Tuberculosis: combating a growing problem

In the past few years there has been much concern over the resurgence of tuberculosis (TB) which has lead to initiatives from the chief medical officer, much press coverage in the lay press, National Institute for Health and Clinical Excellence (NICE) guidance, the setting up of an All-Party Parliamentary Group and most recently a large meeting in London addressed by the chief medical officer and the director of public health for the London Strategic Health Authority to which all chief executives were invited, emphasizing the priority that control of TB now has within the capital.

The problem

Overall the annual numbers of cases of TB notified within the UK has risen from 6323, a rate of 11.7 per 100 000 in 2000, to 8113 in 2005, a rate of 14.7 per 100 000. The number of cases rose by 10.8% in 2005 compared to 2004.

The cases are mainly found within the large urban conurbations and the above figures conceal the fact that the rate in London is far higher at over 40 per 100 000 in 2005. TB is now seen primarily as a London problem based on these epidemic rates.

The majority of these cases are in the young adult age group (25–30 years of age). They are also mainly in the immigrant population. In 2005 in London 2500 cases were non-UK born as opposed to 500 UK born, the regions of birth most commonly being Eastern Europe, Africa or the Indian subcontinent. Although some immigrants develop TB soon after arriving in this country the vast majority (80%) develop it two or more years after immigration.

Other important co-factors in the London TB epidemic are high rates in groups that are notoriously difficult to treat, such as hostel or street dwellers, drug abusers and prisoners.

HIV co-infection is also a problem – in London this runs at around 8% of those consenting to be tested (only the minority in some studies). Again there is a differential between those born in the UK (about 1% incidence) and those not born in the UK (about 10%).

Resistance to first-line anti-TB drugs is also an important factor to be aware of in treatment. The commonest drug resistance found in London is isoniazid resistance, which is seen in about 8–9% of patients overall. Rifampicin resistance is found in 3–4% of patients whereas multidrug resistance is still fortunately rare, accounting for less than 1% of patients.

Steps to combat TB

Since 1998 and 2000 there has been guidance from the British Thoracic Society on how cases of TB should be managed (Joint Tuberculosis Committee of the British Thoracic Society, 1998, 2000).

More recently this has been strengthened by publication of a number of documents especially *Stopping Tuberculosis in England: an action plan from the chief medical officer* (Department of Health, 2004) which set out clear steps which the government, health services and local communities needed to take to reverse the rise in TB. This document was given full support by John Reid, the then Secretary of State.

More recently NICE has published *Tuberculosis: Clinical diagnosis and management of tuberculosis, and measures for its prevention and control* (National Collaborating Centre for Chronic Conditions, 2006). This guidance covers the diagnosis and treatment of active and latent TB in adults and children, and the prevention of the spread of TB, for example by offering tests to people at high risk, and by vaccination.

Additionally an All-Party Parliamentary Group on Global Tuberculosis was set up in July 2006 to raise the profile of the global TB epidemic and to help accelerate efforts to meet millennium development goal targets on TB.

Guidance is being developed by the Department of Health for the commissioning of local TB services, and this is due for publication in the near future.

The problem of infection within health-care workers has been addressed with guidance published in March 2007 (Department of Health, 2007), which contains advice on clearance and screening of new health-care workers for TB (there were 105 health-care workers with TB in the north-east sector of London over the 3-year period 2003–5; Department of Health, 2007; Dr J Moore-Gillon, personal communication, 2007).

Anxiety has been expressed in some trusts that specialized TB nurse posts have been put under threat because of economic pressures. The importance of having at least one nurse to 40 active cases of TB to manage the workload has been stressed to chief executives (unpublished communication, April 2007). NHS London has emphasized that TB is a priority for London PCTs in financial balance for the year 2007–8.

Solutions

It is encouraging that TB has now risen up the health-care agenda – this will undoubtedly help.

The NICE and British Thoracic Society guidance stresses the importance of identified specialist TB treatment teams of nurse specialists and respiratory specialist doctors to treat active cases and trace their contacts. This team needs a multidisciplinary approach with adequate staffing levels, administrative support and space in which to operate.

The concept of individual case management by the nurse specialist and one specialist team managing all the patients in a trust is important.

Rightly targets have been set for the monitoring of successful completion rates of a 6-month course of therapy – these are 85% nationwide and 90% within London.

In London TB services are regularly checked against these by means of the computerized London network database which holds anonymized patient data on all patients with TB in London, and which can be accessed from all TB clinics. It would be a good idea to roll this out

nationally to keep track of mobile patients (bearing in mind that they are mobile in and out of the UK as well).

So far London has not gone down the path that New York used when faced with a similar outbreak by insisting upon directly observed therapy for all patients. It is standard practice for TB nurse specialists to conduct a risk assessment on newly diagnosed patients for the factors which are known to be associated with poor compliance (such as alcohol or drug abuse, street living/hostel dwellers, prisoners (or ex inmates), psychiatric ill health) and reserve directly observed therapy (at least) initially for these patients.

Way forward

Despite much effort on the part of local TB clinics, certainly within London the caseload is increasing for largely unknown reasons. Many cases are being diagnosed late and not until patients are sick enough to present to and be admitted to hospital through accident and emergency departments.

Greater awareness and earlier diagnosis are clearly needed. A few initiatives have been tried:

- A mobile X-ray unit has been working across London for the past 2 years taking X-rays in prisons and hostels to try and identify cases earlier in populations at high risk and without easy access to health care
- There have recently been advertisements on the side of London buses to raise awareness
- Work continues with local GPs to raise awareness and with immigrant groups to break down the social stigma (and fear that the TB nurses are part of the immigration services) so that patients can be encouraged to report symptoms earlier.

Conclusions

Although much has been achieved in identifying the problems of TB in London there is still much to do to combat the growing problem.

It is now recognized as a major health priority by the Department of Health and local health services and as such one hopes that TB nurses and doctors will be provided with the support they need to treat active cases successfully; however, so far this approach has not been successful in reducing the caseload.

New initiatives are needed to heighten the awareness of TB especially among young adults who are recent immigrants to the UK. There is a need to critically review TB screening after arrival in the UK and, importantly, identify cases at an early stage when TB symptoms develop. For this new immigrants need to be registered with health providers in primary care and there needs to be health advice and education about TB freely available for the general public, especially within the local immigrant communities, to help breakdown the social stigma still associated with this disease.

It is important that patients are encouraged to seek help at the onset of symptoms rather than waiting for time to pass during which they are spreading TB throughout the community. BJHM

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Dr Johnson is greatly indebted to Dr John Watson, Heath Protection Agency, Colindale, for the statistical information on tuberculosis.

KEY POINTS

- Rates of tuberculosis in the UK are rising, especially within London and urban conurbations.
- The increase is mainly among young adult immigrants who have been in the UK between 2 and 10 years.
- Earlier diagnosis is needed; this requires higher awareness of tuberculosis both among health-care workers and the general public.
- There should be at least one tuberculosis nurse specialist for every 40 cases of tuberculosis; these are essential in the case management of patients with tuberculosis to enable them to complete treatment and to attain the target of at least 90% of patients completing therapy.
- The present services need to be supported and to adapt in order to control the present increase in tuberculosis.

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