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European Travel and Tropical Medicine Network
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European Centre for Disease Prevention and Control
Collaborative Network for Travel and Tropical Medicine



EUROTRAVNET SCIENCE WATCH: JUNE 2011

Scientific advances – **Transmission of influenza on international flights, may 2009.** Foxwell AR, et al. *Emerging Infectious Diseases*. 2011 Jul;17(7):1188-94.

Scientific advances – **Severe Plasmodium knowlesi malaria in a tertiary care hospital, Sabah, Malaysian Borneo.** William T, et al. *Emerging Infectious Diseases*. 2011 Jul;17(7):1248-55.

Review – **Neurognathostomiasis, a neglected parasitosis of the central nervous system.** Katchanov J, et al. *Emerging Infectious Diseases*. 2011 Jul;17(7):1174-80.

Review – **Country-to-Country Transfer of Patients and the Risk of Multi-Resistant Bacterial Infection.** Rogers BA, et al. *Clinical Infectious Diseases*. 2011 Jul 1;53(1):49–56.

These papers were selected and commented by:
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Transmission of influenza on international flights, May 2009.

Foxwell AR, Roberts L, Lokuge K, Kelly PM.

Emerging Infectious Diseases 2011 Jul; 17(7): 1188–94.

Summary:

In-flight transmission of pandemic (H1N1) influenza during two long haul flights was studied using a retrospective cohort design. Passenger questionnaire data about influenza-like symptoms during flight and subsequent influenza diagnosis were triangulated with public health data on H1N1 and influenza like illness (ILI) diagnoses. 2% (13/319) of respondents had an ILI in flight and 5% developed ILI in the first week after arrival. The risk of contracting H1N1 was increased by 3.6% if passengers were within two rows either side of a symptomatic passenger and increased by 7.7% if sitting within 2 seats in front, beside or behind a symptomatic passenger.

Link to the article: <http://www.cdc.gov/EID/content/17/7/1248.htm>

Public Health significance:

The study clearly demonstrates an increased risk of influenza transmission to passengers on long haul flights and helps to define which passengers are most at risk. This has implications for focusing efforts at contact tracing by public health authorities. It also reinforces the need to prevent symptomatic patients from boarding flights.

Scientific advances

Severe *Plasmodium knowlesi* malaria in a tertiary care hospital, Sabah, Malaysian Borneo.

William T, Menon J, Rajahram G, Chan L, Ma G, Donaldson S, Khoo S, Fredrick C, Jelip J, Anstey NM, Yeo TW.

Emerging Infectious Diseases 2011 Jul; 17(7): 1248-55.

Summary:

56 adult patients with PCR confirmed *P. knowlesi* malaria from Sabah are described. 22 (39%) of these had strictly defined severe malaria including respiratory distress, acute renal failure and shock. None had cerebral malaria. Eighteen patients were pregnant. Overall, six patients with severe malaria (27%) died, giving a case fatality rate of 27% for severe knowlesi malaria.

Link to the article: <http://www.cdc.gov/EID/content/17/7/1248.htm>

Public Health significance:

Although the proportion with severe disease is likely to have been biased by the fact that this report came from a referral hospital, this report emphasises how *P. knowlesi* can cause severe malaria and the case fatality rate is on a par with severe falciparum. The high proportion of pregnant women is also reminiscent of falciparum although cerebral disease is less common and respiratory distress more common in severe knowlesi disease. There are now two substantive reports of severe knowlesi disease from different geographical locations and it is becoming clear that in patients in certain parts of the world (and certain travellers to those regions), *P. knowlesi* is a potentially important cause of mortality and morbidity.

Review

Neurognathostomiasis, a neglected parasitosis of the central nervous system.

Katchanov J, Sawanyawisuth K, Chotmongkol V, Nawa Y.

Emerging Infectious Diseases 2011 Jul; 17(7): 1174-80.

Summary:

This review summarises the clinical features, diagnosis and treatment of gnathostomiasis and highlights the rare but important different neurological syndromes that can occur as a consequence of migration of the worm within the CNS. These range from a radiculitis to a meningoencephalities and sub-arachnoid haemorrhage: different syndromes can be seen in the same patient as the worm migrates causing mechanical damage. The article reviews all English literature reports of gnathostomiasis and highlights suggestive diagnostic features and findings on imaging and.

Link to the article: <http://www.cdc.gov/EID/content/17/7/1174.htm>

Public Health significance:

Although there are only a small number of published case reports of gnathostomiasis in travellers, cases are seen intermittently in returning travellers who have had the classical exposure to eating raw fish, frogs or snails or chicken and these patients are at risk of neurognathostomiasis. The diagnosis should be considered in anyone with eosinophilic radiculomyelitis, myeloencephalitis or meningoencephalitis and a history of travel to endemic areas.

Review

Country-to-Country Transfer of Patients and the Risk of Multi-Resistant Bacterial Infection.

Rogers BA, Aminzadeh Z, Hayashi Y, Paterson DL.

Clinical Infectious Diseases 2011 Jul 1; 53(1): 49-56.

Summary:

This review outlines examines how changes in travel patterns are increasing the risk that multi-resistant organisms may be transferred from country to country. The authors review the factors that underpin such risks and the evidence that travel may be contributing to the spread of multi-resistant gram –ve and gram +ve bacterial infections. The potential approach to patients transferred from other countries is discussed.

Link to the article: <http://www.ncbi.nlm.nih.gov/pubmed/21653302>

Public Health significance:

The authors highlight the increasing potential for travellers and migrants to act as vectors (and victims) of multi-resistant organisms and suggest approaches and policies to reduce the risk of spread of these organisms within receiving countries.