EPI-NEWS
NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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Q FEVER IN DENMARK

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Q fever (query fever) is a zoonosis caused by infection with the bacterium Coxiella burnetii. This bacterium is particularly common in cattle, sheep and goats, but it is also found in other mammals such as cats and small rodents, as well as insects and birds. Infected animals are frequently asymptomatic, but may shed bacteria in vast numbers in the placenta and to a lesser extent in breast milk. The infection may trigger miscarriage in animals. This year, several Jutlandish herds of cattle vexed by miscarriage have had C. burnetii infection confirmed by serologic or molecular diagnostic methods. Furthermore, retrospective examination of samples collected from Danish cattle herds with miscarriages in 2003 and 2004 demonstrated an increased incidence of C. burnetii antibodies; see the webpage of the Danish Institute for Food and Veterinary Research at www.dfvf.dk. Among persons who have been in close contact with infected animals (farmers, their families and veterinaries), a few clinical cases of Q fever have been diagnosed, and several cases of asymptomatic seroconversion have been found. As Q fever in humans is not notifiable, the overall occurrence is unknown, but C. burnetii should now be considered endemic in at least parts of Denmark.

Mode of infection
Q fever was first described in Australian slaughterhouse workers in 1937. Subsequently, the disease has been found across the world, particularly in rural areas. Farmers with infected animals and veterinarians, slaughterhouse workers and laboratory staff have a high infection risk. In addition to direct contact with infected animals and their afterbirth, airborne infection by aerosols or dust from contaminated areas is an important mode of infection. Fields and meadows may become contaminated in connection with animal parturition and from there the bacterium may spread with the wind. C. burnetii can survive from months up to years outside a host. Especially in dry areas, such as the Mediterranean, outbreaks have been observed in the local population in periods with many animal partitions and high winds. There is no evidence of person-to-person transmission.

Clinical picture
After an incubation period of normally 2-3 weeks, Q fever presents as an influenza-like disease with sudden onset of fever, headache, muscle pain and varying degrees of pneumonia and/or hepatitis. In about 5% of the clinically infected cases, the disease requires hospitalisation, and in a few cases it is fatal. Rare acute manifestations include myo- and pericarditis, and meningoencephalitis. Among the exposed who seroconvert, 40% will develop clinical disease. In rare cases, patients develop a chronic C. burnetii infection, usually located to the heart valves. Less frequently, a chronic infection emanates from aneurysms and vascular prostheses, and chronic hepatitis and osteomyelitis are only observed rarely. Patients with structural malformations in these organs, immunosuppressed patients and pregnant women are particularly predisposed to chronic Q fever. The chronic infection may stay symptomatic for up to 2 years after the primary infection. Pregnant women infected with C. burnetii have an increased risk of abortion and premature birth. Patients who have acute Q fever should be assessed to identify risk factors for chronic Q fever. Such assessment may include echocardiography.

Treatment
First choice treatment for acute Q fever in non-pregnant adults is doxycycline 100 mg x 2 for a period of 2-3 weeks. Treatment of chronic patients and patients predisposed for this disease, including pregnant women, may include up to 1 ½ year of antibiotic therapy and should be considered a specialist assignment.

Diagnostics
C. burnetii infection is diagnosed by serology and/or by PCR. Cultivation is not possible. Antibody titre interpretation normally requires that two samples be taken at an interval of two weeks or more. C. burnetii DNA may be detected via PCR in the lower airways and other relevant material such as tissue from liver biopsies, heart valves, tissue liquids from focus and, on suspicion of endocarditis, from whole blood (with added EDTA). In connection with *in-situ* hybridisation, C. burnetii may be demonstrated in paraffin-embedded tissue sections.
(S. Villumsen, M. Kemp, DBMP, K. Mølbak, Dept. of Epidemiology)

VACCINATION OF PILGRIMS TRAVELLING TO SAUDI ARABIA

Vaccination with the tetravalent polysaccharide vaccine against meningococcal disease serogroup A+C+W135+Y is still required to obtain a visa for Saudi Arabia for anyone above the age of two years. Protection lasts three years. All travellers over the age of 2 years, including those who have been vaccinated against groups A+C within the last three years, should be vaccinated once at least 10 days before entry. Children aged 3-24 months should be A+C vaccinated twice at an interval of 3 months, and only protection against serogroup A can be expected.
(Department of Epidemiology)

CHIKUNGUNYA FEVER IN INDIA

The outbreak of chikungunya fever observed during the past year in the Indian Ocean, EPI-NEWS 33/06, has spread to major parts of India over the last six months. WHO informs that from February to October 2006, about 1.25 mill. cases have been reported from the states of Andra Pradesh, Tamil Nadu, Karnataka, Maharashtra, Gujarat, Madhya Pradesh, Kerala, Delhi and the Andamans and Nicobar island groups. The disease presents 4-7 days after infection as a high fever, headache and arthralgia. The differential diagnostic considerations for travellers who have returned from India include dengue fever and malaria, among others.
No restrictions have been imposed on travellers to any of the affected areas, but travellers are advised to carefully prevent mosquito bites by using mosquito repellents and mosquito nets impregnated with insecticide.
(L. Vestergaard, Dept. of Epidemiol.)

