

## PURULENT MENINGITIS 2002

No. 35, 2003

In 2002, there were 181 notified cases of purulent meningitis. [Fig. 1](#) and [Table 1](#) show the distribution by aetiology, age and age-specific incidence. Meningococcal meningitis has previously been discussed in EPI-NEWS 17/03.

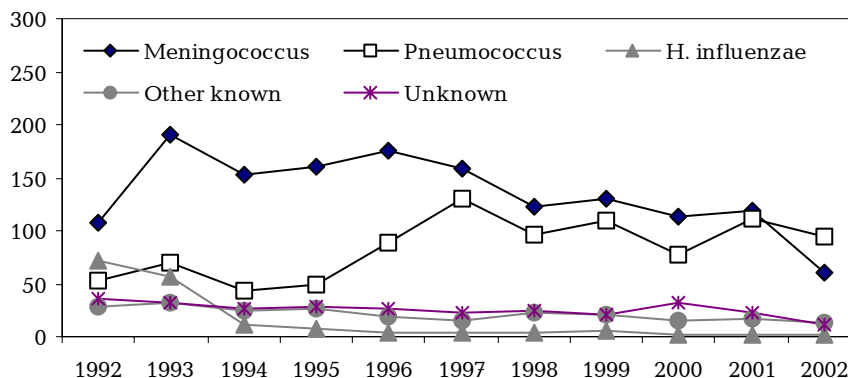
### Pneumococcal meningitis

Pneumococcal meningitis was notified in 95 patients, 47 males and 47 females; one patient developed pneumococcal meningitis twice. This represents a decline of 17 cases relative to 2001, EPI-NEWS 41/02.

A reminder was sent for 53 (56%) notifications. 14% of the cases were children <1 year of age, 58% were persons >40 years, and 18% were >65 years of age. At least 58 (61%) patients had a predisposing factor: 29 had otitis media or other ear-nose-throat infection, six had pneumonia and one had another infection. Four had a dural defect, two had a previous cranial fracture, one had shunt dysfunction and one other had facial haemangioma. Two were alcoholics and 10 had some other predisposing factor. Two had previously undergone splenectomy and had been vaccinated; one of them within five years, while the vaccination time for the other case was unknown. In both cases, pneumococci were isolated with serotypes that are not covered by the 23-valent pneumonia polysaccharide vaccine. For 42 (44%) patients, information was available on sequelae or death. At least 10 suffered hearing impairment, and nine developed neurological sequelae. Two developed reactive arthritis and two other sequelae.

A total of 19 (20%) patients died in association with the infection. Mortality varied with age: 0-20 years: 4%, 21-60 years: 18%, >60 years: 40%.

**Fig. 1. Patients notified with purulent meningitis, by bacteriological aetiology, 1992-2002**



### H. influenzae meningitis

One case of H. influenzae non-capsular meningitis was notified in a 50-year-old woman who subsequently developed dizziness and a balance disorder.

### Listeria meningitis

Listeria meningitis was notified in five cases: three males, aged 57, 61 and 78 years, and two females, aged 1 and 56 years. One patient had another underlying disease, and one had consumed unpasteurised milk abroad. One patient developed impaired vision and coordination difficulty in the limbs, and one patient died in association with the infection.

### Streptococcal meningitis

Five patients were notified with streptococcal meningitis, one haemolytic gr. A, two haemolytic gr. B and two non-haemolytic. These included four females, aged 3 weeks, 4 weeks, 20 years and 85 years, and a 65 year-old-man. One patient developed sequelae in the form of aphasia and hemiparesis. The two infants died in association with the infection.

### Other bacterial aetiologies

Three patients were notified with meningitis due to other known causes. Two males, aged 29 and 54 years, had meningitis caused by Staphylococcus aureus, and one of them died in association with the infection. A woman aged 56 had meningitis caused by Klebsiella pneumoniae.

### Purulent meningitis, unknown aetiology

Meningitis of unknown aetiology was notified in 12 patients. The patients were aged 1-74 years (median 34 years), and all were either <7 years or >60 years. Six patients had negative MAT (meningococcal antibody test).

### Comments

The age-specific incidence of purulent meningitis is highest in children <1 year. The number of cases of meningococcal meningitis declined by 49% over the previous year and is for the first time lower than the number of cases of pneumococcal meningitis. (A. H. Christiansen, S. Samuelsson, Department of Epidemiology)

