

Editor: Susanne Samuelsson

Statens Serum Institut - 5 Artillerivej - 2300 Copenhagen S - Denmark

Tel: +45 3268 3268 - Fax: +45 3268 3874

www.ssi.dk - serum@ssi.dk - ISSN: 1396-4798

No. 7, 2002

FOUR SERIOUS CASES OF GROUP A STREPTOCOCCUS INFECTION

During the last month, group A streptococci have been found in three specimens from the Institute of Forensic Medicine in Aarhus and in one specimen from the Institute of Forensic Medicine in Copenhagen. The four cases are as follows:

- A 12-year-old boy had symptoms of malaise for less than 24 hours. He had not been seen by a doctor.

The patient died from septicaemia. Specimens of spinal fluid showed streptococcus group A, T-type 3-13-B3264, non-mucoid.

- A 25-year-old woman who had been ill for two weeks with symptoms of malaise, diarrhoea and vomiting. She had been seen by a doctor. The patient died from septicaemia. Specimens from blood and lungs showed streptococcus group A, T-type 3-13-B3264, mucoid.

- A 25-year-old man, who had been ill for one to two days with symptoms of malaise, diarrhoea and vomiting. He had been seen by a doctor.

The patient died from septicaemia. Specimens from blood and lungs showed streptococcus group A, T-type 1, non-mucoid.

- A 42-year-old man with symptoms of fever and sore throat. Duration of illness unknown. He had not been seen by a doctor. The patient died. Specimens from blood and lungs showed streptococci group A, T-type 1, non-mucoid.

Case clusters of mucoid streptococci group A have previously been described among persons associated with physically and mentally handicapped people, EPI-NEWS 5/97 and 9,12/96.

Surveillance

The Streptococcus Unit at SSI receives a large portion of the group A streptococci that are isolated from patients with invasive disease in Denmark.

Generally, there is no increase in the number of serious group A streptococcal infections relative to previous years. The isolated T-types 3-13-B3264 and 1 are commonly occurring types, among both mild and life-threatening group A streptococcal infections. Nor can an increase of these T-types, relative to previous years, be demonstrated. The two strains of the T-type 3-13-B3264 described above are phenotypically different, since one of them is mucoid, whereas the two T-type 1 strains cannot be dis-

tinguished phenotypically. The fact that a group A streptococcus is mucoid may, but does not necessarily, mean that the strain is more pathogenic. Only one of the four strains described was mucoid.

Comments

This clustering is unusual, but may be a coincidence. There is no immediate epidemiological link between the four cases described. Whether a microbiological association can be demonstrated, will be made likely by further DNA investigations, including whether a special group A streptococcus, T-type 1, or a 3-13-B3264 clone, may be involved.

Until then, it is recommended to be aware of the occurrence of serious streptococcal infections, even though these occur rarely.

(H. B. Konradsen, Dept. of Respiratory Infections, Meningitis and STIs, A. Lemcke, Dept. of Epidemiology)

NEW NATIONAL CENTRE FOR BIOLOGICAL DEFENCE

The terrorist attacks in the US on 11 September 2001 and packages sent in the American postal system containing anthrax spores have shown that the possibility of a biological terrorist attack involving Denmark can no longer be dismissed. The SSI has therefore been given the task of building up a national centre for biological defence, which is to develop specialised expertise on biological warfare agents and countermeasures and co-ordinate SSI's contingency plans in the event of biological terrorism. The centre has now been established with the appointment of the undersigned Head of Centre.

Key tasks for the Centre

It is a high-priority assignment to refine existing analytical methods so that the occurrence of a biological warfare incident can be quickly established or dismissed. This applies whether a specimen comes from the environment or from a patient who is suspected of being exposed to a biological attack. A reliable, rapid diagnostic procedure, plus qualified counselling and information, will be crucial in order to implement appropriate measures. Such measures might consist of vaccination, antibiotics, isolation of patients and decontamination of polluted areas. SSI is responsible for supplying the country with vaccines. The smallpox vaccine that was formerly used for

vaccination of the Danish population is ready for use in the event of a biological terrorist attack with smallpox virus. SSI has begun to develop new means of protection against or treatment of other warfare agents.

Experience from the United States has shown that biological warfare agents constitute a different kind of challenge than we are used to in dealing with infectious diseases and microorganisms. In order to be able to build up the necessary expertise to deal with suspicious materials of unknown character, it is crucial to have at our disposal safety facilities that enable a rapid and qualified diagnostic procedure, and which simultaneously protect both employees and the surrounding community against possible infection.

