

WORLD TB DAY

No. 11, 2000

On 24 March 1882, Robert Koch discovered the tubercle bacillus. This date is commemorated each year as the international TB day, which the WHO wishes to use to draw attention to the fact that tuberculosis (TB) remains a serious, world-wide problem, one that is even out of control in some places. Since the mid-1950's, effective treatments have been available which could cure most TB patients. Nevertheless, about 8 million people develop TB each year, and about 3 million die of the disease. On a world scale, TB is thought to be the commonest cause of death due to a single micro-organism.

TB trends in Denmark

The annual number of TB cases has fallen steadily in Denmark over the last 125 years - only interrupted by minor rises connected with the two world wars. However, this trend has changed over the last decade or more (Fig. 1). In 1986, 299 cases of TB were notified, the lowest figure ever. In 1998, the figure was 529, a rise of 77%. This rise can be explained by the high incidence in immigrants who have arrived from high-endemic TB areas. The number of cases notified in Danes has in fact been stable or has fallen slightly. In 1998 immigrants made up 65% of all notified cases, about half of these being from Somalia. A steady rise in the number of patients from Somalia has been observed in recent years. If the number of Somalis that develop TB each year is compared with the total number of Somalis who have lived in Denmark for the same number of years, the incidence of TB is calculated as 2000 per 100,000 (2%) per annum during the first two years after their arrival in Denmark.

Fig. 1. Trends in notified cases of tuberculosis in Denmark, 1973-1998

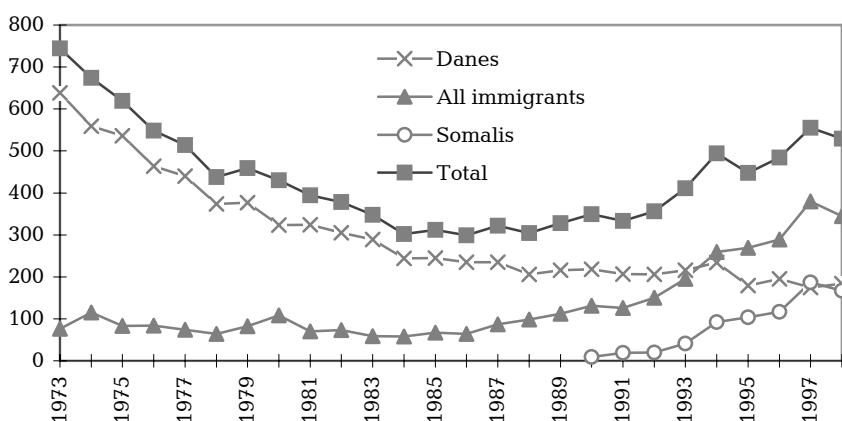


Table 1. Infection patterns in Somalis and Danes diagnosed as having tuberculosis during 1996-1998

Most probable route of transmission:	No.	(%)
Somalis infected abroad	293/391	(74,9)
Somalis infected in Denmark by other Somalis	91/391	(23,3)
Somalis infected in Denmark by Danes	7/391	(1,8)
Danes infected by Somalis	4/470	(0,9)

Thereafter the incidence gradually falls to 750 per 100,000 after seven years of residence. In comparison, the reported incidence of TB in Somalia is 1100 per 100,000. For Danes, the incidence in 1998 was 3.5 per 100,000. The reason for the exceptionally high incidence for Somalis in Denmark is unknown. It is likewise uncertain why the incidence is only subject to a gradual fall during the years after arrival, in contrast to the rapid fall observed e.g. in Vietnamese immigrants to Denmark.

Patterns of infection in Denmark

During the last eight years the Mycobacteria Laboratory has carried out a nationwide DNA subtyping of more than 97% of all isolates from culture-positive TB patients (except for South Jutland County in 1999). This has made it possible to trace the probable routes of infection. During 1996-1998 isolates from 391 Somalis were DNA subtyped, and by comparing the DNA patterns from these isolates with the patterns from the 3322 patients whose isolates have been subtyped since 1992, an impression of the probable routes of infection can be obtained (Table 1). Somali patients whose isolates show a DNA pattern unlike those of isolates from other TB patients in Denmark are assumed to have been infected abroad. The same is assumed

to apply to Somali patients whose isolates have an identical pattern, when none of these patients has had infectious (microscopy-positive) pulmonary TB. On these assumptions, it is probable that 75% of all Somalis who have developed TB in Denmark were already infected at the time of arrival. A maximum of 23% could have been infected in Denmark by other patients from Somalia, and a maximum of 2% could have been infected by Danish TB patients. In comparison, a maximum of 1% of all Danish TB patients could have been infected by patients from Somalia during the same period. The spread of TB between Somalis and Danes is thus extremely limited, and there are probably more Somalis who are infected with TB by Danish patients than *vice versa*.

BCG vaccination

The Mycobacteria Laboratory has had several inquiries about the treatment of abscesses following BCG vaccination. Treatment, which is carried out by the relevant Chest Clinic, is by drainage, but in persistent cases this can be supplemented with isoniazid tablets for 2-3 months. Too deep an injection increases the risk of abscess formation. It should be emphasized that BCG must be given intradermally by someone who is experienced in this injection technique. A correctly placed needle can be seen through the skin and a clearly defined small bleb is produced at the injection site. The indication for BCG vaccination is a prolonged, typically more than six-month stay in a risk area, with regular, close contact with a local population living in poor conditions. Revaccination has not been documented to have any effect and cannot therefore be recommended. (Troels Lillebæk, International Reference Lab. for Mycobacteriology)

15 March 2000



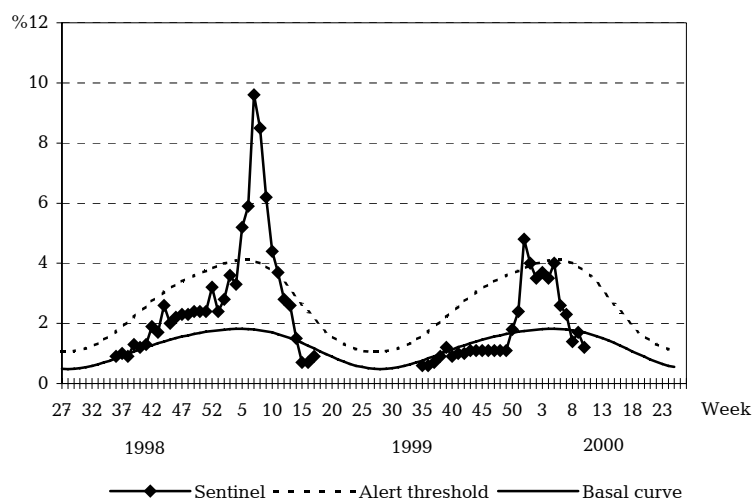
Patients with laboratory-diagnosed respiratory syncytial virus and rotavirus, 1999 / 2000

December		January		February	
RSV	Rota	RSV	Rota	RSV	Rota
339	14	516	19	549	44

Reported by the following Clinical Microbiology Departments:
 Herning Central Hospital, Hvidovre Hospital, Odense University Hospital, Slagelse Central Hospital, Viborg Hospital, Aalborg Hospital South, Aarhus Municipal Hospital, and from the Department of Virology, Statens Serum Institut.

Sentinel surveillance of influenza activity

Weekly percentage of consultations, 1998/1999/2000



- Sentinel:** Influenza consultations as % of total consultations
- Basal curve:** Expected frequency of influenza consultations under non-epidemic conditions
- Alert threshold:** Possible incipient epidemic