

Tuberculosis: current problems for primary care, a danger of complacency?

Peter Davies

We seem to have had an unfortunate run of missed diagnosis of tuberculosis recently. One, in Leicester has resulted in the biggest outbreak of tuberculosis since chemotherapy became available.¹

A current member of cabinet had undiagnosed tuberculosis for nearly a year before an astute surgeon hit on it. "I had almost accepted that I was dying in front of my family and was very irritated that there was no apparent reason."²

Undiagnosed tuberculosis is the second commonest cause of medical litigation for a respiratory complaint. Missed pulmonary embolus is the first.³

Tuberculosis cases have been steadily increasing in the UK since 1987. We now have over 7,000 cases a year compared with about 5,000 then.^{4,5} The problem is our medical skills at diagnosis and management do not seem to have kept pace with the numbers. We need to be aware of the risk factors for tuberculosis as the patient walks, or is wheeled through the door. Rates in the elderly are ten times higher than in the young and three times higher in older males than females. Rates among those originating from the Indian subcontinent are up to fifty times higher than in the white population and in those from Africa 80 times higher. Since the British exported TB to its Commonwealth 200 years ago it has come back to haunt us with a vengeance.⁶

Other risk factors include poverty, diabetes, renal failure and smoking but most importantly HIV/AIDS. Across the globe tuberculosis is the commonest opportunist infection in those infected by HIV.⁷ The problem with pulmonary tuberculosis is that the symptoms are no different from any other chest complaint. They are, in decreasing order of frequency, cough, pyrexia, malaise, weight loss, night sweats, pain and breathlessness.

In the elderly the commonest differential diagnosis is lung cancer, but in the young asthma seems to be a trap.⁸

Diagnosing infectious tuberculosis should not be a problem. A chest x-ray may provide a clue but can be off-putting. I have known world experts miss primary TB on a chest film and HIV related TB can present with a very uncharacteristic chest picture. The microbiologists won't usually be fooled however, so sputum must be sent for smear, culture and sensitivity looking for those little red rods which only stain positive to Zhiel-Neelsen or phenol auramine.

You might think a positive smear gets you home and dry but beware. In the elderly these environmental

bugs such as *M. Avium-intracelulare* and *M. kansasii* are increasingly found in the elderly. These smear as for *M. tuberculosis*, are not infectious but can be much more difficult to treat.⁹

Smear negative TB and TB at a non-respiratory site can be very much more difficult to diagnose. The cervical lymph nodes remain the commonest non-respiratory site and an Asian or African presenting with a neck lump can probably be presumed to have tuberculosis until proved otherwise. TB meningitis can be the most difficult of all, presenting in unusual ways such as slow loss of normal mentation or the use of a single cranial nerve as well as the more classical meningitis. The rule of thumb is the same. TB should always be considered and if suspected the necessary specimens taken for bacteriology and treatment started.

And that brings me to the most problematic aspect of tuberculosis; keeping a patient on four antibiotics for two months and two antibiotics for four months is not easy. I have always valued the input of the GP and district nurse to provide help to the specialist TB nurses in giving a patient directly observed therapy, if required.¹⁰ Though we use this method only occasionally at the moment I am sure its value will increase as drug resistance becomes more problematic.⁵

The use of BCG remains controversial as it is a relatively weak vaccine. We are probably giving over 10,000 vaccinations among white teenagers to prevent a single case now. Its use in infants of high risk families such as those of African or Asian origin should continue.

There seems little hope of a new vaccine or new drugs in the foreseeable future but there is hope for an improvement in the way TB infection is detected. The old skin test may be replaced by a blood test which is more accurate and can distinguish between infection with *M. tuberculosis* and BCG.¹¹

That will require money, but if the government wants us to "Keep ahead of the curve" of tuberculosis control, a certain amount will be required.¹²

In the meantime, we need to increase our guard against tuberculosis, bearing in mind that the next patient we see may have the disease. ■

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