

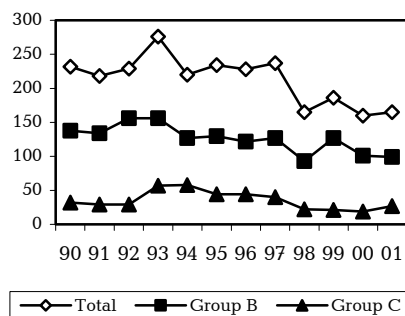


MENINGOCOCCAL DISEASE 2001

No. 16, 2002

In 2001, a total of 165 cases of meningococcal disease (MD) were notified, representing the same low level as the previous three years, [Fig 1](#). In 40% of cases, a reminder was sent to obtain written notification.

Fig. 1. No. of notified cases of meningococcal disease, 1990-2001



The incidence was highest among 0-2-year-olds, but it was also high among 14-17-year-olds, [table 1](#). Of the 165 patients, 22 had meningitis, 47 septicaemia, and 96 had both meningitis and septicaemia as clinical manifestation.

Sequels of the disease

A total of 12 patients (7%) died, [table 1](#); all patients had septicaemia with or without meningitis. Five had MD group B, four MD group C, one MD group Y, and two had clinical meningococcal disease. Mortality was 17% for <1-year-olds, 3% for 1-39-year-olds and 18% for ≥ 40-year-olds.

For 18 patients, information was provided about serious sequelae: three patients developed impaired hearing, two were subsequently treated for epilepsy, one developed facial paresis, seven developed skin necrosis, three developed reactive arthritis, one developed both peri- and myocarditis, one developed acute renal failure and received dialysis treatment. All the patients had septi-

caemia with or without meningitis as clinical manifestation.

Diagnosis

In 134 (81%) of patients, meningococci were found on culture. In the remaining 31 patients, the diagnosis in one case was verified by counter-immunoelectrophoresis, in 22 (13%) by positive meningococcal antibody titre (MAT), in four (2%) by microscopy, and four (2%) were diagnosed clinically.

In 128 of the culture-confirmed cases, sero grouping was performed by the Neisseria Unit:

Serogroup A:	2	(2%)
Serogroup B:	97	(76%)
Serogroup C:	26	(20%)
Serogroup W135:	2	(2%)
Serogroup Y:	1	(<1%)

None of the four patients with MD group A or W135 had had foreign contact, including Mecca.

The number of patients with MD group C has increased a little compared to the last three years, but is still low. Age distribution is shown in [table 1](#).

Distribution by county

The incidence of MD increased substantially in Viborg County, [table 2](#). Four of the clusters described occurred in Viborg County, but they were otherwise unconnected.

Case clusters

Three co-primary and four secondary cases were notified.

- Two siblings became ill within 24 hours. Both had MD group B.
- One child and one adult became ill simultaneously. One of the cases was MD group B, the other case was diagnosed clinically.
- Two pupils in the same school class became ill within 24 hours of each other. One of the cases was MD group B, the other was verified by

Table 2. No. of patients with meningococcal disease in 2001, by county, and incidence per 100,000.

County	No.	Incidence
Cph. Municip.	15	3.0 (2.6)
Frb. Municip.	0	0.0 (1.1)
Copenhagen	11	1.8 (3.4)
Frederiksborg	9	2.4 (2.5)
Roskilde	6	2.6 (2.2)
West Zealand	7	2.4 (3.4)
Storstrøm	2	0.8 (1.9)
Bornholm	0	0.0 (2.3)
Funen	17	3.6 (2.5)
South Jutland	10	3.9 (2.8)
Ribe	7	3.1 (3.6)
Vejle	14	4.0 (3.7)
Ringkøbing	10	3.7 (4.0)
Aarhus	16	2.5 (2.0)
Viborg	18	7.7 (3.0)
North Jutland	21	4.2 (4.5)
Other	2	-
Total	165	3.1 (3.0)

positive MAT.

- Two cousins became ill with an interval of 48 hours. Both cases were MD group B.
 - Two pupils in the same continuation school became ill with an interval of three days. Both cases were MD group B.
 - Two children in the same kindergarten became ill with an interval of four days. Both cases were MD group C.
 - Two pupils in the same upper secondary school became ill with an interval of 19 days. Both cases were MD group C.
- In addition, two pupils at the same continuation school became ill with an interval of just under four months. Both cases were MD group B. There were three cases of MD in Kolding within 48 hours. However, there was no link between these.
 (A. H. Christiansen, S. Samuelsson, Department of Epidemiology)

MENINGOCOCCAL DISEASE: OUTBREAK IN BURKINA FASO

A major outbreak of MD group W135 has been reported in Burkina Faso, and it is therefore recommended to use the tetravalent meningococcus vaccine A+C+W135+Y when travelling to this destination.
 (Department of Epidemiology)

RABIES IN SHEEP IN WESTERN JUTLAND: See overleaf.

