EPI-NEWS
NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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ALUMINIUM ALLERGY, GRANULOMA AND VACCINATION

Aluminium compounds have been used for more than 70 years as adjuvants to certain vaccines to increase the immune response after vaccination. Thus, the DTaP-IPV/Hib vaccine contains 1 mg of aluminium hydroxide in the DTaP-IPV component. There is also aluminium in diphtheria and tetanus vaccines for primary vaccination and revaccination (including diphtheria/tetanus booster), in vaccines against hepatitis A and B, tick-borne encephalitis, and conjugated vaccines against pneumococci and group C meningococci. The IPV and Hib vaccines do not contain aluminium.

It is well known that on rare occasions a pruritic subcutaneous granuloma can develop after vaccination with aluminium-containing vaccines, EPI-NEWS 16/99. The granuloma often appears several months after vaccination, and may persist for a long time. Similar granuloma formation is seen after hyposensitisation with aluminium-containing allergen extracts.

Granuloma is thought to arise as an allergic reaction to aluminium. The granuloma may develop if the aluminium remains localised and is not transported with the antigen away from the vaccination site to the regional lymph nodes as intended. The risk of developing a vaccination granuloma is significantly smaller after intramuscular injection compared to subcutaneous injection. Since April 1999, it has therefore been recommended in Denmark that all aluminium-containing vaccines be given intramuscularly, EPI-NEWS 16/99. Only few cases of vaccination granuloma have been reported for vaccines produced at SSI. In most of these cases, the vaccination was given subcutaneously. There is therefore good reason to believe that vaccination granuloma will appear even more infrequently if the vaccine is given intramuscularly. Similarly, very few granulomas after vaccination are seen in a number of other countries that have for several years recommended intramuscular injection. In Denmark, it has been possible to vaccinate with an aluminium-free diphtheria-tetanus vaccine produced by SSI in cases of proven aluminium allergy. This vaccine is no longer produced.

There is a risk of recurrence of granuloma formation with the use of aluminium-containing vaccines in persons with proven aluminium allergy. With correct intramuscular injection technique, this risk is probably small. Serious systemic allergic reactions have not been described after vaccination with aluminium-containing vaccine in persons with known aluminium allergy.

The risk of granuloma formation must be weighed against the risk of contracting one or more potentially life-threatening infectious diseases. In most cases, the patient is a child and the doctor must consult with the parents to assess whether the child should be further vaccinated with an aluminium-containing vaccine.

If it is decided not to vaccinate with aluminium-containing vaccine, the Department of Epidemiology may be of assistance in providing advice on further vaccination and different prophylaxis.

As regards protection against tetanus and diphtheria, the antibody level reached after the vaccinations given to date may act as an indication of the duration of protection. If the person no longer has protecting antibodies, EPI-NEWS 7/99, the risk assessment mentioned above must be performed.

(P. Andersen, Dept. of Epidemiology, M. Stellfeld, Dept. of Medicine)

THE CHILDHOOD VACCINATION PROGRAMME LEAFLET

The Department of Epidemiology publishes a leaflet describing the Danish childhood vaccination programme. The leaflet, last revised in 1997, is now out of date, following the most recent modifications to the vaccination programme. A new, revised edition is planned. However, since the vaccination programme is expected to be changed in the course of 2003, the SSI's website, www.ssi.dk/sw163.asp#516_3912, should be consulted for the latest developments.

(P.Andersen, Dept. of Epidemiology. M. Stellfeld, Dept. of Medicine)

CASES OF BOTULISM

A 38-year-old man was admitted in December 2002 with symptoms of botulism. The poisoning originated in “garlic in chilli oil” of the “Bon Appetit” brand, best before 19 February 2004. The Danish Food Directorate has asked importers to remove the batch from shops. Abroad, garlic in oil has previously caused outbreaks of botulism. In one outbreak, several cases were mild and frequently misdiagnosed.

There is no knowledge of further cases of botulism. In order to be able to trace the source of infection as quickly as possible, suspected cases of botulism should be reported immediately by telephone to the local Medical Office of Health and later in writing on form 1515 to the local Medical Office of Health and the Department of Epidemiology. The microbiological diagnosis or neurophysiological confirmation of the clinical suspicion should not be awaited.