EMENDATION TO EPI-NEWS 23a+b, 2006

Unfortunately, a number of errors occurred in EPI-NEWS 23a+b/06 concerning vaccination recommendations in connection with foreign travel. The following changes apply:
The Philippines: "M" only in group 4.
Malaysia: "r" in group 4. (However, Sabak and Sarawak are rabies-free).
The Maldives: "X" in group 2 is omitted.
Mauretania: "g" in groups 1-4 and "B" in group 3.
Trinidad and Tobago: "g" in groups 2-4. There is a risk of yellow fever when staying outside urban areas.
Turkey: "T" in group 4 is omitted.
(P.H. Andersen, Dept. of Epidemiol.)

15 November 2006

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2006 figures are preliminary)

Table 1	Week 45 2006	Cum. 2006 [1]	Cum. 2005 [1]
AIDS	0	38	51
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	22	2
Diphtheria	0	0	0
Food-borne diseases	17	496	496
of these, infected abroad	2	122	122
Gonorrhoea	13	373	436
Haemorrhagic fever	0	0	0
Hepatitis A	1	36	59
of these, infected abroad	0	18	21
Hepatitis B (acute)	2	17	31
Hepatitis B (chronic)	7	275	125
Hepatitis C (acute)	0	7	1
Hepatitis C (chronic)	11	418	276
HIV	3	209	228
Legionella pneumonia	0	111	100
of these, infected abroad	0	29	42
Leprosy	0	0	0
Leptospirosis	0	8	10
Measles	0	27	2
Meningococcal disease	0	56	82
of these, group B	0	26	38
of these, group C	0	11	22
of these, unspec. + other	0	19	20
Mumps	0	17	7
Neuroborreliosis	0	69	81
Ornithosis	0	10	19
Pertussis (children < 2 years)	5	44	135
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	3	2
Listeria monocytogenes	0	7	2
Streptococcus pneumoniae	0	68	101
Other aethiology	0	7	16
Unknown aethiology	0	17	17
Under registration	5	33	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	2	55	95
of these, infected abroad	0	44	75
Syphilis	6	60	111
Tetanus	0	2	2
Tuberculosis	7	343	374
Typhoid/paratyphoid fever	0	25	31
of these, infected abroad	0	24	29
Typhus exanthematicus	0	0	1
VTEC/HUS	3	124	137
of these, infected abroad	0	42	47

[1] *Cumulative number 2006 and in corresponding period 2005*

Selected laboratory diagnosed infections

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

Table 2	Week 45 2006	Cum. 2006 [2]	Cum. 2005 [2]
Bordetella pertussis (all ages)	7	189	435
Gonococci	5	369	391
of these, females	0	65	41
of these, males	5	304	350
Listeria monocytogenes	1	45	35
Mycoplasma pneumoniae			
Resp. specimens [3]	19	397	853
Serum specimens [4]	13	328	683
Streptococci [5]			
Group A streptococci	2	124	91
Group B streptococci	2	85	71
Group C streptococci	1	20	22
Group G streptococci	3	130	103
S. pneumoniae	18	825	942
Table 3	**Week 43 2006**	**Cum. 2006 [2]**	**Cum. 2005 [2]**
Pathogenic int. bacteria [6]			
Campylobacter	51	2604	3213
S. Enteritidis	5	500	567
S. Typhimurium	15	348	476
Other zoon. salmonella	9	597	491
Yersinia enterocolitica	4	160	204
Verocytotoxin-producing E. coli	6	128	129
Enteropathogenic E. coli	3	250	237
Enterotoxigenic E. coli	2	205	321

[2] *Cumulative number 2006 and in corresponding period 2005*

[3] *Resp. specimens with positive PCR*

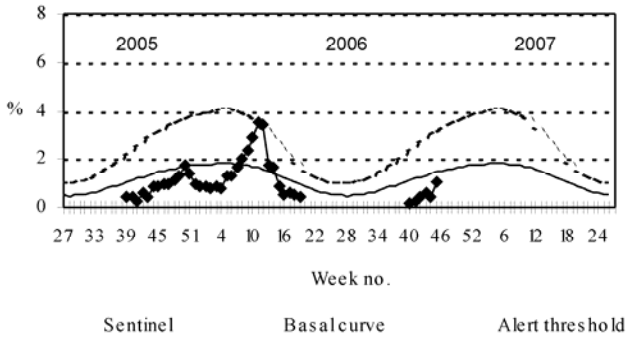
[4] *Serum specimens with pos. complement fixation test*

[5] *Isolated in blood or spinal fluid*

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

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2005/2006/2007



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

15 November 2006