EPI•NEWS
NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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REVISED GUIDELINES FOR PREVENTION OF VIRAL HEPATITIS

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In July this year, the National Board issued: "Guidelines for the Prevention of Viral Hepatitis" which are a revision of those published in 1996. In the new guidelines, up-to-date information on hepatitis A (HAV) and B (HBV) is provided, the description of hepatitis C (HCV) has been expanded, and both hepatitis D and E are mentioned. Furthermore, independent sections have been written to include issues on legal aspects, compensation and pregnant women with HBV infection. Finally, there are references to patient associations and educational material. Some of the most important aspects are discussed below:

Hepatitis A

Based on the number of notifications, the incidence of acute HAV in Denmark is low. The most significant exposure occurs during foreign travel particularly in the immigrant population during visits to the countries of origin. HAV infection is usually asymptomatic in small children with the infection being subclinical in about 90% of pre-school age children. Currently there are two possibilities for immunoprophylaxis: vaccination and human normal immunoglobulin. Vaccination with two doses provides protection for many years and may be used for children >1 year of age. It is recommended that children born in Denmark to parents from endemic areas be vaccinated before they visit their country of origin. Immunoglobulin provides short-term protection making it suitable for outbreak control. It can be given to both children <1 year of age and to pregnant women, and the dose is always 0.02 ml/kg body weight.

How much time may elapse between the 1st and 2nd vaccination against hepatitis A?

Antibodies can already be detected shortly after the first vaccination. Since the incubation period for the disease is 2-6 weeks, even one vaccination just before departure will provide protection for many months. It is generally recommended that the second dose be given 6-12 months following, after which protection can be expected for at least 20 years. However, studies have shown that an adequate serological response can be achieved even though the second dose is given 3-4 years later following the first dose. Finally, several studies suggest that if a good serological response is achieved after the primary vaccination course, life-long protection against HAV disease can be expected. However, this has not yet been finally clarified.

Hepatitis B

The prevalence of chronic HBV infection is estimated to have risen threefold to about 15,000 mostly related to the increase in immigration in the last 25 years. The National Board of Health therefore recommends that refugees and immigrants from high endemic areas be tested for HBV infection in order to offer protection by means of counselling and vaccination. Furthermore, it is recommended that children and staff in day-care centres attended by children with chronic HBV be vaccinated against HBV, even though the risk of infection in child-care institutions is considered very small. Pregnant women play a central role in the spread of HBV, since > 90% of newborns infected at birth will, if un-treated, develop chronic HBV infection. By comparison, <1% of young adults develop chronic HBV after acute HBV, and in 5-10% the disease is subclinical. The incidence of chronic HBV infection is thus dependent on the extent of perinatal infection. It is therefore crucial to identify pregnant women with chronic infection. Currently, selective screening is recommended at the first pregnancy examination in women at special risk. The National Board of Health is considering a proposal from SSI for general screening of all pregnant women for HBV. The diagnosis of HBV infection is made on detection of HBsAg in a blood sample. It is crucial that children born to pregnant women with chronic HBV be vaccinated. For newborns, a four-dose programme is recommended: the first dose is given within 48 hours of birth, and the next three after 1 month, 2 months and 12 months, respectively. Hepatitis B immunoglobulin must be given along with the first vaccination.

Actions to be taken if a person is seronegative after a full course of vaccinations against HBV
About 90-95% of immunocompetent persons fully vaccinated against HBV will produce protective antibodies after vaccination is completed. Young people generally respond better to the vaccine than older persons. However, people without measurable antibodies are not necessarily unprotected against clinical hepatitis. The vaccine is a recombinant vaccine and cellular immunity plays a major role. It is generally not recommended to measure antibodies after the vaccination course is complete. An exception is made for haemodialysis patients who should be tested annually. If there are few or no antibodies, it is recommended to give one more vaccination dose and to measure antibodies again four weeks later. If there is still no response, a further two vaccination doses are given after 1 and 6 months, respectively, corresponding to a new course of vaccinations. Irrespective of antibody level, no further vaccinations should be given. Certain factors predispose to reduced response, including dialysis, HIV, smoking and age >50 years. A double dose of vaccine should be used in people >10 years of age with Down's syndrome.

Hepatitis C

In Denmark, about 15,000 persons are infected with HCV, of whom almost 80% are intravenous drug users (IVDU). Other infected persons are primarily recipients of multiple blood transfusions with blood/blood products before blood screening became compulsory in 1991. It is relevant to test IVDU and immigrants who have been exposed to invasive procedures and blood transfusion in their home country for chronic HCV infection.

Treatment of HBV and HCV

Treatment of both chronic HBV and HCV is a specialist's task. In recent years, significant progress with the use of antiviral agents has been made in this field. In some patients with HCV, treatment is curative.

Compensation matters

Certain social groups have access to free vaccination: 1) newborns and children < 2 years of age born to women with chronic HBV infection, 2) children and employees in day-care centres, where the Medical Officer of Health knows of a child with chronic HBV infection and 3) IVDU in prisons. Other groups of people for whom vaccination is recommended can be awarded a subsidy for the HBV vaccine by application on a special form to the Danish Medicines Agency. Human normal immunoglobulin can be obtained free of charge from SSI on the recommendation of the Medical Officer of Health in connection with outbreaks of HAV.

(E. Smith, Dept. of Epidemiology)

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Patients with selected individually notifiable diseases

Notifications received during January-March 2002 compared with the same period of 2001

	AIDS		Hepatitis A		Meningococcal disease		Tuberculosis	
County	2002	2001	2002	2001	2002	2001	2002	2001
Cph. Municipality	7	6	7	2	3	5	26	43
Frb. Municipality	1	3	-	-	-	-	4	-
Copenhagen	2	2	2	-	2	5	19	22
Frederiksborg	-	1	-	1	4	2	6	4
Roskilde	-	-	-	-	1	1	-	2
West Zealand	2	1	1	-	4	-	3	3
Storstrøm	-	-	-	1	1	1	2	5
Bornholm	-	-	-	-	-	-	-	-
Funen	-	1	-	-	3	9	11	16
South Jutland	-	-	-	-	1	2	1	2
Ribe	-	-	-	-	3	5	3	-
Vejle	1	1	1	-	2	5	3	5
Ringkøbing	-	1	-	-	6	3	2	1
Aarhus	-	1	6	1	6	2	12	14
Viborg	-	-	-	1	1	11	4	4
North Jutland	-	1	1	-	3	12	12	11
Other	1	1	-	1	-	1	5	-
Total	14	19	18	7	40	64	113	132

Patients with other individually notifiable diseases

Notification received during January-March 2002 and 2001, whole country

	2002	2001
Bacterial meningitis	46	49
Hepatitis B - acute	11	13
Hepatitis B - chronic*	28	44
Hepatitis C - acute	-	1
Hepatitis C - chronic*	57	62
Legionellosis	15	18
Measles	24	1
Mumps	2	3
Paratyphoid fever	1	1
Pertussis < 2 years	87	33
Psittacosis	3	6
Shigellosis	19	44
Typhoid fever	-	4

* Chronic hepatitis B og C were made notifiable by 1 May 2000

Patients with laboratory-confirmed pertussis

2nd quarter 2002

	April	May	June	Total
< 2 yrs	30	23	28	81
2-17 yrs	60	71	134	265
≥ 18 yrs	16	23	35	74
Total	106	117	197	420

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