COMMENT

Tuberculosis in Somalia

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Abstract

This is a description of a tuberculosis treatment programme in a country at war where security and the absence of order pose problems to health care delivery. It is also a description of an epidemic of tuberculosis where treatment and diagnosis are difficult and the methods used have changed little in many years. More international pressure is needed.

Civil war has existed in Somalia since 1991. There is a high incidence of tuberculosis (TB) and other diseases but the insecurity of the area makes treatment difficult.

Somalia is a country too dangerous for many to visit. There is more media coverage of Somali pirates in the Indian Ocean than of the plight of the nine million people who live in that lawless country. An elected government is having difficulty establishing itself. There are few scheduled airline flights and few roads, and travel is hazardous because of warring clans controlled by warlords. Gunfire and clashes between rival clans are common. Movement in towns between different clan areas is insecure.

The people are mostly nomadic, living by tending camels and goats and moving large distances across the bush to seek food and water for livestock. Somalis may only eat every second day. Supplies from the World Food Bank provoke further clan clashes. Further famine is projected for the Horn of Africa after recent droughts. There are no government, no public schools, no civil or state law, and no public health system.

Medical and nursing schools in Mogadishu no longer exist. Health professionals are unregulated. There is one physician for every 250,000 of the population. Children are not immunised. Polio still occurs. Health indicators are amongst the worst in the world, although accurate recent statistics are not available. There is high infant and maternal mortality. One estimate of maternal mortality is 1,600/100,000. One child in four does not survive to the age of five years. Female genital mutilation is still practiced.[1]

In 2005 I worked in the Médecins Sans Frontières (MSF) Galcayo tuberculosis clinic in Puntland Somalia. MSF is one of the few non-governmental agencies providing health care. The high incidence of tuberculosis makes it part of the differential diagnosis for any pneumonia or meningitis in Somalia. The prevalence can only indirectly be estimated from the high numbers of immigrants and refugees from Somalia needing TB treatment in their new countries.[2,3,4,5,6] The many children with the disease are also an indication of large numbers of infected persons.

We worked where sunlight and kerosene washed floors were the main antiseptics available and patients were sent to cough under a tree in the compound to produce sputum. The bright (unremitting) sunshine was also the only viewing box for the chest radiographs, although radiological examination was not helpful, and the plain films of dubious quality were read by holding them up to the light. There was no storage and patients kept their own X-rays, which disintegrated quickly in the heat and were rarely available for comparison. Electricity from solar panels was available in the laboratory and office.

Diagnosis of TB was by sputum staining by the Ziehl Neelsen method[7] first developed 125 years ago. Sputum culture is rarely available in developing countries and regular transfer of cultures to a laboratory is impossible. Other sophisticated diagnostic testing (such as polymerase chain reaction testing) was not available.

"Smear negative" TB is also "diagnosed" by an algorithmic clinical method if sputum stain is negative and there is strong clinical suspicion. Diagnosis is based on the presence of a persistent cough for three weeks or more and lack of response to broad-spectrum antibiotics such as ampicillin and erythromycin.[8] Persistent cough is relatively rare in Somali where few people smoke tobacco.

Sputum "positive" patients are not admitted to the hospital, as there is no respiratory isolation. Patients must find lodging in the town and commit to staying there for the period of Direct Observation Treatment Short Course (DOTS) TB treatment. There is no consistent surveillance of contacts because of security concerns. Those who had family commitments far out in the bush or who had neither shelter in town nor money to buy food could not be admitted. Patients were young (mean 24 years) and mainly male (66%).[9] The higher male incidence may be real but women may be unable to stay for financial reasons, because they are unable to leave their children or even reluctant to be diagnosed with TB.

Sixteen percent of the adult patients in the clinic had extrapulmonary TB. Since children do not expectorate the tubercle bacilli, another diagnostic algorithmic method, Crofton Criteria,[10] was used based on weight, presence of cough and contact with an infected person. Pott's Disease, fistulous adenitis, and osteomyelitis were common in both children and adolescents.

Treatment consisted of two months of isoniazide, rifampin, ethambutol and pyrazinamide followed by four months of isoniazide and rifampin as per the World Health Organisation

protocol.[11] Longer second courses may be given for patients who remain sputum "positive". However, if patients are subsequently designated as chronic no further treatment is given. Patients rarely complain of side effects.

Some tuberculosis treatment programmes in developing countries provide food and shelter for patients on treatment (the Manyatta programmes).[12] This was not possible in Somalia because food stores pose a security hazard and were often the targets for robbers.

MSF provides and imports all the laboratory materials and drugs used for quality control. Medications are brought by MSF from reputable sources often from as far afield as Europe. Laboratory quality assurance is maintained with the Nairobi laboratories or the MSF office in Holland.

However, patients can walk into a non-regulated pharmacy in a town and obtain two weeks of TB medication (including rifampin) without prescription and this is cheaper than staying for six months for free medicine.

Many other persons in the bush or in the displaced persons' camps are not yet being treated. Great concern exists about the promotion of drug resistance. While I was there, there were plans to expand the DOTS programme to outlying areas by training supervisors and providers but this was impossible because of security. The prevalence of drug resistance and HIV infection is not known. Discussion of HIV is a social taboo and very difficult.

There were few drugs available to treat other chronic illnesses such as hypertension, diabetes, or heart failure. I learned a new respect for old chloramphenicol. Well children could be immunised elsewhere for a price, but few could afford that price. Chickenpox, measles, meningitis and hepatitis are common and tetanus occurs. Physicians, nurses and others do the best they can with few resources.

Most Somalis want peace and a safe place to live. This epidemic of tuberculosis needs more than a few brave programmes provided by non-governmental organisations. But there can be no end to the strife until there are adequate supplies of the basic commodities taken for granted in other places. Food handouts are not enough, emergency health care is not enough, and money is not enough.

It is very difficult to treat tuberculosis in this environment. Real political resolve on the part of elected leaders and influence are needed urgently to assist Africa to move forward from the burden of disease that it carries and the errors of colonialism.

We physicians in developed countries can provide better health care expeditiously for our immigrants and refugees but that is only one small step in the journey. The plight of Africa and other developing countries is rarely an election issue. Rich nations and their physicians are failing to provide the political support and pressure needed. The treatment and eradication of tuberculosis needs adequate housing and nourishment not just medication as was shown in Britain and North America 100 years ago. Better diagnostic methods and treatment are needed.

We in Scotland learned this lesson a century ago. However, we have forgotten that one of the most important determinants of health is the absence of war, in addition to good food and adequate housing. Sir John Crofton wrote in 1999, "It is a sad reflection on society's incompetence that, more than 30 years after the methods for cure and prevention were evolved and before the advent of the HIV epidemic, there were already more patients with active TB in the world than there had been in the 1950s."[10] We are not doing any better in this millennium and should heed those words again.

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No conflict of interest declared. The author was with Medécins Sans Frontières in Somalia. The opinions expressed in this paper are those of the author alone and do not reflect the opinion of Medécins Sans Frontières. It should also be noted that the TB programme has changed since the author was there in Spring of 2005.

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