



RABIES PROPHYLAXIS

In Denmark, bat bites generally constitute the only direct indication for post-exposure prophylactic treatment against rabies. If, after being bitten by other animals, there is reason to suspect that the animal has rabies, it should be examined by a veterinarian. The veterinarian will, if necessary, kill the animal and arrange further investigation.

In other parts of the world, rabies is more widespread. Transmission occurs through the penetrating bite of an animal infected with rabies, or on rare occasions through direct contact between infected saliva and mucous membranes or wounds.

Pre- as well as post-exposure prophylaxis recommendations are further described in EPI-NEWS 3/08. Prophylactic treatment after possible exposure should be discussed with the Department of Epidemiology, and human rabies immunoglobulin (HRIG) and vaccine may be ordered by general practitioners at the expense of the National Health Service.

In 2008, a total of 106 persons were given post-exposure prophylaxis for rabies after animal bites, [Table 1](#).

Table 1. Persons given prophylactic treatment, by possible rabies exposure source, 2008

Species	Denmark	Abroad
Dog	0	49
Bat	10	2
Monkey	0	29
Cat	0	9
Other	0	7
Total	10	96

Ten persons were given prophylactic treatment because of bat bites in Denmark, [Table 1](#).

Furthermore, 16 were exposed in other parts of Europe (including Turkey), 64 in Asia, seven in Central and South America, seven in Africa, one in Greenland and in one case the country of exposure was unknown. A total of 54 persons were treated with HRIG in addition to vaccination.

A total of 46 persons were treated after possible exposure in Thailand. Among these, 22 were bitten by monkeys and 18 by dogs.

Commentary

Approx. 91% of the persons who received prophylactic treatment had been possibly exposed to rabies abroad, most frequently in Thailand. When giving advice prior to foreign travel, it is thus important to mention

RABIES 2008

the risk of rabies which is associated with contact with animals. (A. Christiansen, S. Cowan, Department of Epidemiology)

RABIES IN ANIMALS AND HUMANS

Classic sylvatic rabies virus has not been observed in Denmark since 1982, but it is endemic to 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, 2008

Species	Denmark No/Pos.	Greenland No/Pos.
Fox	0	7/5
Bat	16/0	0
Dog	0	4/0
Sheep	1/0	1/0
Cat	3/0	1/0
Flying fox bat	1/0	0
Marten	1/0	0
Total	22/0	13/5

Bats are reservoir for EBLV (European Bat Lyssa-virus). EBLV was first detected in Danish bats in 1985 and has subsequently been found each year. The number of positive detections as well as the number of animals tested has also varied considerably.

In 2008 no EBLV-positive bats were found.

Rabies in Europe

For several years, the bulk of European rabies cases have been reported from Russia, Ukraine, Lithuania, Belarus and Croatia.

A limited number of rabies cases are seen in animals and humans in Western Europe, as infection is imported from countries where rabies occurs endemically.

In February of 2008, a dog in France tested positive for rabies virus genotype 1 of Moroccan origin. The dog was a puppy which had never left France. Its owner had previously had another dog, which had been put down after a brief disease period in January 2008. This dog had previously had contact with another dog which had been imported illegally from Morocco. The Moroccan dog had been put down in November 2007 due to disease. Both of the dogs had symptoms which were compatible with rabies, but none of them were rabies-tested.

In April of 2008 a dog in France which had been imported from Gambia tested positive for rabies vi-

rus genotype 1 of West African origin.

In November of 2008, a puppy in France tested positive for rabies virus genotype 1 from North Morocco. The puppy was a street dog which was found drifting around in Malaga, Spain, and had probably been infected through contact with illegally imported Moroccan animals.

In November of 2008 in the province of Udine, North-eastern Italy, three foxes tested positive for rabies. One of the foxes had bitten a man while the two others were found dead and tested post mortem. Since 1997, Italy has been declared rabies free, while the neighbouring country of Slovenia has seen cases of rabies in foxes.

In Germany a dog tested positive for rabies in December of 2008. The dog had been born in Croatia and subsequently brought to Germany. Northern Ireland reported a human case of imported rabies in December 2008. The infected person had worked with animals as a volunteer in South Africa and had, among others, come into contact with dogs. Rabies is endemic in South Africa where dogs comprise the main source of human infection.

Commentary

The animals diagnosed with rabies in Western Europe were all illegally imported. It is essential to maintain strict monitoring of animals, particularly dogs imported from other countries. EU provisions covering travels with dogs, cats etc. among EU-countries and from third world countries are in force.

It is important to consider rabies vaccination in connection with working with animals or long-term stays in highly rabies endemic countries.

