

INCREASED NUMBER OF LEPTOSPIROSIS CASES

In the period September-November 2004, 13 cases of leptospirosis acquired in Denmark were diagnosed (10 cases as per 1 September 2004). Eight of the patients were either fish farm workers or persons with other contact to fish farming.

In the counties of Ringkøbing and Ribe, there were two outbreaks in which two patients in each county were most likely infected from the same fish farm. One patient was a boy who had been fishing in a fish farm.

Five sporadic cases were diagnosed in persons without contact with fish farms, but with other probable exposure to rat urine in connection with agriculture, forestry, etc.

In the last 20 years, an average of 12 cases of leptospirosis have been diagnosed annually, including cases acquired abroad.

Clinical manifestation and treatment

Leptospirosis is a zoonosis with rats as the most important reservoir, EPI-NEWS 9/02. The bacteria are secreted with rat urine into surface water and sewage. The most important mode of infection is through the skin, either through small scratches or through softened, but intact skin.

After an incubation period of 1-2 weeks, the disease typically begins with influenza-like symptoms. In severe cases, jaundice, proteinuria and possibly oligo-/anuria may occur. In jaundiced cases, the mortality is 10-20%.

Diagnosis is made on the basis of the clinical symptoms, occupational anamnesis and laboratory findings (blood culture in special medium as well as specific antibodies are performed at SSI). The diagnosis should be kept in mind in patients with an uncharacteristic disease picture who at the same time may have had massive exposure to rats and/or rat urine.

Early commencement of treatment with penicillin is of decisive significance, and it may thus be necessary to treat on suspicion.

Comments

There may be several explanations for the current cluster: fish farms constitute an attractive environment for rats, and the rat population fluctuates. Data from local authorities' reports about combating rat infestation suggest that the years since 1999 have been big years for rats.

In 2003, there were about 145,000 notifications of sightings of rats, in comparison with the period before 1999, with an average of 100,000 notifications annually. Outbreaks of leptospirosis have previously been seen in connection with large amounts of precipitation, EPI-NEWS 49/99.

Prophylaxis consists of combating rat infestation and consistent application of personal protection gear when working on fish farms and in sewers. Moreover, workers should always be informed of the risk of leptospirosis. There is no vaccine. Clinical leptospirosis is notifiable on form 1515. (K. A. Kroghfelt, DBMP, K. Mølbak, Department of Epidemiology)

INFECTION WITH BARTONELLA SPECIES

In the 1980s, Sweden was struck by a series of sudden, unexpected cardiac deaths among elite orienteers. The detection of *Bartonella elizabethae* in tissue from deceased elite orienteers, with high seroprevalence among these, gave rise to suspicion of infection with *Bartonella* species as a cause of the deaths. *Bartonella henselae* and *quintana* are the cause of cat scratch disease and trench fever, respectively.

Symptoms, mode of infection and diagnosis

Cat scratch disease usually has a mild, self-limiting course, and most commonly occurs in children after being scratched or bitten by a cat. In the typical course of disease, signs of infection are seen around the scratch or bite mark, and the patient has regional lymphadenitis and general malaise.

Trench fever occurs in minor outbreaks around the world and usually strikes immunocompromised persons. *B. henselae* and *quintana* are the cause of about 3% of all cases of infectious endocarditis, and are also thought to be capable of causing myocarditis. The body louse (*Pediculus corporis*) is a vector for *B. quintana* and probably also for *B. henselae*. Whether ticks (*Ixodes ricinus*) is a vector, and whether other animals besides cats are a reservoir, is a matter of controversy. The carrier frequency in cats varies, and is up to 50-60% in stray cats.

Bartonella species is detected primarily by antibody testing or PCR on suitable biopsy specimen. *Bartonella* species are difficult to culture and are isolated with variable success.

Occurrence in Denmark

In Denmark, a case-control study of 43 Danish elite orienteers was recently conducted, with 159 blood donors as controls. All participants were tested for *B. henselae*, *quintana* and *elizabethae*. 79% of the orienteers spent time in the Danish woods on a daily basis, as against 4% in the control group. All the orienteers had spent time in a Swedish wood within the previous year, as against 13% in the control group. The study showed a surprisingly low seroprevalence of 2% in the orienteers and 1% in controls, as against 31% and 7%, respectively, in a similar Swedish study.

Comments

Apart from the disease pictures described, *Bartonella* infection should be considered in the event of fever of unknown cause and/or lymphadenopathy, as well as culture-negative endocarditis. Indication for investigation is increased in children, immunosuppressed patients, orienteers and all persons who have contact with cats.

(P. Schiellerup, K. A. Kroghfelt, DBMP)

NOROVIRUS – NEW VARIANT

The first cases of norovirus infection (known in Denmark as "Roskilde disease") in Danish hospitals this season were diagnosed in September 2004, which is strikingly early compared with previous years. Already in September and October, norovirus was detected in specimens from patients admitted to 12 different hospitals distributed right across Denmark, and in November and December in specimens from a further 12 hospitals. Early appearance was also observed in the autumn of 2002, when there were subsequently many, persistent outbreaks, right up to the spring of 2003.

