EPI-NEWS

NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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Q-FEVER: TESTING & MANAGEMENT

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Q fever is a bacterial zoonosis caused by Coxiella burnetii, EPI-NEWS 46/06. Until 2005 it was assumed that C. burnetii occurred rarely in Denmark. However, analyses of samples from cattle herds performed by the National Veterinary Institute, DTU, have shown a seroprevalence in individual cattle of 17%, and a seroprevalence in herds of > 50%; a sign of current or previous infection, www.food.dtu.dk.

Occurrence in humans

Q fever in humans is not notifiable, but the diagnosis is only made at the SSI. Until 2006 only sporadic, imported cases had been found. From 2006 to November 2007, approximately 650 persons have been tested for C. burnetii antibodies. In 150 cases, an reduced level of antibodies was found, indicating previous or current infection. The majority of the tested persons were related to cattle farming. Most of those tested were asymptomatic, but had possibly been exposed to infection from positive herds. Furthermore, in several cases serological signs of current Q fever have been found in pregnant women with occupational contact with cattle herds.

Risk groups

In the majority of cases, Q fever displays as a mild, self-limiting infection, EPI-NEWS 46/06.
Pregnant women only rarely develop symptoms of acute infection, but do - regardless of the clinical picture – have an increased risk of abortion and premature birth. Such risks may be decreased through antibiotic treatment during pregnancy. Assessment and treatment of pregnant women should be performed in cooperation with an infection specialist.
Immunosuppressed patients and persons suffering from chronic cardiovascular malformations, particularly in the cardiac valves, and patients with vascular prostheses have an increased risk of developing a chronic infection in the aftermath of the acute infection.

Who should be tested for Q fever?

- Patients with symptoms that are compatible with Q fever and relevant exposure should be tested for Q fever. The typical symptoms are severe respiratory infection, severe influenza-like symptoms, hepatitis or persisting fever, EPI-NEWS 46/06.
The symptoms that are relevant may overlap with those of atypical pneumonia.
- Pregnant women who have come into contact with herds which have an increased abortion frequency or in which current Q fever has been detected, regardless of whether they present with the clinical symptoms or not.
- Testing of healthy, non-pregnant persons on the basis of possible exposure alone is not indicated.

Risk management in animal herds

Animals with Q fever excrete a considerable number of bacteria to the placenta. This creates a risk of aerosol infection, particularly in connection with births, abortions or contact with afterbirths. The Working Environment Authority and the National Board of Health recommends that pregnant women and persons with immune deficiency and/or chronic heart disease, particularly in the form of cardiac valve disease, avoid contact with cattle, sheep and goat herds with abortion problems where infection is suspected. If contact cannot be avoided, a mask equipped with a P3 filter should be worn. Furthermore, it is important to correctly dispose of birth-related material in Q fever-positive herds, www.lr.dk.

Commentary

Q fever is endemic to Denmark, but the frequency and spectrum of clinical disease in humans are not fully known at present. However, most cases do not require antibiotic treatment. Person to person transmission has not been documented apart from one case from abroad which describes transfer from placenta tissue during birth. For some risk groups, Q fever can have a serious illness course and chronic disease does occur in a limited number of cases.
Q fever is a newly acknowledged problem in Denmark. Efforts to collect further information in order to assess the risk and substantiate any further prophylactic measures are being planned.
(S. Villumsen, M. Kemp, DBMP, P. Valentiner-Branth, K. Mølbak, Department of Epidemiology)

TB TREATMENT 2005

For 422 of 424 patients (99.5%) notified with tuberculosis in 2005, the treatment outcomes are now known, Table 1 and Table 2.

Table 1. Treatment outcome for all tuberculosis cases, regardless of localisation, 2005

Treatment outcome	Danes	%	Immigrants	%
Cured	55	33	58	23
Completed	87	52	163	64
Treatm. succ.	142	86	221	86
Died	14	8	5	2
Failure	1	1	0	0
Default	3	2	12	5
Transfer out	3	2	10	4
Other/Unkn.	3	2	8	3
Total	166	100	256	100

Table 2. Treatment outcome for all cases of culture-positive pulmonary TB, 2005

Treatment outcome	Danes	%	Immigrants	%
Cured	50	36	49	26
Completed	66	48	110	58
Treatm. succ.	116	85	159	84
Died	13	9	4	2
Failure	1	1	0	0
Default	3	2	10	5
Transfer out	2	1	10	5
Other/Unkn.	2	1	6	3
Total	137	100	189	100

The possible outcomes are: 1. Cured, 2. Treatment completed, 3. Died, 4. Treatment failure, 5. Defaulter, 6. Transfer out (patients who leave Denmark during treatment), 7. Other/unknown. The sum of 1. and 2. comprise the outcome "Treatment success".