Food-borne botulism is a rare but serious type of food poisoning which usually appears 12-36 hours after eating food bearing preformed toxin. Characteristic signs are bilateral cranial nerve effects such as visual disturbances, xerostomia, dysphagia, dysphasia, and possibly nausea and vomiting. Hypotonic symmetric pareses may subsequently arise, and the patient may die as a result of paralyses afflicting respiration. The patient is usually alert and lucid, and there is only fever if the process is complicated by an infection. The poisoning is caused by a neurotoxin which may form in foodstuffs handled inadequately. The poison may be fatal, even in very small amounts. The botulism bacterium produces air as it grows. As a result, a tin containing the bacterium will often bulge at the bottom and lid.

(N. Lohse, Skejby Sygehus, L. Krusell, Regional Food Inspectorate Aarhus; K. Mølbak, Dept. of Epidemiology)

INFLUENZA

During week 3, an influenza A/Moscow/10/99 (H3)-like strain, another influenza A and an influenza B were isolated from clinical specimens. During week 5 an influenza A/Moscow/10/99 (H3)-like strain and two influenza B/Hong Kong/330/01-like strains were isolated from sentinel specimens. Similar strains are included in the season's vaccine and correspond to the strains that have been detected elsewhere in Europe.

(P. C. Grauballe, Dept. of Virology, S. Samuelsson, Dept. of Epidemiol.)

NEW MEMBER OF STAFF

From 1 January, Kåre Mølbak has been appointed Senior Medical Officer at the Department of Epidemiology.

29 January 2003

Serum specimens postive for Mycoplasma pneumoniae by complement fixation test

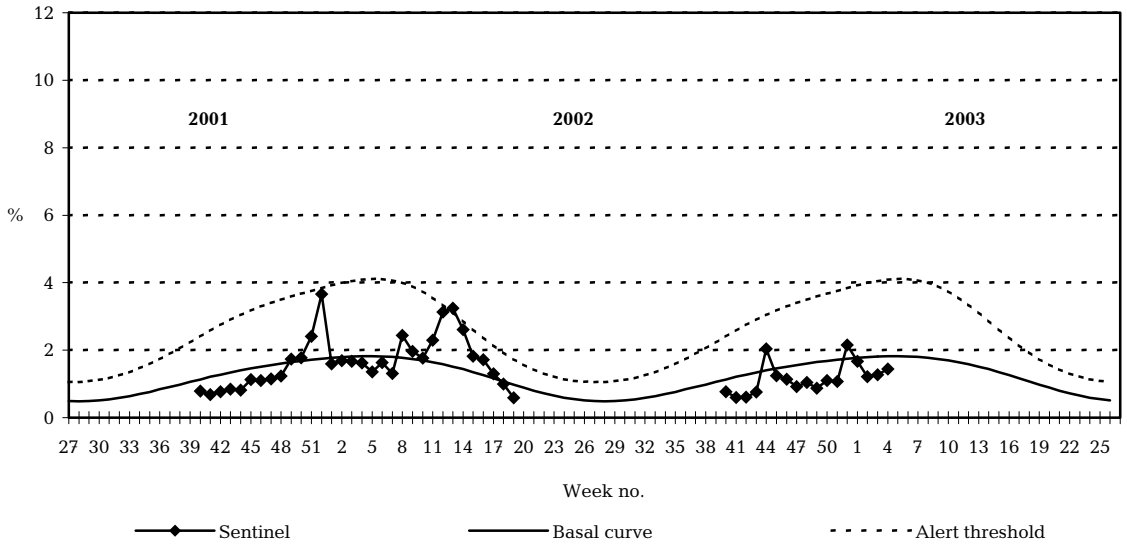
4th quarter of 2002 compared with 4th quarter of 2001 and, average for 4th quarter of 1997-2001

	October	November	December
Positive specimens during 4th quarter of 2002	147	113	73
Positive specimens during 4th quarter of 2001	70	108	103
Positive specimens, average 4th quarter of 1997-2001	129	205	155

(Dept. of Respiratory Infections, Meningitis and STIs)

Sentinel surveillance of influenza activity

Weekly percentage of consultations, 2001/2002/2003



Sentinel: Influenza consultations as percentage of total consultations

Basal curve: Expected frequency of influenza consultations under non-epidemic conditions

Alert threshold: Possible incipient epidemic

(Dept. of Epidemiology)