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HEPATITIS A 2002

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In 2002, there were 83 notified cases of acute hepatitis A, an increase of 32% over 2001. The incidence per 10^5 was 0.8 among Danes and 10.6 among immigrants. The increase is due to an outbreak in Holstebro (described below) involving 25 cases, including 21 in 2002. Of the remaining 62 cases, 22 were from Greater Copenhagen and 18 from Aarhus County. Males and females were equally distributed; 26 were Danes and 36 were immigrants.
A total of 34 (55%) were <20 years of age, and of these 33 (97%) were immigrants. Eighteen were children <10 years of age, including seven <5 years. Among the 28 adults, three (11%) were immigrants. A total of 27 (44%) patients, 23 immigrants and four Danes, were infected abroad from 10 different countries: Pakistan (8), Turkey (5), Lebanon (4) and other countries (7). In three cases, the country of infection was not stated. Thirty-five (56%) cases, 22 Danes and 13 immigrants, were infected in Denmark, table 1.

Table 1. Notified cases of hepatitis A-infected persons in Denmark, by mode of infection, 2002

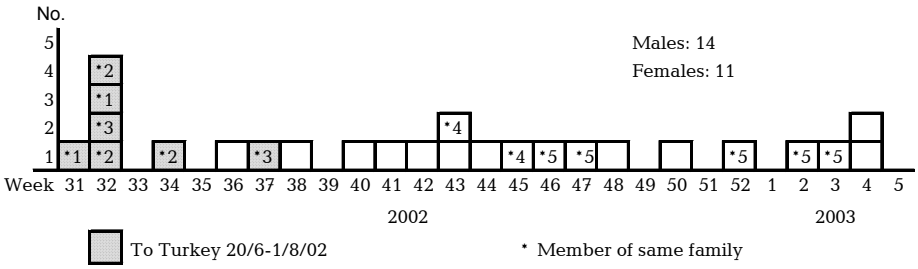
	No.	%
Member of household	12	34
Child in institution	4	11
Family not household	1	3
Unknown	18	51
Total	35	99

A total of 35 (56%) patients were admitted to hospital in relation to hepatitis A infection, of these, 12 were <15 years old, all were immigrants.
Occupational infection was presumed in three cases, all were childminders, two of whom worked in the same nursery.
Information on immunoprophylaxis was provided in 25 (40%) cases. Two had received immunoglobulin in connection with infection of their spouses and one patient was vaccinated with an unknown vaccine in Pakistan. The rest had not received immunoprophylaxis.

Outbreaks

Five household outbreaks (15 cases) were recorded and could be related to infection abroad. Also recorded, were three household (nine cases) and two institutional outbreaks (seven cases) with unknown source of infection.
(G. H. Kock-Hansen, K. Mølbak, Department of Epidemiology)

Fig. 1. Epidemic curve for hepatitis A outbreak in Holstebro, 2002-2003



HOLSTEBRO OUTBREAK, 2002-03

From August 2002 to January 2003, 25 cases of hepatitis A (HAV)(14 males, 11 females) were notified from Ringkøbing County. In the preceding six years, there were only three notified cases. All were residents of Holstebro, giving an incidence of 61.0 per. 10^5 in 2002. Sixteen (64%) cases were children aged 4-15 years, while the rest belonged to the parental generation, 29-48 years. The earliest cases included seven children from three families who had been on a trip together to Turkey, figure 1. These children attended institutions and schools to which subsequent cases could be related; and from where further spread of infection to other families occurred. In autumn 2002, the local Medical Office of Health (MOH) informed the schools about the outbreak and emphasised strict hygiene. In spring 2003, the Department of Epidemiology and the local MOH conducted a retrospective outbreak investigation.

Case-control study

The index case of each affected household was invited to participate. The study included 16 cases and 64 controls. Data on exposures in a two-month period prior to the onset of illness and an equivalent period for controls were collected via telephone interviews. Multivariate logistic regression analysis showed that the risk of infection was associated with: contact to affected after-school clubs (odds ratio 29.6); household member of child in affected school class/-childcare institution (odds ratio 9.5) and non-Danish origin (odds ratio 4.3). No person in the study had been vaccinated against hepatitis A or received immunoglobulin.

Sero-epidemiological study

To assess the incidence of subclinical cases of hepatitis A (HAV), a serological study using sputum samples was conducted. HAV positivity was defined as IgM or IgG positivity.
All 16 households with cases were studied. Among 50 Danes, 29 were HAV-positive, 15 of whom were notified. Among 27 immigrants, 23 were positive, and of these, eight were notified. A total of 476 sputum samples were collected from three child-care institutions and four schools. Among 451 children of Danish origin, six (1.3%) were HAV-positive, whereas among 25 immigrants, six (24%) were positive. The proportion of seropositive children was not higher in classes or institutions with notified cases relative to other classes.

Comments

The outbreak, which is the largest outbreak of hepatitis A in Denmark to-date, was originally due to infection from children who had visited an endemic area. In this way the outbreak thus resembles many other minor outbreaks in Denmark. The National Board of Health recommends that children of immigrants be vaccinated before visiting their home country or other trips abroad with risk of infection, EPI-NEWS 35/2002. Nine of the 25 patients were infected within their households, and more of these cases could presumably have been prevented by immunoprophylaxis. If quick protection of transient duration is desired, immunoglobulin may be used. This provides some degree of protection, even after exposure to infection.
Furthermore, the survey suggests that infection does not only occur in day-care centres and schools, but also in after-school clubs, which ought to be taken into consideration with regard to hygiene initiatives during outbreaks. The serological investigation suggests that the occurrence of subclinical cases in classes attended by cases and case household members was modest.
(A. Gervelmeyer, M. Søborg Nielsen, K. Mølbak, Dept. of Epidemiology, L. Frey, H. Sckerl, E. Damberg, MOH, Ringkøbing County)

3 September 2003

Patients with laboratory-diagnosed RSV and rotavirus infections

2nd quarter of 2003 compared with the corresponding period in 2002

	RSV		Rotavirus	
	2003	2002	2003	2002
April	48	56	81	50
May	1	16	63	37
June	0	3	21	21
Total	49	75	165	108

Reported from the following Clinical Microbiology departments:

Aalborg Hospital (South), Aarhus Municipal Hospital, Herning Central Hospital, Hvidovre Hospital, Odense University Hospital, Slagelse Central Hospital, Viborg Hospital, Dept. of Virology, SSI.

Patients with laboratory-confirmed pertussis

2nd quarter of 2003 compared with the corresponding period in 2002

	2003				2002			
	April	May	June	Total	April	May	June	Total
< 2 years	4	3	5	12	30	23	28	81
2-17 years	7	20	22	49	60	71	134	265
≥ 18 years	2	6	5	13	16	23	35	74
Total	13	29	32	74	106	117	197	420

(Dept. of Respiratory Infections, Meningitis and STIs)