EPI-NEWS

NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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RABIES PROPHYLAXIS

In Denmark, bat bite normally constitutes the only direct indication for prophylactic treatment against rabies. If, after being bitten by other animals, there is reason to suspect that the animal has rabies, the animal should be examined by a veterinary. The veterinary will, if necessary, arrange further investigation.
In other parts of the world, rabies is more widespread. Transmission occurs in connection with penetrating bites of animals infected with rabies or on rare occasions upon direct contact with saliva, mucous membranes or wounds.
Prophylaxis recommendations have been changed in accordance with the WHO guidelines.

Prophylaxis before exposure

Prophylaxis before exposure consists of primary vaccination on days 0, 7 and 28, i.e. a total of three doses.
Revaccination: Persons at risk of work-related rabies exposure should be revaccinated pending measurement of antibodies to ensure continued immunity. When measurement of antibodies is not an option, revaccination should be given at 5-year intervals.

Post-exposure prophylaxis

The prophylactic treatment after possible rabies exposure consists of an injection of human rabies immunoglobulin (HRIG) and rabies vaccination.
Human rabies immunoglobulin
HRIG is administered concurrently with the initial vaccination. In cases where HRIG is not administered with the first vaccination, HRIG should be given if less than eight days have passed since the first vaccination.
The dose is 20 IU/kg body weight. If possible, HRIG should be infiltrated in and around the wound. The remaining amount is given intramuscularly. HRIG and vaccine should be given on opposite sides of the body.
Rabies vaccination
The vaccination is normally administered on days 0, 3, 7, 14 and 28, i.e. a total of five doses.
According to the WHO guidelines, the 6th dose, formerly given to bat bite victims, is not needed.
Previously vaccinated persons
Persons who have previously received the primary vaccination (three doses on days 0, 7 and 28) should be vaccinated on days 0 and 3, i.e. a total of two doses. Persons who have not received full primary vaccination, should be considered as unvaccinated. Prophylactic treatment after possible exposure should be discussed with the Department of Epidemiology, where HRIG and vaccine may be ordered at the expense of the National Health Service.

POST-EXPOSURE PROPHYLAXIS

In 2007, a total of 88 persons were given prophylactic treatment for rabies after animal bites, Table 1.

Table 1. No. of persons given post-exposure prophylaxis, by possible rabies exposure source, 2007

Species	Denmark	Abroad
Dog	0	36
Bat	7	0
Monkey	0	29
Cat	0	10
Fox	2	0
Other	0	4
Total	9	79

Nine persons were possibly exposed in Denmark, 16 in other parts of Europe (incl. Turkey), 53 in Asia, five in South America and five in Africa.
A total of 46 persons were treated with human rabies immunoglobulin in addition to vaccination. Seven persons were given prophylactic treatment because of bat bites in Denmark, Table 1.
Two males were given prophylactic treatment following fox bites. One bat and the two foxes were tested for rabies virus; all tested negative and the prophylactic treatment was discontinued.
A total of 41 persons were treated after possible exposure in Thailand. Among these, 20 were bitten by monkeys and 17 by dogs.

Commentary

About 90% of the possibly exposed persons who received prophylactic treatment had been exposed to rabies abroad, most frequently in Thailand. When giving advice prior to foreign travel, it is thus important to mention the risk of rabies related to contact with animals.
(A. Christiansen, S. Cowan, Department of Epidemiology)

RABIES IN ANIMALS 2007

Classic sylvatic rabies virus has not been observed in Denmark since 1982, but it is endemic in Greenland, where polar foxes regularly transfer the infection to sledge dogs and other mammals, Table 2.

Table 2. Rabies tests performed on animals in Denmark, 2007

	Denmark	Greenland
Species	No./Pos.	No./Pos.
Fox	3/0	11/8
Bat	22/2*	
Dog		3/0
Sheep		1/1
Total	25/2*	15/9

* European Bat Lyssavirus (EBLV)

