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NETHERLANDS AND UNITED KINGDOM

A case study of intercountry collaboration on migration and cross-border TB control

Background

The Amsterdam Municipal Public Health Service notified 151 new TB cases in 2011, of which 11 were detected through contact investigations. Immigrants from Somalia have the highest TB incidence and approximately 1% of TB cases in the Netherlands are MDR-TB.

In August 2011, "A", a 13-year old Somali girl was notified with smear-positive pulmonary TB. She had arrived in the Netherlands with a normal chest X-ray 17 months earlier. Subsequent culture grew M. tuberculosis resistant to isoniazid, rifampicin, pyrazinamide, ethambutol, streptomycin, protionamide and clarithromycin. She was immediately referred for isolation and treatment to the specialized National TB Care Centre in Beatrixoord, Haren.

Contact investigations

Amsterdam

All five close contacts in Amsterdam had latent TB infection, three of them developed active culture-confirmed TB within six months of A's diagnosis and strains proved identical in variable number tandem repeat and multidrug resistance pattern. After consultation with the national MDR-TB committee they were all referred to the National TB Care Centre. The index patient recovered; however, she needed resection of her left lung. All subsequent cases are also recovering well. The two multidrug-resistant latent TB infection cases in Amsterdam are being closely followed up.

London

In October 2011, another Somali girl "B", a 22-year old, was diagnosed with MDR-TB in a London hospital. Careful history taking proved that B was with her family in Limburg, a province in the south of the Netherlands, in the summer of 2011. A stayed there for a month in the same room. The information on time and exact place of transmission was rapidly communicated to the Amsterdam Public Health Service. A was not aware of the address were she had stayed in the summer of 2011, her mother had left her with friends in Limburg while she went to Somalia. Further intercountry laboratory collaboration proved that the VNTRs of the two girls, A and B, were identical.

Later in 2012, a boy ,"C", with MDR-TB in this cluster was found in London. In retrospect, he turned out to have stayed with A and B in the summer of 2011 in the Limburg house. Further contact investigation was carried out in London.

Limburg

In the Limburg family, eight of nine contacts proved tuberculin skin test - and interferon-gamma release assay-positive and were put on close follow-up. Later in 2012, an adult man, a friend of the Limburg family developed spinal TB of the same VNTR cluster.

Conclusions

During the summer of 2011, a Somali girl with MDR-TB infected at least 16 close contacts from Amsterdam, London and Limburg. Six of them developed MDR-TB of the same cluster within twelve months. This MDR-TB outbreak with international transmission sites illustrates that mutant MDR-TB strains can be highly infectious and virulent. Information about the transmission site in Limburg only became available from a secondary case that occurred in London and was investigated through good international surveillance and cooperation. Special attention is needed when collecting information for contact investigations among refugees, who travel frequently in Western Europe and carry a high TB risk.

From our perspective, the best practice in intercountry collaboration started in London with the careful history taking and rapid communication of contact details (time and place of transmission in Limburg) to the Dutch Public Health Service.