In Belgium

Seasonal increase of hantavirus infections in Wallonia

In the period January-May 2005, 92 hantavirus infections have been reported in Belgium by the IPH sentinel laboratory network and the Reference Laboratory (Queen Astrid Military Hospital, Brussels), including 38 cases in May. This report indicates an increase compared to January-May 2004 (N=12) - a year that has shown a particular low incidence, and compared to the same period in 2003 (N=51). No deaths have been reported. The number of laboratories reporting cases has been stable over the last years.

Classically, hantavirus infections in Belgium display a periodic resurgence every 2 to 3 years, with a seasonal peak in spring and summer. Significant seasonal increases in the number of detected cases were reported in Belgium in summers 1996, 1999, 2001 and 2003 (see figure below and the bulletin dated 17 June 2003).

Among the cases reported in January-May 2005, 88% resided in Wallonia, with a high concentration of cases in the arrondissements of Liège, Neufchâteau, Thuin and Dinant. These areas are known to be endemic for the disease. In France, a higher number of hantavirus infections has also been reported in April and May 2005 by the Institut de Veille Sanitaire. Most cases resided in the Northern part of France, and particularly in several departments that neighbor Belgium.

These preliminary results in Belgium suggest a high hantavirus activity for 2005. This periodic resurgence seems to be of higher intensity than previous peaks, but comparable to what has been reported in 1996. According to field health professionals, part of this increase is also due to a greater awareness among health professionals and a higher
recourse to hantavirus testing. However, under-diagnosing of hantavirus infections still is a problem.

Hantavirus infection is a viral infection spread to humans by contact with rodent or with rodent’s excretions (urine, faeces or saliva). In Belgium the main virus host is the *Cletherionomys glareolus* (red bank vole). Infected rodents are apparently unaffected by the virus, but remain lifelong carrier of the virus. Infection occurs through inhalation of virus particles or through a bite. Persons at risk are those having direct or indirect contact with rodents, those working with wood and persons involved in the renovation or cleaning of old houses. In Europe there is no evidence of human-to-human transmission. Cases of hantavirus disease occur when rodent populations have increased and when this population is heavily infected by the virus.

In Europe and Belgium, the prevailing form of hantavirus infection is called Nephropathia epidemica (NE) and is caused by Puumala viruses. It is the mildest form of the disease compared to the Asian and American forms. People typically become sick 1-4 weeks after exposure, and symptoms include fever, headache, muscle pain, gastrointestinal symptoms, eye pain and blurred vision. Sometimes renal or lung involvement develops. The clinical diagnosis is confirmed by detection of antibodies in a blood sample.

No specific treatment has been developed for the disease and symptomatic treatment of fever and headache is appropriate in most cases. Non-steroid anti-inflammatory drugs should be avoided. Most cases cure spontaneously within 2-3 weeks. Renal and pulmonary complications require appropriate treatment in hospital setting. Preventive measures consist in avoiding rodents in houses, disinfection of places used by rodents, protective clothing and avoiding deep breathing when manipulating rodents or anything that has been in contact with rodents, such as wood or old houses. Information leaflets on hantavirus infections are available at the IPH, and can be found on the IPH website at [http://www.iph.fgov.be/epidemio/epifr/plabfr/info_hanta.htm](http://www.iph.fgov.be/epidemio/epifr/plabfr/info_hanta.htm) (in French) or at [http://www.iph.fgov.be/epidemio/epinl/plabnl/info_hanta.htm](http://www.iph.fgov.be/epidemio/epinl/plabnl/info_hanta.htm) (in Dutch).

Sources: IPH sentinel laboratories, Hantavirus Reference Laboratory (Research Laboratory for Vector-borne Diseases, Queen Astrid Military Hospital/MSBT), Wallonia health inspectorate and Institut de Veille Sanitaire ([http://www.invs.sante.fr/display/?doc=presse/2005/le_point_sur/hantavirus_200605/index.html](http://www.invs.sante.fr/display/?doc=presse/2005/le_point_sur/hantavirus_200605/index.html)). Further details are available on the Hantavirus Reference Laboratory website ([http://www.smd.be/rlvbd/lvdindex_e.php?id_lvd=5](http://www.smd.be/rlvbd/lvdindex_e.php?id_lvd=5)). Follow up and contact at IPH: G. Ducoffre (g.ducoffre@iph.fgov.be).