EBLV infections

Bats are a reservoir for EBLV (European Bat Lyssavirus). EBLV was first detected in Danish bats in 1985 and has subsequently been found annually. The number of cases has varied between years and the number of animals tested has also varied considerably.
In November 2007, EBLV was detected in a cat in Western France. This constitutes the first ever European EBLV case in a cat. In connection with a previous serological survey of 152 sera in Danish cats, a high level of EBLV antibody titre was found in one sample, indicating that the cat had been infected with EBLV.
EBLV infection in larger mammals was previously recorded in sheep in Denmark in 1998 and 2002, and in a marten in Germany in 2004.
The continued EBLV occurrence in Denmark means that this virus requires constant attention.
It is a well-known fact that EBLV may be transmitted experimentally to a number of animal species with ensuing low mortality rates.
However, screening studies of a number of animal species, including cats and foxes, show that natural spread of the disease is extremely uncommon. There are, however, no reports of humans who have been infected with EBLV from other animals than bats.
As from 1977, a total of four fatal human cases of EBLV infection have been reported in Europe (three confirmed and one possible), all following massive bat exposure.
Several deaths have been reported following bat bites outside Europe, most recently the case of a Dutch tourist visiting Kenya in November 2007. In any event, bats are potential carriers of rabies virus and bat bites or scratches and bat saliva which come into contact with non-intact skin or mucous membranes should imply post-exposure prophylaxis.
(A. Christiansen, S. Cowan, Department of Epidemiology, A. Bøtner, National Veterinary Institute)

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2008 figures are preliminary)

Table 1	Week 2 2008	Cum. 2008 [1]	Cum. 2007 [1]
AIDS	0	1	3
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	2	3	1
Diphtheria	0	0	0
Food-borne diseases	3	9	16
of these, infected abroad	1	2	2
Gonorrhoea	3	7	9
Haemorrhagic fever	0	0	0
Hepatitis A	2	3	2
of these, infected abroad	0	0	2
Hepatitis B (acute)	0	0	0
Hepatitis B (chronic)	1	4	11
Hepatitis C (acute)	0	0	1
Hepatitis C (chronic)	1	3	13
HIV	5	9	9
Legionella pneumonia	1	2	3
of these, infected abroad	0	0	1
Leprosy	0	0	0
Leptospirosis	0	0	1
Measles	0	0	0
Meningococcal disease	1	1	4
of these, group B	0	0	0
of these, group C	1	1	3
of these, unspec. + other	0	0	1
Mumps	0	0	0
Neuroborreliosis	2	4	5
Ornithosis	0	0	0
Pertussis (children < 2 years)	3	3	5
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	0	0
Listeria monocytogenes	0	0	1
Streptococcus pneumoniae	3	4	6
Other aethiology	1	2	1
Unknown aethiology	0	0	0
Under registration	2	8	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	1	3	2
of these, infected abroad	1	2	0
Syphilis	4	6	7
Tetanus	0	0	0
Tuberculosis	3	10	15
Typhoid/paratyphoid fever	0	1	0
of these, infected abroad	0	1	0
Typhus exanthematicus	0	0	0
VTEC/HUS	1	4	2
of these, infected abroad	0	1	2

[1] *Cumulative number 2008 and in corresponding period 2007*

Selected laboratory diagnosed infections

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

Table 2	Week 2 2008	Cum. 2008 [2]	Cum. 2007 [2]
Bordetella pertussis (all ages)	3	4	8
Gonococci	3	13	7
of these, females	0	2	1
of these, males	3	11	6
Listeria monocytogenes	0	0	3
Mycoplasma pneumoniae			
Resp. specimens [3]	1	2	55
Serum specimens [4]	3	7	28
Streptococci [5]			
Group A streptococci	3	7	8
Group B streptococci	2	5	4
Group C streptococci	0	1	1
Group G streptococci	3	8	4
S. pneumoniae	46	106	73
Table 3	**Week 52 2007**	**Cum. 2007 [2]**	**Cum. 2006 [2]**
MRSA	1	668	-
Pathogenic int. bacteria [6]			
Campylobacter	8	3862	3226
S. Enteritidis	2	566	562
S. Typhimurium	0	353	411
Other zoon. salmonella	8	729	690
Yersinia enterocolitica	3	275	215
Verocytotoxin-producing E. coli	2	162	146
Enteropathogenic E. coli	0	194	266
Enterotoxigenic E. coli	1	307	243

[2] *Cumulative number 2008 and in corresponding period 2007*

[3] *Resp. specimens with positive PCR*

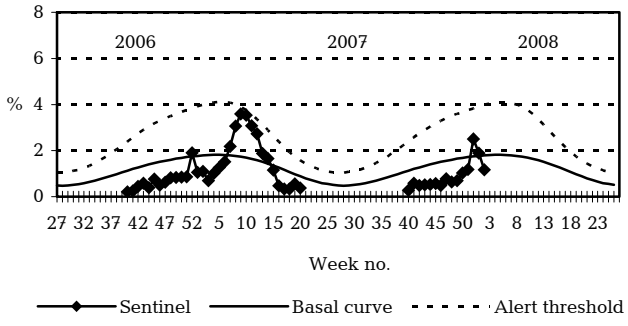
[4] *Serum specimens with pos. complement fixation test*

[5] *Isolated in blood or spinal fluid*

[6] *See also www.germ.dk*

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2006/2007/2008



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

16 January 2008