The Centre as coordinator

If a threat appears, it is the Centre's task to advise the many different authorities and parties involved. Those involved range from nurses in casualty departments to political decision-makers. As a result, the National Centre for Biological Defence is the point of contact between SSI and the outside world, as regards biological weapons and bio-terrorism. Through education and training of relevant Danish personnel, the Centre will enhance the level of knowledge, and the Centre will ensure that the Institute's 24-hour emergency facilities are prepared for handling biological threats, regardless of whether they appear in Denmark or abroad. Emergency preparedness includes the epidemiological surveillance of relevant disease patterns both in Denmark and in the European Union.

The plan is that the European countries will cooperate in a network of reference laboratories which live up to a common standard of procedures that are recognised in terms of safety and quality. As a result, the Institute is in the process of preparing the foundation for the establishment of a new safety laboratory, equipped to work with microorganisms in biohazard class 4, which will be the only laboratory of this standard in Denmark.

The National Centre for Biological Defence can be contacted through the Institute's switchboard or the 24-hour emergency medical service. (John-Erik Stig Hansen, National Centre for Biological Defence)

13 February 2002

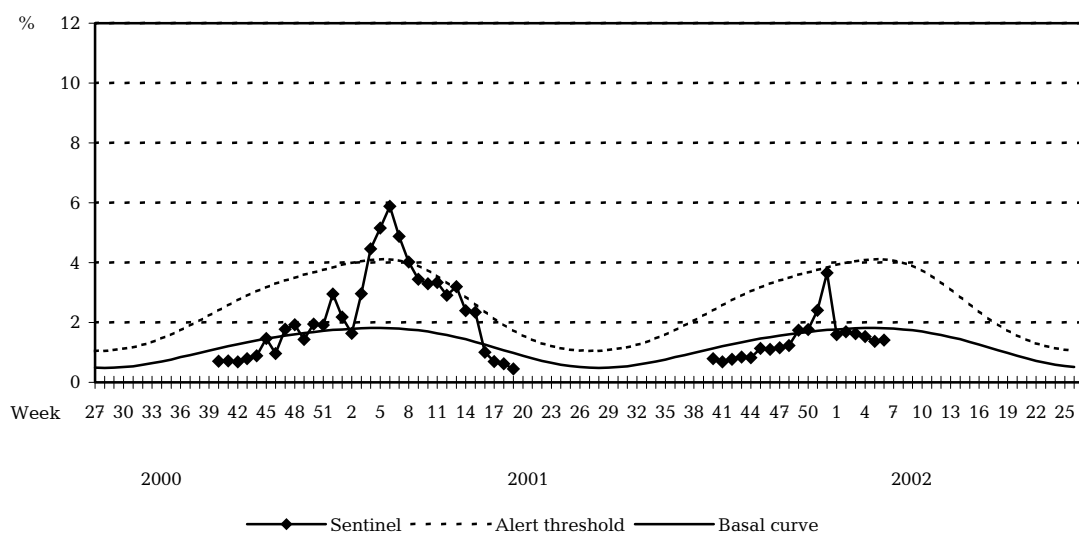
Patients with positive cultures of pathogenic intestinal bacteria, November-December 2001

County	Campylobacter		Yersinia ent.		S. typhimurium		S. enteritidis		Other zoon. Salmonella spp.	
	Nov	Dec	Nov	Dec	Nov	Dec	Nov	Dec	Nov	Dec
Copenhagen Municip.	41	14	2	1	1	4	10	6	9	11
Frederiksberg Municip.	4	-	-	-	-	-	-	-	-	1
Copenhagen	52	17	3	1	1	-	9	7	4	5
Frederiksborg	39	9	2	1	1	1	6	1	7	1
Roskilde	14	12	-	1	2	1	2	-	-	1
West Zealand	8	5	2	-	1	3	4	1	1	1
Storstrøm	13	12	1	4	1	3	2	6	3	2
Bornholm	3	2	-	-	-	1	1	-	-	-
Funen	29	15	2	-	4	5	11	6	8	3
South Jutland	13	15	-	-	2	-	4	2	3	2
Ribe	17	11	-	4	1	2	8	-	2	2
Vejle	28	20	1	2	-	1	9	1	5	2
Ringkøbing	18	8	4	-	1	9	4	2	1	1
Aarhus	32	23	1	2	4	3	10	-	3	1
Viborg	9	3	-	1	2	2	3	6	4	-
North Jutland	26	14	1	-	2	2	3	2	3	4
Unknown	-	-	-	-	-	-	-	-	-	-
DK Nov/Dec 2001	346	180	19	17	23	37	86	40	53	37
DK Nov/Dec 2000	289	243	21	24	25	41	84	62	65	51

(Dept. of Gastrointestinal Infections)

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)