detecting existing minimal lesions. Full size films are asked for in suspected cases, or as a routine for doing a comparative study. They have to be compared with the previous films.

2. Tuberculin testing. The reaction to Tuberculin testing should be determined. Candidates with positive reactions to their tests, should be X-rayed again in three months, and thereafter at six monthly intervals. The Tuberculin tests need not be repeated.

In those with negative reaction, the test should be repeated at six-monthly intervals. After this, if a former negative reaction is noted to have turned positive, it is evident of recent tuberculous infection, and is an indication for a complete medical check up. For those candidates who show negative reaction, B.C.G. vaccine is given.

3. Complete History. On admission a careful history both of the candidate and that of the family is taken and recorded. Inquiry into the possibility of previous contact with tuberculosis, is very valuable.

4. Laboratory Examinations. Complete clinical examinations and laboratory tests are done. Any abnormality and deficiency are promptly treated. For instance, minor ailments and anaemia are treated.

It is important that the most careful attention be given to each new entrant, thus preventing any tuberculous infection entering the profession or institution.

B. Prevention of infection in the nursing service personnel

1. X-ray examination.

X-ray examination and screening taken on admission, are repeated annually. It should be done keeping in mind that, when a chest specialist is not available on the hospital staff, arrangements may be made with a tuberculosis hospital or chest clinic in the area, so that a careful study is made. It is a good thing that many hospitals do this. For example, the E.T.C.M. Hospital, Kolar, and the M.L.L. Hospital Madanapalle, which are close to Arogyavaram Sanatorium, always send groups of nurses and patients for a check-up.

2. Tuberculin Testing. The same measures as already mentioned should be carried out.

3. Laboratory Examinations. Again these are done in the same way attending to deficiencies and abnormalities. The results of the tests and examinations are recorded in the health records. When a staff member is transferred to another hospital, the nursing superintendent should see that the record card follows the nurse.

4. B.C.G. Vaccination is given to those with negative reaction especially in cases of anticipated exposure to sources of infection. It is available through the Anti-tuberculosis Campaign Teams of the State Government.

C. Environmental Factors

Supervision of nurses health should be a continuous process. Prevention of infection includes more than doing the examination and tests. It includes looking into their working and living conditions ; providing a hygienic living and working environment ; and provision of adequate and a well balanced diet to build up the necessary resistance and strength that will prevent infection.

1. Working Conditions. In general hospitals, there should be arrangements for proper isolation of patients who have been diagnosed as tubercular with either negative or positive sputum.

(a) Disposal of Sputum. A routine of systematic disposal of the sputum must be established. This will prevent some of the dangers of dissemination of the bacilli. In many places, the most beautiful hospitals and wards have been opened but alas ! without arrangement for the proper disposal of the sputum.

(b) The wards should have proper cross ventilation and the walls should be made of such a material as to allow frequent disinfection. Arrangement for the disinfection of the linen, blankets, pillows and mattresses, is essential. Duty and rest rooms for the staff should be conveniently located. These are as essential as any office or laboratory.

(c) Hours of work. It is recommended that nurses have not more than 48 hours of work per week. This standard working arrangement permits nurses reasonable rest and leisure. The night nurses should not be allowed to work more than 8 hours per night. It is the aim of many hospitals to put this principle into practice, and are doing their best to limit the night duty hours to eight per night.

The survey report of the Indian Nursing Council gives encouraging reports about the working conditions in the schools of nursing. The number of hospitals with a 48-hour week in 1955 was 136, but rose up to 192 in the year 1959 ; and the number of hospitals with a 56-60 hour week was 66 in 1955 and came down to 49 by 1959. We hope that the situation continues to improve. Here are some of the working conditions which are ignored as though they had no connection with the control programme.

2. Living Conditions. Living conditions of the staff are just as important as working conditions. A certain amount of the resistance obtained to the disease depends upon proper living conditions, rest and relaxation.

(a) Accommodation. We must admit that many nurses' homes are over-crowded and ill-ventilated. Separate and quiet sleeping accom-

modation is not provided for the night nurses. The hospitals are rapidly expanding, the wards and their capacities are increasing, but are the nurses' homes expanded simultaneously for the increasing staff ? A happy and healthy nursing staff is the first essential for good and efficient care of the patient. Let us attend to first things first.

(b) Rest and Recreation. In some places, the nurses on night duty are expected to get up for lectures at most unsuitable hours of the day. Other schools of nursing count the class hours as rest. I am sure we can arrange our school hours as to allow reasonable hours of rest and sleep for our nurses.

