

9. Mycobacterial infections

Mycobacterium ulcerans infection

Summary of notifications

Mycobacterium ulcerans became a notifiable infection in January 2004. This was in response to increasing evidence of localised clusters of ulcerans infection in some coastal regions of Victoria and an apparent shift in the foci of disease. The disease was first noted in East Gippsland, however clusters have now occurred in Westernport, Mornington Peninsula and Hastings with a large outbreak occurring on Phillip Island from 1992 to 1994. More recently the focus has shifted further westward with an outbreak in St Leonards on the Bellarine Peninsula in 2001 and currently in the small township of Point Lonsdale where there has been 35 cases confirmed by PCR and/or culture at VIDRL since 2002.

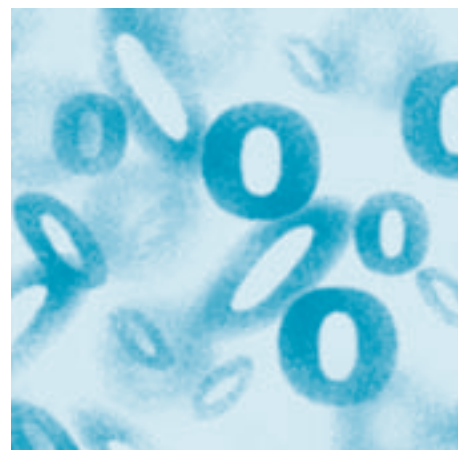
In 2004 there were 26 notified cases of *M. ulcerans*, of which 17 were associated with the Point Lonsdale outbreak. Of the 26 cases, 14 were female and 12 were male with ages ranging from two years to 87 years; 14 cases were aged over 50 years (ten of these were part of the Point Lonsdale outbreak). Most ulcers were located on lower limbs (arms and legs), however there were some ulcers located on the trunk, including buttocks and scapula. Ulcers ranged in size from very small to extensive with significant tissue damage, depending on diagnostic delay.

Risk factors

The most significant risk factor for developing *Mycobacterium ulcerans* infection appears to be living in an identified endemic area and experiencing some form of skin abrasion or puncture wound. Little is known about the mode of transmission of infection, risk factors or incubation period. There is increasing evidence that biting insects may play a role, however the route of transmission remains unclear. The most important public health measures in the prevention and management of ulcerans infections is to avoid insect bites by the use of repellents and protective clothing, to wash and cover skin abrasions and to seek early medical advice for any ulcer or lesion that is slow to heal.

Comment

The department is currently sponsoring research into the risk factors and transmission of *M. ulcerans* through the Public Health Research Grants.



Tuberculosis

Summary of notifications

There were 326 notified cases of tuberculosis (TB) made to the department in 2004. This is an average increase of ten per cent in cases from the mid to late 1990s. The notification rate of TB in Victoria has now been greater than or equal to seven per 100,000 population per year since 2002, the highest in the last decade. Of the 326 cases, 150 (46 per cent) were female and 176 (54 per cent) were male. Patients aged 20 and 30 years had a notification rate of 14.8 per 100,000 (figure 27). In addition, older patients over the age of 70 years had a notification rate of 13.3 per 100,000. Sixteen children aged younger than 15 years were notified with TB.

Most notified cases were from metropolitan Victoria (93 per cent), with the highest rate and number of notifications from the North and West Metropolitan region (51 per cent). Eastern and Southern Metropolitan regions had similar notification rates, however the lowest numbers were from Eastern Metropolitan region. Fifteen notified cases were from rural and regional Victoria (figure 28).

Figure 27: Notified cases of tuberculosis, by age group, sex and rate per 100,000 population, Victoria, 2004