17 April 2002

Table 1. No. of notified cases of meningococcal disease, 2001, by age, serogroups B and C, M/F ratio, incidence per 100,000 and no. of deaths

Age (years)	Gr. B	Gr. C	Total	M/F ratio	Incidence	Deaths
< 1	16	0	18	0.6	26.8	3
1-2	18	3	28	1.8	21.0	1
3-6	11	4	18	0.8	6.4	2
7-13	19	3	27	1.7	5.9	0
14-17	16	7	33	0.9	14.7	1
18-29	6	3	13	0.9	1.6	0
30-39	0	0	0	0.0	0.0	0
40+	13	7	28	0.9	1.1	5
Total	99	27	165	1.1	3.1	12

SHEEP INFECTED WITH RABIES VIRUS FROM BATS (EBL)

Bats may be infected with a less pathogenic rabies virus known as European Bat Lyssavirus (EBL). At the beginning of April this year, EBL infection was detected in one single sheep, originating from a herd in western Jutland. The sheep showed characteristic clinical disturbances in the central nervous system, and upon examination, EBL was found in all regions of the brain.

In addition to a few human fatalities, EBL has earlier occurred a few times in relation to infections in sheep and animals of the marten family. In Denmark, these infections were first described in sheep in 1998, simultaneously with a rise in the number of EBL infections in bats. The sheep in question also displayed the histological symptoms of a listeria infection, which can in itself be pathogenic. A subsequent experimental infection of four sheep failed to reveal any of these agents as the primary aetiological cause of the clinical symptoms, EPI-NEWS 13/00.

The infected sheep in western Jutland was located in close geographical proximity to the earlier reported cases. The incidence of EBL in bats is currently low, and the means by which the infection was transmitted are unknown. The activation of a possible latent EBL infection in connection with the lambing season, and the possible existence of unknown secondary hosts, such as wild mink, should also be considered.

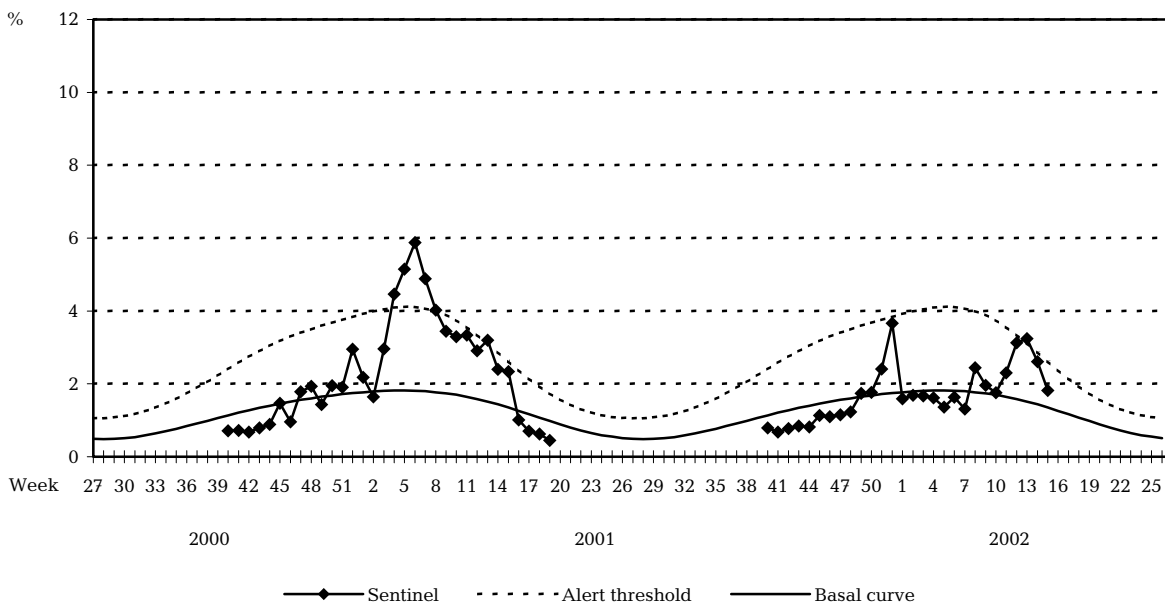
EBL infection is apparently very rare in sheep. Only animals with clinical symptoms might be contagious. The infection can only be passively transmitted to for instance man via salivary secretion if there are open sores or cuts on the affected part of the body.

In the current case, four persons have been given prophylactic treatment.

(L. Rønsholt, Danish Veterinary Institute, Lindholm)

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)