27 August 2003

**Table 1. Patients with purulent meningitis 2002, by aetiology, age and age-specific incidence per 10<sup>5</sup>**

| Age (years)   | Meningococcus | Pneumococcus | H. influenzae | Listeriosis | Streptococcus | Other | Unknown | Total | Incidence |
|---------------|---------------|--------------|---------------|-------------|---------------|-------|---------|-------|-----------|
| 0             | 7             | 13           | -             | -           | 2             | -     | -       | 22    | 33.6      |
| 1-5           | 14            | 11           | -             | 1           | -             | -     | 5       | 31    | 9.1       |
| 6-10          | 5             | 1            | -             | -           | -             | -     | 1       | 7     | 2.0       |
| 11-15         | 10            | 0            | -             | -           | -             | -     | -       | 10    | 3.2       |
| 16-20         | 10            | 1            | -             | -           | 1             | -     | -       | 12    | 4.3       |
| 21-30         | 2             | 2            | -             | -           | -             | 1     | -       | 5     | 0.7       |
| 31-40         | 2             | 12           | -             | -           | -             | -     | -       | 14    | 1.7       |
| 41-50         | 1             | 9            | 1             | -           | -             | 1     | -       | 12    | 1.6       |
| 51-60         | 4             | 21           | -             | 2           | 1             | -     | 1       | 29    | 3.9       |
| 61-70         | 1             | 15           | -             | 1           | -             | -     | 3       | 20    | 4.2       |
| 71+           | 4             | 10           | -             | 1           | 1             | 1     | 2       | 19    | 3.6       |
| Total, 2002   | 60            | 95           | 1             | 5           | 5             | 3     | 12      | 181   | 3.4       |
| (Total, 2001) | (118)         | (112)        | (1)           | (4)         | (6)           | (7)   | (23)    | (271) | (5.1)     |

## Patients with selected individually notifiable diseases

Notifications received during the 2nd quarter of 2003, compared with the corresponding period in 2002

| County            | Tuberculosis |      | Meningococcal disease |      | Pertussis < 2 yrs |      | Chronic Hepatitis B |      | Hepatitis A |      | AIDS |      |
|-------------------|--------------|------|-----------------------|------|-------------------|------|---------------------|------|-------------|------|------|------|
|                   | 2003         | 2002 | 2003                  | 2002 | 2003              | 2002 | 2003                | 2002 | 2003        | 2002 | 2003 | 2002 |
| Cph. Municipality | 22           | 34   | -                     | 1    | 1                 | 7    | 8                   | 2    | -           | 2    | 1    | 3    |
| Frø. Municipality | 2            | 4    | -                     | 1    | 1                 | -    | 2                   | 1    | -           | -    | 1    | 2    |
| Cph. County       | 23           | 14   | 1                     | 1    | -                 | 1    | 8                   | 8    | 1           | 1    | 5    | -    |
| Frederiksborg     | 4            | 2    | -                     | 1    | 1                 | 4    | 7                   | 1    | 1           | 3    | 1    | 1    |
| Roskilde          | 3            | 3    | -                     | 2    | -                 | 6    | -                   | 1    | -           | -    | -    | -    |
| West Zealand      | 3            | 3    | 1                     | -    | 2                 | 5    | -                   | 1    | 1           | -    | -    | 1    |
| Storstrøm         | 5            | 4    | 1                     | 3    | 1                 | -    | 4                   | -    | -           | 1    | -    | 1    |
| Bornholm          | -            | -    | -                     | -    | -                 | -    | -                   | -    | -           | -    | -    | -    |
| Funen             | 3            | 8    | -                     | 3    | -                 | 14   | 2                   | 2    | 1           | -    | -    | 2    |
| South Jutland     | 1            | 3    | 2                     | 2    | -                 | -    | 1                   | -    | 5           | -    | -    | -    |
| Ribe              | 3            | 2    | 2                     | 2    | -                 | 5    | -                   | -    | -           | -    | -    | -    |
| Vejle             | 4            | 5    | 5                     | 3    | -                 | 2    | -                   | -    | -           | 2    | -    | -    |
| Ringkøbing        | 3            | 2    | 4                     | -    | 1                 | 8    | 8                   | -    | 1           | -    | -    | 1    |
| Aarhus            | 15           | 13   | 1                     | 2    | 5                 | 10   | 6                   | 10   | 2           | 2    | 1    | 3    |
| Viborg            | 1            | 2    | 3                     | 1    | -                 | 10   | 2                   | 1    | 1           | 1    | -    | -    |
| North Jutland     | 15           | 10   | 7                     | 2    | -                 | 7    | -                   | 1    | -           | -    | -    | 4    |
| Other             | 2            | 1    | -                     | 1    | -                 | -    | 1                   | 4    | -           | -    | -    | -    |
| Total             | 109          | 110  | 27                    | 25   | 12                | 79   | 49                  | 32   | 13          | 12   | 9    | 18   |

## Patients with other individually notifiable diseases

Notifications received during the 2nd quarter of 2003 compared with the corresponding period in 2002, DK

|                           | 2nd quarter |      |
|---------------------------|-------------|------|
|                           | 2003        | 2002 |
| Creutzfeldt-Jakob disease | 6           | 2    |
| Foodborne diseases        | 102         | 128  |
| Hepatitis B - acute       | 13          | 19   |
| Hepatitis C - acute       | 1           | 3    |
| Hepatitis C - chronic     | 57          | 120  |
| Hib-meningitis            | -           | -    |
| Legionella pneumonia      | 21          | 19   |
| Measles                   | -           | 2    |
| Neuroborreliosis          | 3           | 3    |
| Paratyphoid fever         | 4           | 1    |
| Pneumococcal meningitis   | 35          | 45   |
| Psittacosis (ornithosis)  | 1           | 2    |
| Shigellosis               | 16          | 27   |
| Typhoid fever             | 1           | 1    |
| VTEC/HUS                  | 14          | 23   |

(Department of Epidemiology)