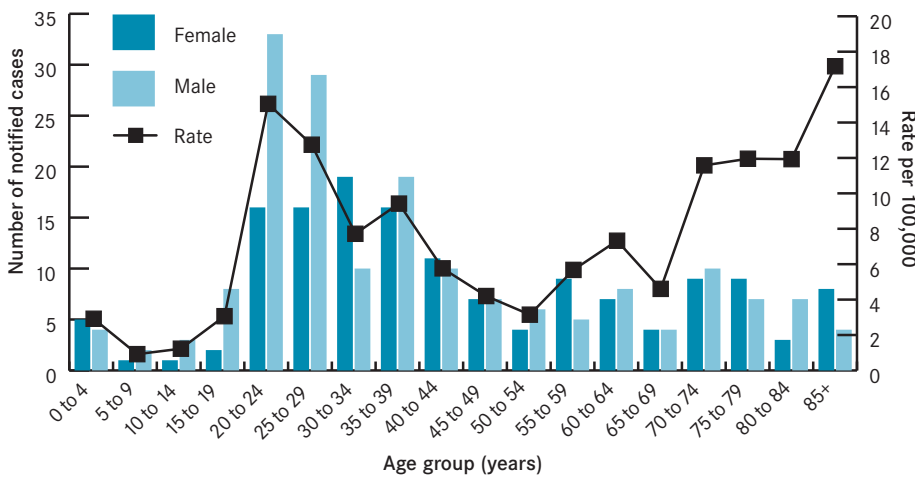
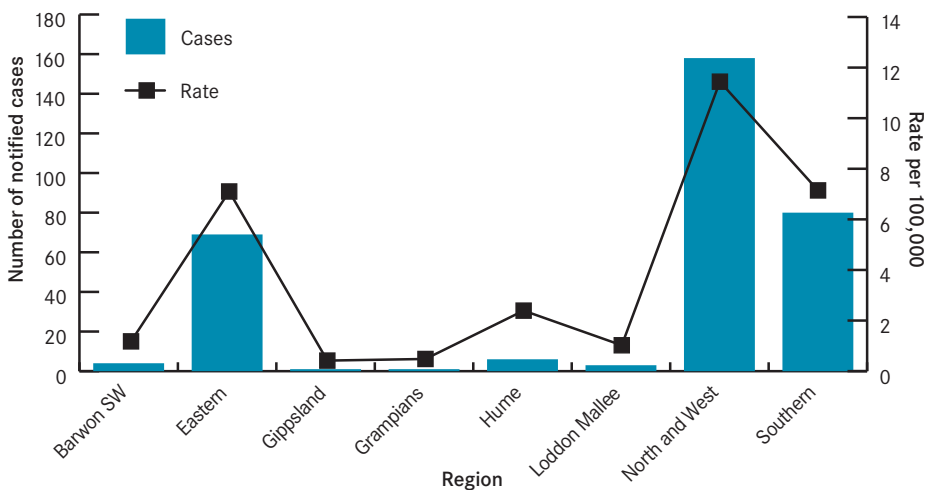


Figure 28: Notified cases of tuberculosis, by region and rate per 100,000 population Victoria, 2004



Pulmonary disease accounted for fifty-two per cent of all notified cases (n=171); 25 of these notified cases noted sites other than the lungs (table 31). Pleural disease was the most common additional site, however, three patients had miliary TB and seven had TB isolated in lymph nodes. One patient was identified as having pharyngeal TB, confirmed on pharyngeal swab, which was smear positive for acid-fast bacilli. Extra pulmonary disease was reported in 48 per cent of notified cases – the most common sites being lymphatic (54 per cent), bone/joint (12 per cent) and pleural (nine per cent). Of the 83 lymph node cases, 13 were mediastinal nodes and two were identified as primary lymph node disease in children, (table 31).

Table 31: Notified case of tuberculosis, by site of disease, Victoria, 2004

Site	Number
Pulmonary	
Pulmonary only	146
Bone/joint	1
Genito/urinary	1
Lymph nodes	7
Miliary	3
Other	2
Peritoneal	1
Pleural	10
Extra pulmonary only	
Lymph nodes	83
Pleural	14
Bone/joint	18
Peritoneal	7
Meningeal	8
Genitourinary	5
Miliary	3
Other	17
Total	326

Risk factors

In 2004, the most significant risk factor for TB in Victoria was having migrated from a high prevalence country (defined as having a rate of tuberculosis greater than 100 per 100,000). In 2004, 12 per cent (39 of 326) of notified cases were in Australian born people; an incidence rate of just over one per 100,000. There were no notifications of TB in Indigenous Australians. However, the notification rate in overseas born people was 27 per 100,000. Of the overseas born cases, a total of 64 per cent of patients were born in countries from the Horn of Africa (n=47), India (n=59), Philippines (n=13), Vietnam (n=45), or China (n=21).

An associated risk factor for the development of TB is time since migration, with most cases being diagnosed within a few years after arrival. In 2004, information about date of arrival was known for 275 of the 287 overseas born patients. Of these, 11 per cent were notified with TB following arrival in Australia during 2004, and 21 per cent were diagnosed within one year of arrival. Sixty-one per cent were diagnosed within ten years of arrival in Australia.

Five patients are known to have HIV and TB co-infection, however information about testing for HIV was known for only 14 per cent of cases.

Comment

Four cases were in child contacts of TB cases identified by contact tracing. All were siblings or children of recently arrived migrants. An additional four children were recent arrivals from refugee-like backgrounds. Cultural perceptions and stigmatisation of TB can create significant barriers to identifying those at risk of infection and disease. Health care providers should be aware of the increased risk of TB in newly arrived refugees and migrants, and of the cultural issues that influence their health seeking behaviours. They should also consider the possibility of TB in any patient from a high-risk group who presents with symptoms or signs compatible with the disease. Early investigation of contacts is imperative to minimise the risk of progression to primary disease, particularly in young children.

The department's *Management, control and prevention of tuberculosis: guidelines for health care providers (2002-2005)* is available from the department's Communicable Disease Control Unit (telephone 1300 651 160) or at <http://www.health.vic.gov.au/ideas>