### ELSEWHERE IN EUROPE

#### Outbreak of legionnaires disease in Norway

As of 8 June 2005, 55 cases of legionnaires’ disease, including 10 deaths, have been reported in the cities of Sarpsborg and Fredrikstad in southeast Norway, close to the border with Sweden. All patients are Norwegian residents and there is no information on any international events in the area in the period. Epidemiologists from the Norwegian Institute of Public Health have been assisting local health authorities with the outbreak investigation, which included a retrospective cohort study and a comparison of genotypes from patient and environmental samples.
Both studies indicated the same source, an air scrubber in a lignin production plant. The scrubber cleans particles in the air used in the production process by exposing it to a strong counter flow of water. The water in the scrubber has a high organic content and is circulated by a pump. A continuous input of fresh water helps to keep the dry-matter level constant and replace water lost as aerosol. The tank of the scrubber was routinely cleaned with high-pressure hot water every 3-4 weeks, but no disinfection was used. The pump and pipes had not been manually cleaned. The scrubber has been closed in June.


Norovirus infections associated with frozen raspberries, Denmark

On 21-26 May 2005, 144 patients and 128 employees at the two Aalborg Hospitals in Northern Jutland were reported ill with vomiting and diarrhoea and a food borne source of infection was suspected. Cases were isolated and some admissions, as well as a total of 43 operations, were cancelled. Sick employees were requested not to turn up for work until they had recovered for at least 24 hours. Kitchen areas were disinfected and cleaning staff were instructed in disinfection of toilet areas.

Case-control studies among 120 employees and inpatients showed that the consumption of a dessert containing frozen pieces of raspberries by the employees on a specific day was associated with an increased risk of disease (OR infinite, lower CI 3.4). Consumption of the same dessert with raspberries was also associated with illness in patients (OR 6.2; 95% CI 1.6-26). A norovirus infection was confirmed by testing faecal samples.

In early June, several cases of gastrointestinal infection were also reported among the elderly in several areas in Sjaelland and in the Greater Copenhagen area, and as of 23 June, at least 289 cases were considered as associated with this second outbreak. The patients had received food from one particular food caterer supplying 12 municipalities with a ‘meals on wheels’ service. The most likely source of infection was a raspberry dessert that had been served to around 1100 people between 1 and 3 June. The frozen raspberries used were bought from the same importer that supplied the raspberries implicated in the hospital outbreak. Several stool specimens from patients tested positive for norovirus. Microbiological analyses of the raspberries as well as further analyses of stool specimens, including genotyping of norovirus, are also in progress.

International warnings were sent through both the European Early Warning and Response System (EWRS) and the Rapid Alert System for Food and Feed (RASFF). Raspberries have previously been associated with outbreaks of norovirus, most recently in March 2005 in a French school. However, the same producer was not involved as in the Danish outbreaks, and the strain in France has not been found in the recent Danish outbreaks.


IN THE REST OF THE WORLD

Meningococcal disease in Delhi

Since 29 March 2005, a total of 405 cases with 48 deaths (CFR=12%) have been reported in Delhi up till 8 June. The majority of cases and deaths have occurred in young adult population. The National Institute of Communicable Diseases (NICD) has demonstrated the presence of Neisseria meningitidis serogroup A in cerebrospinal fluid of 35 cases. Most cases have been reported from Old Delhi.
Contact tracing of all clinical suspect cases is being done and the members of over 300 households have received chemoprophylaxis. Hospitals of Delhi have administered approximately 12,000 vaccinations of quadrivalent meningococcal vaccine to high risk groups, including health care workers. Public education, surveillance, vaccination of high risk population and chemoprophylaxis for close contacts continues. Source: WHO (http://www.who.int/csr/don/2005_06_14/en/index.html)

Cholera in Afghanistan
From 25 May to 16 June 2005, the Ministry of Health in Afghanistan has reported a total of 3245 cases of acute watery diarrhoea in Kabul city. Out of these 777 were hospitalised for severe dehydration. *Vibrio cholerae* has been laboratory confirmed in 30 stool samples out of 44. WHO is assisting the Ministry of Health to administer its control measures and has sent cholera kits for case management. Source: WHO (http://www.who.int/csr/don/2005_06_21/en/index.html)