EPI-NEWS

NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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PURULENT MENINGITIS 2007

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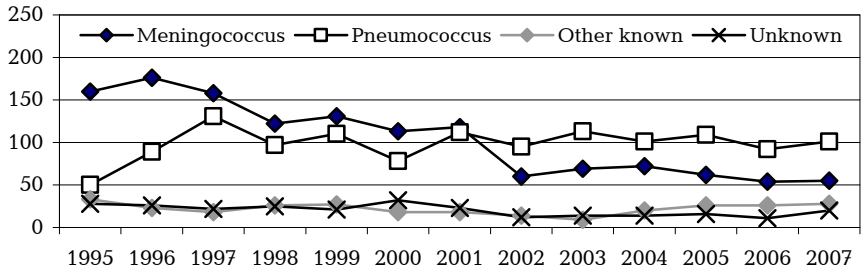
2007 saw 204 notified cases of purulent meningitis. Figure 1 and Table 1 show the distribution by aetiology and age, as well as age-specific incidence. The occurrence of meningococcal disease in 2007 was previously discussed in EPI-NEWS 12-13/08.

Figure 1. Notified cases of purulent meningitis by aetiology, 1995-2007



Pneumococcal meningitis

A total of 101 cases of pneumococcal meningitis were notified, of these 58 were males and 43 females. A reminder was sent for 47 (46%) notifications. A total of 14 (14%) patients were children < 12 months, and 54% were > 50 years old.

For 58 (57%) patients, at least one predisposing factor was known: A total of 36 (36%) had otitis media, 11 (11%) had pneumonia, and one had sinusitis. One patient had an inoperable dural defect and previously had an episode of pneumococcal meningitis. One patient had been operated for a benign brain tumour ten days before, one had sustained a basilar scull fracture, and one suffered head injury four days before with no signs of fracture.

Two patients were previously splenectomized, none of whom had received pneumococcal vaccination. One was in long-term prednisolone therapy due to polymyalgia rheumatica a.o. One patient had myelomatosis and two were chronic alcoholics. In a total of 43 (43%) cases, no information on disposing factors was provided.

A total of 21 (21%) patients died in connection with the infection, one of the deceased was < one year old; all others were > 30 years old. Among the 80 survivors, 37 (46%) are known not to have sequelae, and the remaining 43 (54%) were distributed as follows: Four suffered severe neurological damage; all were > 40 years old. Two patients, both > 60 years old, developed unilateral deafness, and another 12 suffered hearing loss, including one 1-year-old, one 17-year-old and ten patients > 30 years of age. One 60-year-old was subsequently diagnosed with endocarditis, one 38-year-old with chronic interstitial nefropathy due to severe sepsis, and one 40-year-old sustained impaired vision and transitory sixth-nerve palsy. In nine cases, sequelae were still being assessed at notification. In another 13 cases, no information on sequelae was provided.

Streptococcal meningitis

Fifteen patients were notified with meningitis caused by streptococci; nine group B (GBS), three group A (GAS) and three other types. All fifteen cases survived. The age of the GBS patients was 15-49 days (six patients), six months, 50 years and 53 years. The three patients with GAS meningitis were eight, 62 and 66 years old. Among the three patients with other types of streptococci was a 45-year-old who had cut a finger in a pigpen (S. suis), one 49-year-old male with known dural defect (S. mitis) and one 66-year-old with Wegener's granulomatosis (S. intermedius).

Listeria meningitis

Seven cases of meningitis caused by listeria monocytogenes were notified; five females and two males. Six of the patients were > 50 years old, one younger patient - aged 18 years - was undergoing immunosuppressive therapy due to bowel disease. Three elderly patients, 75, 90 and 92 years old, respectively, died.

Haemophilus influenzae meningitis

Two patients were notified with H. influenzae, including one type b and one biotype 2. Both patients were > 70 years old, unvaccinated, and had otitis media. No sequelae have been reported.

Other and unknown aetiology

Three cases of meningitis with other bacterial aetiology were notified, including a 22-days-old infant with E. coli and two patients aged 55 and 73 years with S. aureus. The 55-year-old patient died.

A total of 21 patients aged one day to 77 years suffered meningitis of unknown aetiology. Two patients died.

Commentary

The number of notified meningitis cases was slightly higher than in 2006, but lower than in 2005. Over the last three years, the number of notified cases of GBS meningitis in children under one year of age has increased from two to four and then to seven cases. The increase is probably due to a procedural change, as the reference laboratory now informs the Department of Epidemiology of cerebrospinal fluid findings, so that a reminder may be sent to the clinical department to ensure that each case is notified on the required form.

