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PURULENT MENINGITIS 2000

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In the year 2000, 236 patients were notified with purulent meningitis. Meningococcal meningitis has been reported separately in EPI-NEWS 18/01. Fig. 1 and Table 1 show the distribution by aetiology and age, as well as the age-specific incidence.

Pneumococcal meningitis

77 patients were notified with pneumococcal meningitis, which is the lowest figure for five years (89-131); EPI-NEWS 49/00 and 50/00. Thirty-nine notifications (51%) were only received after a reminder had been sent. 10% of cases were in children under one and 73% in patients over 40 years of age.

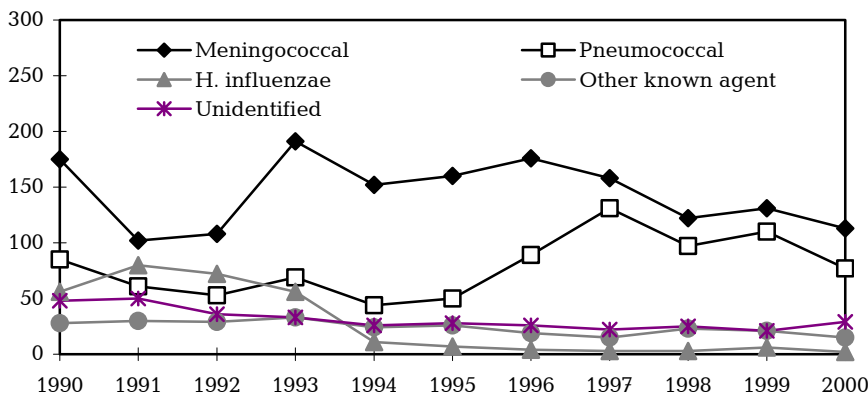
Fiftythree patients (69%) had predisposing factors; 31 had had otitis media or other otorhinolaryngological infection, 10 had had pneumonia and nine had other predisposing factors. A further three patients were splenectomized; all had been given pneumococcal vaccination, one within the last year, no vaccination dates being stated for the other two patients.

Seven patients suffered hearing loss or deafness and nine had neurological sequelae. Fourteen patients (18%) died in connection with the infection. The mortality varied with age, being 7% for 0-20 year-olds, 17% for 21-60 year-olds and 30% for those over 60.

H. influenzae meningitis

Two patients were notified with H. influenzae meningitis, both children in their first year of life. H. influenzae type b (Hib) was isolated from one of these, who had recently arrived in Denmark and was probably unvaccinated. The child developed a subdural haematoma

Fig. 1. No. of notified cases of purulent meningitis, by bacterial aetiology, 1990-2000



but recovered without sequelae. Uncapsulated (non-b) H. influenzae was isolated from the other child. This child had previously had bilateral otitis media and had been Hib-vaccinated twice.

Listeria meningitis

Six patients were notified with Listeria meningitis, aged 22 to 89 years, median age 74 years. Three of the patients had a predisposing factor in the form of another underlying disease. One patient died and one suffered permanent brain damage as a result of the infection.

Streptococcal meningitis

Six patients were notified with meningitis caused by haemolytic streptococci, three of group A and three of group B. Two of the patients were under two months of age; one developed subdural empyema, but had no sequelae. Two patients aged 65 and 86 years, respectively, died in connection with the infection.

Meningitis due to other bacteria

Three patients were notified with

meningitis of other known aetiology. A 76-year-old man had meningitis due to E. coli, preceded by urinary retention and urinary tract infection. A 63-year-old man had meningitis due to Capnocytophaga canimorsus (DF2). The source of the infection was unknown. A 20-year-old man had meningitis caused by Fusobacterium necrophorum, EPI-NEWS 12/00. This patient also had pleurisy and septicaemia on admission. None of the three patients had sequelae.

Purulent meningitis of unknown aetiology

Twentynine patients were notified with purulent meningitis of unknown aetiology. These were aged 0-86 years, with a median age of 27 years. Six had been treated with antibiotics prior to lumbar puncture, eight were MAT (meningococcal antibody test) negative. One patient suffered hearing loss after the infection and one patient died.