As in previous years, the prevailing norovirus type in outbreaks in hospitals is genogroup II type 4, also designated "Lordsdale". Compared with last season, the present circulating virus is a new variant of this virus type. Such a pattern, with the appearance of a new virus variant, was also observed in 2002.

For in-depth description of the clinical manifestation, mode of infection, diagnostics, and prevention of spread in hospitals and institutions, see EPI-NEWS 15/03.

(B. Böttiger, C. Johnsen, Department of Virology)

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2005 figures are preliminary)

Table 1	Week 1 2005	Cum. 2005 ¹⁾	Cum. 2004 ¹⁾
AIDS	1	1	0
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	0	0
Diphtheria	0	0	0
Food-borne diseases	4	4	5
of these, infected abroad	1	1	0
Gonorrhoea	5	5	9
Haemorrhagic fever	0	0	0
Hepatitis A	3	3	1
of these, infected abroad	0	0	0
Hepatitis B (acute)	2	2	1
Hepatitis B (chronic)	0	0	5
Hepatitis C (acute)	1	1	0
Hepatitis C (chronic)	1	1	8
HIV	7	7	7
Legionella pneumonia	3	3	3
of these, infected abroad	1	1	0
Leprosy	0	0	0
Leptospirosis	0	0	0
Measles	0	0	0
Meningococcal disease	0	0	5
of these, group B	0	0	4
of these, group C	0	0	0
of these, unspec. + other	0	0	1
Mumps	0	0	0
Neuroborreliosis	5	5	2
Ornithosis	1	1	0
Pertussis (children < 2 years)	4	4	7
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	0	0
Listeria monocytogenes	0	0	0
Streptococcus pneumoniae	0	0	4
Other aethiology	0	0	0
Unknown aethiology	0	0	1
Under registration	6	6	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	1	1	3
of these, infected abroad	0	0	3
Syphilis	2	2	4
Tetanus	0	0	0
Tuberculosis	8	8	6
Typhoid/paratyphoid fever	2	2	0
of these, infected abroad	2	2	0
Typhus	0	0	0
VTEC/HUS	6	6	5
of these, infected abroad	2	2	2

¹⁾ Cumulative number 2005 and in corresponding period 2004

Selected laboratory-diagnosed infections

Number of specimens, isolates, and/or notifications received in SSI laboratories

Table 2	Week 1 2005	Cum. 2005 ²⁾	Cum. 2004 ²⁾
Bordetella pertussis (all ages)	20	20	17
Gonococci	11	11	1
of these, females	0	0	0
of these, males	11	11	1
Listeria monocytogenes	1	1	1
Mycoplasma pneumoniae			
Resp. specimens ³⁾	72	72	3
Serum specimens ⁴⁾	26	26	8
Pathogenic int. bacteria ⁵⁺⁶⁾			
Campylobacter	65	65	-
S. Enteritidis	11	11	-
S. Typhimurium	10	10	-
Other zoon. salmonella	15	15	-
Yersinia enterocolitica	6	6	-
Streptococci ⁷⁾			
Group A streptococci	3	3	1
Group C streptococci	0	0	0
Group G streptococci	5	5	2
S. pneumoniae	38	38	77

²⁾ Cumulative number 2005 and corresponding period 2004

³⁾ Resp. specimens with positive PCR

⁴⁾ Serum specimens with pos. complement fixation test, MPT

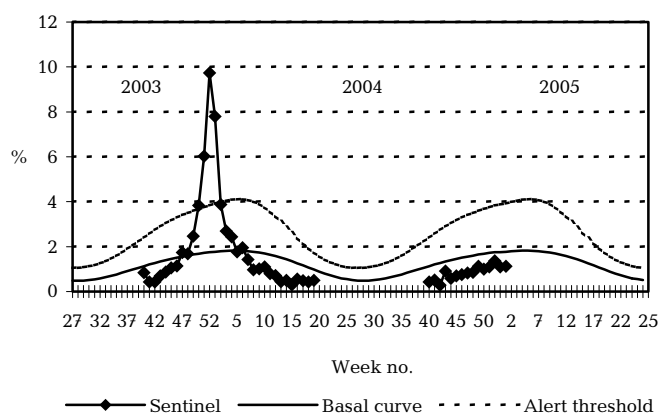
⁵⁾ See also www.germ.dk

⁶⁾ 2004 comparison not possible due to change in reg. procedure

⁷⁾ Isolated in blood or spinal fluid

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2003/2004/2005



Sentinel: Influenza consultations (as percentage of total consultations)
 Basal curve: Expected frequency of consultations under non-epidemic conditions
 Alert threshold: Possible incipient epidemic