(A.H. Christiansen, S. Cowan, Department of Epidemiology, A. Bøtner, DTU, National Veterinary Institute)

RISK OF POLIO SPREAD

WHO has issued a warning concerning a currently very high risk of polio spread from the Sudan, www.who.int/scr/don.

An outbreak in Southern Sudan has spread to Kenya and Uganda and to Khartoum and Port Sudan in the Northern part of the country. It was via Port Sudan that a major international spread comprising more than 1,200 cases in 20 countries occurred in 2004-2006.

(P. H. Andersen, Dept. of Epidemiology)

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2009 figures are preliminary)

Table 1	Week 9 2009	Cum. 2009 ¹⁾	Cum. 2008 ¹⁾
AIDS	1	5	8
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	1	2	1
Diphtheria	0	0	0
Food-borne diseases	5	61	47
of these, infected abroad	0	7	11
Gonorrhoea	9	96	58
Haemorrhagic fever	0	0	0
Hepatitis A	1	6	13
of these, infected abroad	0	3	5
Hepatitis B (acute)	1	4	2
Hepatitis B (chronic)	0	14	42
Hepatitis C (acute)	0	3	3
Hepatitis C (chronic)	0	42	81
HIV	4	46	35
Legionella pneumonia	4	23	19
of these, infected abroad	0	2	10
Leprosy	0	0	0
Leptospirosis	0	0	1
Measles	0	8	2
Meningococcal disease	2	15	18
of these, group B	0	6	7
of these, group C	1	6	3
of these, unspec. + other	1	3	8
Mumps	1	2	9
Neuroborreliosis	0	2	15
Ornithosis	0	0	1
Pertussis (children < 2 years)	0	9	13
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	2	0
Listeria monocytogenes	1	2	0
Streptococcus pneumoniae	1	21	20
Other aethiology	1	2	10
Unknown aethiology	0	2	7
Under registration	4	13	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	2	17	13
of these, infected abroad	2	17	11
Syphilis	4	38	22
Tetanus	0	0	0
Tuberculosis	10	69	67
Typhoid/paratyphoid fever	0	3	5
of these, infected abroad	0	0	4
Typhus exanthematicus	0	0	0
VTEC/HUS	2	18	20
of these, infected abroad	1	6	5

¹⁾ Cumulative number 2009 and in corresponding period 2008

Selected laboratory diagnosed infections

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

Table 2	Week 9 2009	Cum. 2009 ²⁾	Cum. 2008 ²⁾
Bordetella pertussis (all ages)	3	24	25
Gonococci	10	72	66
of these, females	2	14	12
of these, males	8	58	54
Listeria monocytogenes	1	13	4
Mycoplasma pneumoniae			
Resp. specimens ³⁾	2	19	32
Serum specimens ⁴⁾	5	32	35
Streptococci ⁵⁾			
Group A streptococci	5	45	25
Group B streptococci	2	16	19
Group C streptococci	1	6	3
Group G streptococci	4	27	23
S. pneumoniae	24	310	260
Table 3	Week 7 2009	Cum. 2009 ²⁾	Cum. 2008 ²⁾
MRSA	14	110	73
Pathogenic int. bacteria ⁶⁾			
Campylobacter	28	187	195
S. Enteritidis	3	29	36
S. Typhimurium	16	143	46
Other zoon. salmonella	14	82	101
Yersinia enterocolitica	6	24	30
Verocytotoxin- producing E. coli	5	15	13
Enteropathogenic E. coli	3	21	11
Enterotoxigenic E. coli	4	20	44

²⁾ Cumulative number 2009 and in corresponding period 2008

³⁾ Resp. specimens with positive PCR

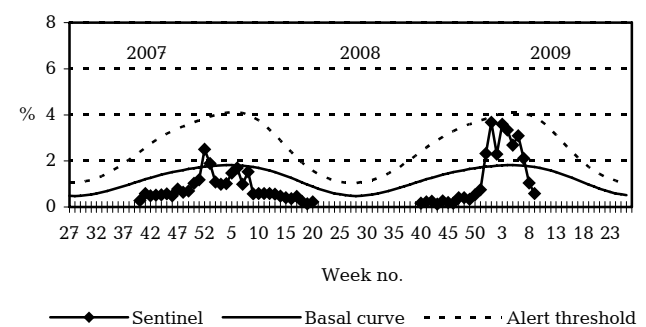
⁴⁾ Serum specimens with pos. complement fixation test

⁵⁾ Isolated in blood or spinal fluid

⁶⁾ See also www.germ.dk

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2007/2008/2009



Sentinel: Influenza consultations
(as percentage of total consultations)

Basal curve: Expected frequency of consultations
under non-epidemic conditions

Alert threshold: Possible incipient epidemic