(A. H. Christiansen, S. Samuelsson, Department of Epidemiology)

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Table 1. No. of patients with purulent meningitis in 2000 (1999) by aetiology and age, with age-specific incidence per 100,000

Age (years)	Meningococcal	Pneumococcal	H. influenzae	Listeria	S. haemolyticus	Others	Unknown	Total	Incidence
<1	13	8	2	-	2	-	1	26	39
1-5	29	6	-	-	1	-	1	37	11
6-10	14	1	-	-	1	-	7	23	7
11-15	10	-	-	-	-	-	3	13	4
16-20	18	-	-	-	-	1	1	20	7
21-30	8	2	-	1	-	-	5	16	2
31-40	4	4	-	-	-	-	3	11	1
41-50	3	12	-	-	-	-	-	15	2
51-60	4	17	-	1	-	-	1	23	3
61-70	4	13	-	1	1	1	1	21	5
71+	6	14	-	3	1	1	6	31	6
Total 2000	113	77	2	6	6	3	29	236	4
(Total 1999)	(131)	(110)	(6)	(6)	(7)	(8)	(21)	(289)	(5)

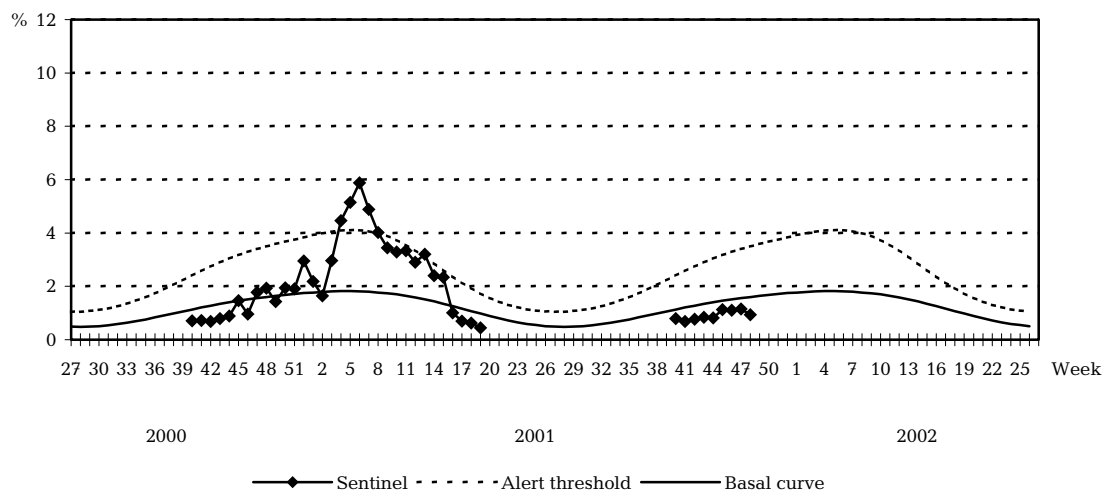
Patients with positive cultures of pathogenic intestinal bacteria, September-October 2001

County	Campylobacter		Yersinia ent.		S. typhimurium		S. enteritidis		Other zoon. Salmonella spp.	
	Sep	Oct	Sep	Oct	Sep	Oct	Sep	Oct	Sep	Oct
Copenhagen Municip.	56	37	4	1	13	4	16	24	10	9
Frederiksberg Municip.	9	5	-	-	-	1	1	-	1	-
Copenhagen	86	58	7	7	9	-	13	16	13	10
Frederiksborg	39	24	4	-	3	3	12	10	4	2
Roskilde	42	20	2	-	3	3	6	9	3	4
West Zealand	21	10	3	1	4	-	5	17	1	4
Storstrøms	23	19	5	-	2	5	10	6	3	4
Bornholms	5	2	-	-	-	-	-	1	-	1
Funen	64	36	5	7	9	4	19	12	8	6
South Jutland	25	15	1	-	7	2	8	8	4	1
Ribe	25	23	3	3	1	1	4	8	2	-
Vejle	32	23	-	-	5	1	14	11	7	5
Ringkøbing	26	24	1	4	5	9	5	12	4	10
Aarhus	75	29	7	2	9	6	17	20	11	8
Viborg	26	23	-	1	24	9	10	6	4	6
North Jutland	38	23	2	1	12	5	16	16	10	8
Unknown	-	-	-	-	-	-	-	-	-	-
DK Sep/Oct 2001	592	371	44	27	106	53	156	176	85	78
DK Sep/Oct 2000	398	309	26	20	34	47	141	99	56	63

(Dept. of Gastrointestinal Infections)

Sentinel surveillance of influenza activity

Weekly percentage of consultations, 2000/2001/2002



- Sentinel:** Influenza consultations as % of total consultations
Basal curve: Expected frequency of influenza consultations under non-epidemic conditions
Alert threshold: Possible incipient epidemic

(Dept. of Epidemiology)