TUBERCULOSIS: Still a menace

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by Dr. Julius A. Ogeng'o

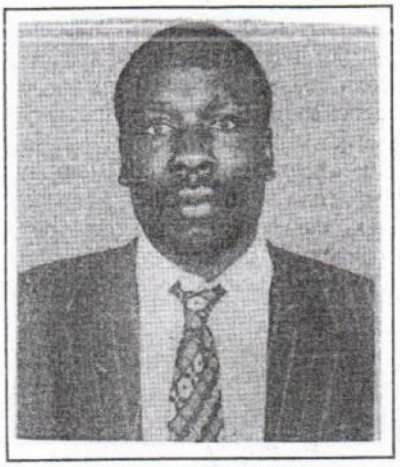
I had had more than my usual dose of alcohol the previous night and my memory and attention were both dull. As I sat half asleep in the doctor's chair, Sir George, as we used to call our consultant physician, arrived and authoritatively ordered the start of the major ward round. That was my first round in the medical wards - special isolation - since I left medical school. There were over forty patients in the ward and one thing they had in common was that they were wasted and looked critically ill.

Dick, a senior medical officer led the round that afternoon. It was hot and none of us was comfortable. "Owino is 21 years old and has had a cough for one month. The cough is productive and the sputum is blood stained. He has lost appetite and 10 per cent of his weight over this one month. He feels hot and sweats profusely at night. He has been treated three times for pneumonia without improvement. He smokes about 20 cigarretes a day and his younger brother, Tony, died two months ago of a similar illness," Dick stated.

"Is this a new admission?" asked Sir George in a heavy American accent. "Then you may continue", he added after Mrs. Oloo, the nurse, had responded in the affirmative.

Without hesitating, Dick proceeded, "He is wasted and rather dehydrated, febrile and definitely breathless. There is moderate palour and his armpits are full of lymph nodes and so is the neck. Hardly any air enters his right lung and the left lung has course crepitatious and wheezy sounds. His heart is deviated to the left."

"Right, investigate this young man for T.B. and start him on treatment as soon as possible - the diagnosis is obvious. Screen him for HIV as well". These finalizing remarks by the consultant reminded me of the several lectures we had had on Tuberculosis



Dr. J.A. Ogeng'o: "In developing countries, at least half the population is likely to be infected."

when we were medical students. Every department we went through had several things to say about TB.

The ward round was long and boring but in the end we had gone through all the patients and all of us were exhausted. Sir George loaded his pipe and soon put fire onto it. The smoke smelt aromatic but it made many of us choke! When he finally entered his car, we all relaxed and my eyes and attention landed on a poster on the wall in the doctor's room. In bold black and white it was written TB causes the following:

- Severe Respiratory problems
- Paralysis
- Bone fractures
- Blindness
- Meningitis
- Breast Lumps
- Skin Nodules
- Heart failure
- Infertility

As I read the list, my vision got progressively worse and my head sank into a deep dream. My 86 year-old grandmother had died of a chronic cough and we were at the burial ceremony. "She was bewitched. Her sputum was picked by Fundi who fed the same to his magic snake. Oh! Oh! She should have lived long enough to be driven in the grandson's new car. Ayaa—ye. Our poor neighbours must have been jealous of her hard work." My Auntie Angela bitterly expressed her sentiments.

When I woke up, it was long past five o'clock and everybody had gone except two nurses. After a little push, the engine of my old car started and I drove to my house only to find my sister having arrived from home with a long standing cough. She was slim and looked breathless. Two days later, she was confirmed to have pulmonary Tuberculosis and admitted to the isolation ward for treatment.

I met her six months later and she was back to work, having recovered from the acute phase. She is continuing with oral treatment and her condition continues to improve.

The disease

Tuberculosis has always had the dubious distinction of being a leading contender for one of the top places on the list of main causes of disability and death. About half a century ago, it was so important globally that it deserved high priority among the activities of World Health Organisation. The disease was then considered incurable and was as feared as cancer and AIDS today. Some societies considered tuberculosis inherited and did nothing about it, while others looked at it as part of witchcraft and resorted to traditional medicine. Soon, effective drugs appeared but were fairly expensive and limited. Even when they became available, their acceptability in many parts of the world was curtailed by the traditional beliefs and practices. Very few people appeared in hospitals for early diagnosis.

World Health Organisation (WHO) was quick to lay down the essentials of a comprehensive tuberculosis control policy and constituted nine expert committees to work out recommendations concerning control of the disease. It was in these early years that close cooperation in tuberculosis control was initiated between WHO and

'NICEF and between WHO and the ıternational Union against uberculosis.

By 1983 the 36th World Health .ssembly reviewed the world situation ıd noted that TB was still an important ealth problem, especially in developing ountries. There is a huge pool of ıfected people who were a major source f new cases. In developing countries at ast half the population is likely to be ıfected. The percentage may be as low s 10% in developed ones. It is estimated ıat about 5% of those infected will evelop the disease in their life time. 'nfortunately prompt diagnosis and ffective treatment and even 100% fficient vaccine may not prevent the mergence of cases from the infected ool. This situation is worse in Third World where many existing cases are not detected and treated.