Do Nurses Homes provide suitable rooms for study, rest and recreation ? Are there common sitting and recreation rooms ?

Very often the bedrooms are so crowded that nurses can neither sit and study, nor sit and relax. All they can do is to lie on their beds and sleep or gossip. Regulated hours of sleep, rest, work and study are conducive to mental health which again is essential for the physical health of the nurse. Are there play grounds for outdoor games and exercise ? Do we encourage our nurses to enjoy a regular hour for games, and provide opportunities for outside interests ? A reconsideration of these conditions is valuable and relevant to the question of nurses' health.

(c) Nutrition. We state with a certain amount of satisfaction, that nurses get a fairly well balanced diet. It may be good enough and we have to economize, yet is it not worthwhile to check it from time to time and change it for the better ? Perhaps, it is of the same standard as it was ten years ago. Some hospitals have a supplementary budget to cover extra expenses in catering for nurses and in maintaining their health. I hope other hospitals would follow this example.

D. Teaching Programme

1. Instructions to patients. Patients in tuberculosis wards attached to the general hospitals, tend to become indifferent and negligent in observing the preventive methods in practice. They tend to be careless in the dissemination of the bacilli by uncontrolled coughing, sneezing and expectoration. Therefore patients need to be taught and made to understand the elementary facts about the disease, the principles of spread, and the prevention of infection. Proper instruction in hygienic measures and their responsibility in the prevention of the spread of the infection, must be taught carefully.

2. Teaching and supervision of nurses. Nurses are taught that the principal source of infection is from the cough and sputum of patient suffering from pulmonary tuberculosis. It is important that she is not only taught but also helped to apply this knowledge in the daily care of the patient.

(a) The droplets of the patients cough may contain many tubercle bacilli. She must be made to realize that it is quite possible to treat patients at close quarters provided that proper precautions are taken. But very often this teaching is so much over-emphasized, that the patient is almost treated as an out-cast.

Recently, a patient was transferred from the sanatorium to another, and in trying to welcome the patient and make him feel at home, the nurses found it very difficult to make him sit or talk to

them. They could not approach him as he kept on receding and he told the nurses not to go near him. He was surprised to find the doctor wanting to hold his hand and pat him on the back. After a long time, the doctor was successful in assuring him of their safety and that he was not going to be treated as an outcast. This was the result of the poor teaching.

(b) Washing the hands after attending to a patient, is important in the technique of self-protection; it must be repeated before the nurse has her meals. There should be provision for soap, running water and wash basins in each ward, and sufficient hand towels for changing whenever necessary. This should not be considered a luxury or an unnecessary expense.

(c) Proper use of mask and gown are taught to nurses but the most important thing is to see that facilities for the application of these procedures are established, so that a nurse can change a mask as often as she uses one; she should not use one mask all the time on duty. This is a source of more harm than good.

There is a question about the use of the mask. Masks of several layers of gauze afford protection when (I emphasize WHEN) they are fresh for each time of use, and when facilities are provided to discard the mask after using it. When used in the proper way, it is a good protection and is recommended for nurses especially when tending bed patients, making beds, or doing dressings. The Nursing Superintendent should see that a proper technique is used with provision

for obtaining an adequate supply of masks and their use insisted upon.

(d) What about the method of cleaning? I need not point out the importance of teaching nurses and ward-ayahs the proper way of cleaning the wards, furniture etc. Dust from floors and furniture in a ward contain the bacilli, and dry cleaning and dusting spreads it in all directions. All the sweeping should be preceded by a sprinkling water on the floor and by using a moist mop. Moist dusters should be used for dusting furniture, doors and windows. Disinfection of the rooms and units must be done by easy methods, and repair of cracks and crevices must be done promptly.

Most hospitals seem to have about an average of one tuberculosis patient a year among the nurses. While anti-tuberculosis programmes are going on among the public it is also essential to build up and maintain an army of healthy and strong medical workers to carry on the fight. Therefore a tuberculosis control programme should be enforced in all hospitals and schools of nursing. It is often said that a healthy and contented staff should be the first requirement of any efficient hospital or health service.

Reference

1. Nursing in Prevention and Control of Tuberculosis by Hetherington and Eshelman.
2. Nursing OUTLOOK January 1961 page 36, 37.
3. Tuberculosis Bulletin, June 1958. page 3.

Education

While doing a nutrition survey in a village near Delhi, a doctor advised a father to add carrots to his child's diet. His answer was that he had used carrots to feed his cows—how could such food benefit a child?

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