Comment

Viruses out travelling

The case study of Power et al. brings a reminder that travelling in warmer countries carries with it a risk of a number of exotic infections. Malaria, typhoid fever and other bacterial infections can be treated. The import of infections of this nature results in fatalities nonetheless (1–4), often as a result of diagnostic failure. Viral infections are more difficult to treat, but most of them clear spontaneously. These infections are most commonly transmitted by insects (arboviral infections) or by animals such as rodents and bats, and often by diseased monkeys (Box 1). However, the viral infections we see most often are transmitted from person to person, and they are diseases we can also be infected with in Norway – influenza, viral hepatitis and HIV.

Measles and poliomyelitis have been eliminated in Norway through vaccination, but may be imported and spread among non-vaccinated persons or persons with an incomplete immune response (3, 4). Measles exists and is regularly imported to a number of European countries – recently also to Norway (5). Poliomyelitis still occurs, particularly in Nigeria and on the Indian subcontinent (6, 7).

Among the exotic infections we are particularly afraid of are viral haemorrhagic fever, which causes haemorrhages and complications from a number of organ systems. The most feared are the Ebola, Marburg and Lassa viruses, all of which occur in Africa and often have a fatal outcome. Individual cases have been imported to Europe a number of times (3). In contrast to the arboviral infections, further transmission can take place through person to person contact and possibly also through airborne infection. Strict isolation and precautions against infection are important. Treatment possibilities are poor, though early treatment with ribavirin has been found to have some efficacy in the treatment of Lassa fever (8).

Dengue fever, Chikungunya viral infection and West Nile fever are frequently reported in Europe (1–3). The distribution of Dengue fever has increased (2), and as a result of climate change is now spreading in Europe, along with the Chikungunya virus. The symptoms often include fever, skin manifestations and joint and muscular pain, as in the case in question. Although these diseases are often cured without sequelae, both Chikungunya viral infection and West Nile fever may lead to meningoencephalitis, and haemorrhagic Dengue fever may have a fatal outcome. Dengue fever and West Nile fever are now nominatively notifiable in Group A, and the Norwegian Institute of Public Health has established diagnostic methods involving antibody tests and polymerase chain reaction tests (7).

Persons planning to spend time in risk areas should be vaccinated against tick-borne encephalitis, yellow fever and if relevant rabies, and given boosters for poliomyelitis and diphtheria (6). Measures to prevent mosquito bites are important for preventing both malaria and arboviral infections. Blood donors who have been in areas with West Nile fever and Chikungunya viral infection must not donate blood for four weeks after returning home (7).

BOX 1

Important viral infections that may constitute a risk in connection with foreign travel (1–4, 7)

Arboviral infections (transmitted by insects)

Mosquito-borne
- Dengue fever
- West Nile fever
- Japanese encephalitis[1]
- Chikungunya and other alphaviral infections
- Yellow fever[1]

Tick-borne
- Tick-borne encephalitis (TBE)[1]
- Crimean Fever (Crimean-Congo Haemorrhagic Fever)

Other viral infections (transmitted by contact, airborne or blood-borne infection)

HIV infection
Hepatitis A and B[1]
Influenza[1]
Measles[1]
Poliomyelitis[1]
Hanta virus infection
Rabies[1]
Lassa fever
Ebola virus infection
Marburg virus infection

[1] Can be prevented through vaccination

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References

1. Gautret P, Cramer JP, Field V et al. Infectious diseases among travellers and migrants in Europe, eurotravnet 2010. Eurosurveillance 2012; 17: pii = 20205. www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20205 (24.9.2012).
2. Field V, Gautret P, Schlagenhauf P et al; EuroTravNet network. Travel and migration associated infectious diseases morbidity in Europe, 2008. BMC Infect Dis 2010; 10: 330.
3. European Centre for Disease Prevention and Control. Annual Epidemiological Report. Reporting on 2009 surveillance data and 2010 epidemic intelligence data. Stockholm: ECDC, 2011. www.ecdc.europa.eu/en/publications/Publications/1111_SUR_Annual_Epidemiological_Report_on_Communicable_Diseases_in_Europe.pdf (24.9.2012)
4. European Centre for Disease prevention and Control. Communicable disease threats. Report week 36, 2–8 September 2012. http://ecdc.europa.eu/en/publications/Publications/ECDC_CDTR_02.09.2012.pdf (24.9.2012).
5. Nasjonalt folkehelseinstitutt. Meslingeutbruddet i Oslo. www.fhi.no/artikler?id=89138 (23.9.2012).
6. Nasjonalt folkehelseinstitutt. Vaksinasjonboka. www.fhi.no/eway/default.aspx?pid=233&trg=MainArea_5661&MainArea_5661=6034:0:15,4486:1:0:0:0:0 (20.9.2012).
7. Nasjonalt folkehelseinstitutt. Smittevernboka. www.fhi.no/eway/default.aspx?pid=233&trg=MainArea_5661&MainArea_5661=6034:0:15,5076:1:0:0:0:0 (20.9.2012).
8. Ogbu O, Ajuluchukwu E, Uneke CJ. Lassa fever in West African sub-region: an overview. J Vector Borne Dis 2007; 44: 1–11.

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