Commentary

In 2005, Denmark complied with the WHO target of treating 85% of all TB patients successfully. The outcome "Cured" is used only for patients with culture-positive pulmonary TB and requires a minimum of one negative control culture in the final stage of the treatment course.
(P. H. Andersen, Department of Epidemiology)

MERRY CHRISTMAS & HAPPY NEW YEAR

The staff at the Department of Epidemiology wishes everyone a merry Christmas and a happy New Year.
Unless special circumstances arise, the next issue of EPI-NEWS will not be published until week 2 of 2008.

19 December 2007

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2007 figures are preliminary)

Table 1	Week 50 2007	Cum. 2007 [1]	Cum. 2006 [1]
AIDS	2	47	45
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	7	20
Diphtheria	0	0	0
Food-borne diseases	9	609	554
of these, infected abroad	2	113	131
Gonorrhoea	5	342	408
Haemorrhagic fever	0	0	0
Hepatitis A	1	25	39
of these, infected abroad	0	10	20
Hepatitis B (acute)	0	28	20
Hepatitis B (chronic)	2	298	302
Hepatitis C (acute)	0	8	7
Hepatitis C (chronic)	7	563	435
HIV	8	308	234
Legionella pneumonia	0	116	124
of these, infected abroad	0	32	30
Leprosy	0	0	0
Leptospirosis	0	13	8
Measles	0	2	27
Meningococcal disease	0	62	81
of these, group B	0	35	40
of these, group C	0	19	20
of these, unspec. + other	0	8	21
Mumps	0	11	17
Neuroborreliosis	0	95	89
Ornithosis	1	11	11
Pertussis (children < 2 years)	3	78	52
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	2	5
Listeria monocytogenes	0	10	7
Streptococcus pneumoniae	0	94	83
Other aethiology	0	12	12
Unknown aethiology	0	13	18
Under registration	6	15	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	1	214	64
of these, infected abroad	1	50	54
Syphilis	1	99	67
Tetanus	0	3	2
Tuberculosis	2	381	371
Typhoid/paratyphoid fever	0	23	27
of these, infected abroad	0	22	25
Typhus exanthematicus	0	2	0
VTEC/HUS	2	153	141
of these, infected abroad	0	51	48

[1] *Cumulative number 2007 and in corresponding period 2006*

Selected laboratory diagnosed infections

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

Table 2	Week 50 2007	Cum. 2007 [2]	Cum. 2006 [2]
Bordetella pertussis (all ages)	2	200	219
Gonococci	7	341	403
of these, females	1	58	70
of these, males	6	283	333
Listeria monocytogenes	0	52	53
Mycoplasma pneumoniae			
Resp. specimens [3]	7	362	522
Serum specimens [4]	7	406	415
Streptococci [5]			
Group A streptococci	1	104	131
Group B streptococci	0	95	90
Group C streptococci	0	21	20
Group G streptococci	1	118	136
S. pneumoniae	31	1018	907
Table 3	**Week 48 2007**	**Cum. 2007 [2]**	**Cum. 2006 [2]**
MRSA	12	631	-
Pathogenic int. bacteria [6]			
Campylobacter	29	3778	3049
S. Enteritidis	10	544	544
S. Typhimurium	4	332	395
Other zoon. salmonella	8	679	664
Yersinia enterocolitica	3	265	198
Verocytotoxin-producing E. coli	1	151	141
Enteropathogenic E. coli	11	181	253
Enterotoxigenic E. coli	3	297	234

[2] *Cumulative number 2007 and in corresponding period 2006*

[3] *Resp. specimens with positive PCR*

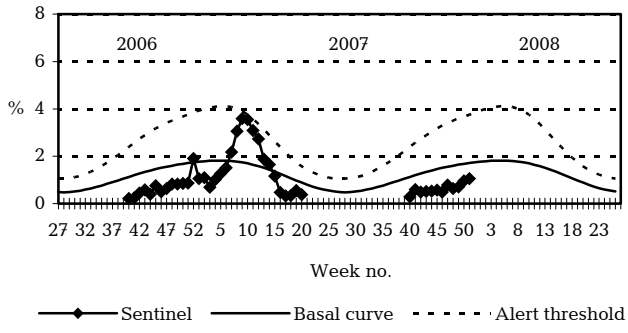
[4] *Serum specimens with pos. complement fixation test*

[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

19 December 2007