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Table 1. Cases of purulent meningitis 2007 (2006) by aetiology, age, and incidence per 10^5

Age (years)	Meningo-coccus	Pneumo-coccus	H. influ-enzae	Listeria	Strepto-coccus	Other	Unknown	Total	Inci-dence
0	5	14	0	0	7	1	3	30	46.5
1-5	12	11	0	0	0	0	2	25	7.6
6-10	3	0	0	0	1	0	2	6	1.7
11-15	12	0	0	0	0	0	2	14	4.0
16-20	15	1	0	1	0	0	0	17	5.6
21-30	2	2	0	0	0	0	0	4	0.6
31-40	1	8	0	0	0	0	1	10	1.3
41-50	3	10	0	0	3	0	3	19	2.5
51-60	2	22	0	1	1	1	1	28	3.8
61-70	0	20	0	2	3	0	3	28	5.1
71+	0	13	2	3	0	1	4	23	4.3
Total 2007	55	101	2	7	15	3	21	204	3.8
Total 2006	54	92	4	10	10	2	12	184	3.4

Individually notifiable diseases

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

Table 1	Week 44 2008	Cum. 2008 [1]	Cum. 2007 [1]
AIDS	0	32	44
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	1	0
Creutzfeldt-Jakob	0	3	8
Diphtheria	0	0	0
Food-borne diseases	31	746	552
of these, infected abroad	4	124	104
Gonorrhoea	7	326	309
Haemorrhagic fever	0	0	0
Hepatitis A	5	44	21
of these, infected abroad	2	23	10
Hepatitis B (acute)	0	20	25
Hepatitis B (chronic)	0	148	282
Hepatitis C (acute)	0	6	6
Hepatitis C (chronic)	17	387	527
HIV	3	214	260
Legionella pneumonia	2	107	103
of these, infected abroad	0	37	29
Leprosy	0	0	0
Leptospirosis	2	5	12
Measles	0	10	2
Meningococcal disease	0	46	62
of these, group B	0	19	34
of these, group C	0	15	18
of these, unspec. + other	0	12	10
Mumps	0	24	6
Neuroborreliosis	2	52	86
Ornithosis	0	2	8
Pertussis (children < 2 years)	3	87	70
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	3	2
Listeria monocytogenes	0	1	10
Streptococcus pneumoniae	1	74	90
Other aethiology	0	19	11
Unknown aethiology	1	19	14
Under registration	0	7	-
Rabies	0	0	0
Rubella (congenital)	0	2	0
Rubella (during pregnancy)	0	0	0
Shigellosis	1	68	204
of these, infected abroad	1	55	44
Syphilis	9	119	83
Tetanus	0	1	2
Tuberculosis	7	332	337
Typhoid/paratyphoid fever	0	30	20
of these, infected abroad	0	24	19
Typhus exanthematicus	0	0	2
VTEC/HUS	3	129	137
of these, infected abroad	2	44	45

[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 44 2008	Cum. 2008 [2]	Cum. 2007 [2]
Bordetella pertussis (all ages)	4	163	179
Gonococci	5	307	300
of these, females	1	65	46
of these, males	4	242	254
Listeria monocytogenes	0	41	50
Mycoplasma pneumoniae			
Resp. specimens [3]	1	69	319
Serum specimens [4]	0	68	366
Streptococci [5]			
Group A streptococci	0	120	97
Group B streptococci	4	111	83
Group C streptococci	0	18	19
Group G streptococci	3	112	106
S. pneumoniae	13	770	869

Table 3	Week 42 2008	Cum. 2008 [2]	Cum. 2007 [2]
MRSA	27	606	517
Pathogenic int. bacteria [6]			
Campylobacter	81	2843	3428
S. Enteritidis	13	549	476
S. Typhimurium	34	1706	295
Other zoon. salmonella	13	859	616
Yersinia enterocolitica	4	273	224
Verocytotoxin-producing E. coli	2	133	136
Enteropathogenic E. coli	5	168	156
Enterotoxigenic E. coli	9	340	253

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

[3] *Resp. specimens with positive PCR*

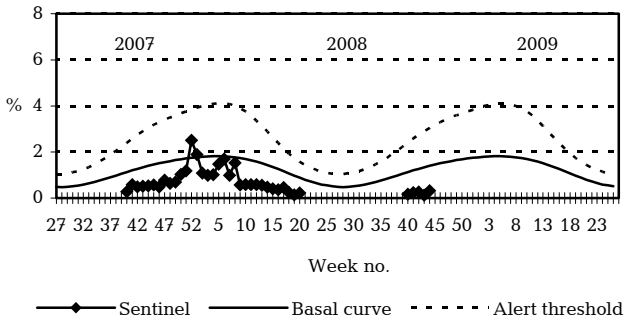
[4] *Serum specimens with pos. complement fixation test*

[5] *Isolated in blood or spinal fluid*

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

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 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

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