Causes and Transmission

Tuberculosis is caused by a 'hard' bacteria referred to as mycobacteria tubercle. I call it 'hard' because it can survive rather hostile conditions which other bacteria would succumb to. One gets the bacteria into the respiratory system by breathing them in from the air. Once in the lungs, infection starts therein and when infected sputum is coughed and swallowed, the alimentary canal gets involved. The latter may also occur when one drinks milk from an infected cow. Both from the gut and the lungs, the bacteria may get into circulation and affect other organs.

Thus the following conditions favour transmission:

- Presence in the population of infected persons or cows
- Drinking of unsterilised milk from such cows
- Overcrowding and poor ventilation
- Poor sanitary conditions
- Poor nutrition
- Dusty environment

Once infected by the bacteria, ideal conditions exist in persons who:

- Have not been vaccinated against tuberculosis
- Are of poor nutritional status
- Are heavy smokers
- Are heavy alcohol drinkers
- Are on immunosuppressing drugs
- Are already suffering from debilitating illnesses
- Are immunosuppressed as for example, those with AIDS
- Have chronic lung disease

Symptoms

Once the bacteria are in circulation, no system is exempt. The bacteria will attack anywhere from the skin to the bones, including the internal organs of the body. Examples include:

- Pulmonary tuberculosis
- Bone tuberculosis, particularly the vertebial column
- Meningitis
- Uterus causing infertility
- Intestines causing diarrhoea and other features of malabsorption
- Liver, heart coverings
- Lymph glands
- Ovaries, testes
- Skin etc

In this issue, I shall discuss pulmonary tuberculosis and in the next, tuberculosis of the spine.

Tuberculosis of the Lungs

Commonly, there is history of contact with another person(s) with the same disease. This could be in school, office, estate, home etc. It starts with a cough whose severity increases and does not respond to the usual short course treatment of pneumonia. This cough usually:

- Will have lasted for over two weeks in spite of antibiotic treatment,
- produces yellowish pus-like sputum which may have streaks of blood,
- improves slightly after antibiotic treatment but flares soon

afterwards,
- is associated with chest pain, slight fever and night sweats.

In addition, there may be:
- loss of appetite and even vomiting,
- breathlessness,
- loss of weight,
- mild-moderate anaemia and
- enlargement of lymph glands in the armpits and the lower parts of the neck

Diagnosis

Usually suspicion is raised by the above history and on examination, the doctor confirms some of the complains above. Besides, the doctor finds:
- reduced chest movements on breathing,
- reduced air entry into the affected part of or the whole lung,
- abnormal sounds from the affected part of or whole lung. These may be crackling and/or wheezy sounds

Common investigations

Early morning samples of good sputum are used. Usually three specimens are taken on consecutive days and these are then examined under microscope after special staining. The offending bacteria are visualized or the sputum may be cultured on special media.

An infection given on the side of the left upper forearm. A positive test is followed by a swelling three days later. The medical persons know how big the swelling should be to be declared positive. This is called mantoux test.

Blood test is also taken or chest X-ray or biopsy of some of the lymph notes.

Treatment

Today we know that tuberculosis is treatable and several drugs are available. They are used in combination and duration varies with the combination. Some combinations are used for three months, others for six, others for nine, for twelve and even eighteen months. Lately shorter courses though expensive are preferable. The decision is made by the doctor for each individual patient. However, it is important to reiterate here that each patient even after feeling well must finish the course prescribed by the doctor to get cured. When the course is completed, some of the tests may be repeated. Should the disease not go or should it reccur, the doctor can always give other drug combinations. Do not despair and visit your doctor again.

Alternative Diagnosis

When you suspect you have lung tuberculosis, there are other diseases that you could suffer from. Not all that feels like tuberculosis is. Other diseases include:
- Pneumonia - resistant to conventional treatment
- Chronic bronchitis
- Lung abscess
- Lung cancer
- Undiagnosed asthma
- Cancer of the larynx
- Tumors of adjacent structures to the respiratory tree
- Heart disease
- Parasitic fungal or protozoal lung infections etc.

Control

Already, even in the developing countries there is a downward trend in tuberculosis cases. Many factors contribute to this and everyone of us must strive to enhance these factors. They include:
- improvement in housing, in nutrition and general living conditions with emphasis on fresh air and proper ventilation,
- understanding that the disease is treatable and thus hospital attendance is important
- understanding that all children must be vaccinated against Tuberculosis,
- reporting of suspected cases for diagnosis, isolation and treatment to which the victims must comply.

Conclusion

Tuberculosis is a common, slow killer which each one of us can help identify and thus assist in early diagnosis and effective treatment. Even though its association with AIDS provides greater challenge, it is important for you to understand the important role you could play. Professionals are already working day and night looking for immunological breakthroughs. These would allow us to identify those who still harbour living bacteria. They are also searching for treatment regime which would result in safe, quick and cheap methods of killing these dormant and hard organisms. If their efforts are successful, then your cooperation shall definitely provide the possibility of predicting the development of the disease in infected persons by identifying them.

Thus, your role in prevention coupled with powerful drugs already in the market may provide the key to the door for exit of the disease worldwide. Start playing your role now and save the future generations!