EPI-NEWS

NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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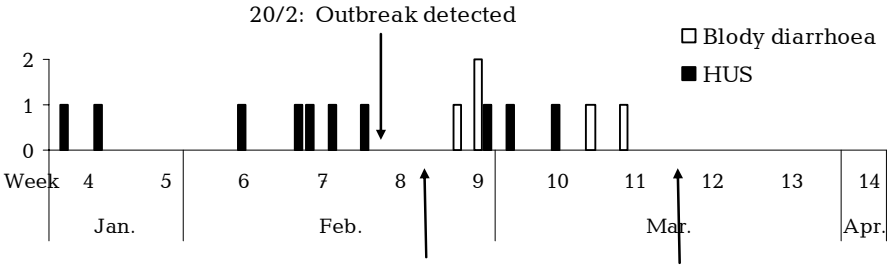
VTEC O103 OUTBREAK IN NORWAY

In the period January-March 2006, a total of 15 cases of verocytotoxin-producing E. coli (VTEC) serogroup O103 were registered in Norway. Ten of these developed haemolytic-uraemic syndrome (HUS), Figure 1. A child subsequently died from complications. Six of the patients were from Oppland, the remaining nine from other Norwegian counties. The outbreak was recognized on 20 February as a cluster of six HUS cases in children aged 2-6 was observed 20 January-20 February, Figure 1. It subsequently became clear that these cases had had diarrhoea, even though stool samples tested for VTEC O157 proved negative. Two samples were then examined for non-O157 VTEC and tested positive for VTEC O103 with a characteristic virulence profile: *vtx2* and *eae*. Another two patients with HUS and five with bloody diarrhoea had a later positive culture for VTEC O103. Two of the culture-negative children tested positive for O103 antibodies while three were possible positives.

An interview study suggested ground beef of the Gilde brand as a possible source of infection, and the product was withdrawn on 24 February. During the following two weeks, another eight patients tested positive for VTEC O103. Interviews with these patients pointed to a smoked Gilde sausage of the birkebeiner type as a possible source of infection. Two types of sausage (Gilde Birkebeiner Sognemorr and Gilde Birkebeiner Fjellmorr) from Gilde's Sogndal plant and frozen mutton produced on the same date tested positive for O103 with the same DNA profile as the outbreak strain. The sausage was withdrawn on 20 March. Follow-up interviews with the first group of patients showed that the majority had also consumed the Morr sausage.

Figure 1. Registered cases of bloody diarrhoea and haemolytic uraemic syndrome (HUS) in Norway, week 4-14 of 2006



Comments

Patients with gastroenteritis or HUS symptoms who have been to Norway should be tested for VTEC O103. The Norwegian strain seems to be highly aggressive. In Germany, VTEC O103 with *vtx2* and *eae* has frequently been isolated from cases of diarrhoea associated HUS (D+HUS), whereas VTEC O103 *vtx1* and *eae* has only rarely been isolated from D+HUS. In Denmark, the period 1997-2005 saw 111 VTEC O103 cases, 110 of which had the *vtx1* and *eae* virulence profile. One Danish child with this type developed HUS.

The Norwegian outbreak is dominated by HUS cases, and probably more patients have had diarrhoea. Had the HUS and/or diarrhoea patients been investigated for VTEC infection, the outbreak would probably have been recognised at an earlier stage, and health authorities would have been able to withdraw suspected products more rapidly. The course of the outbreak consequently stresses the importance of early non-O157 VTEC diagnosis of diarrhoea and HUS patients. See www.fhi.no for further information.

(F. Scheutz, DBMP, SSI, J. Lassen, K. Nygård, Folkehelseinstituttet, Oslo)

MEASLES OUTBREAK IN THE ORESUND REGION

Since the end of January 2006, a total of 19 confirmed measles cases have been reported in the Oresund region, all unvaccinated. Ten cases were reported in Zealand and another nine in Western Scania. The Danish outbreak has previously been described in EPI-NEWS 8/06 and 10/06.

Course

The first case was a 29-year-old man in Denmark and a 41-year-old woman in Sweden who both fell ill on 25 January.

In Denmark, three children aged 20 months, 11 years and 8 months subsequently developed symptoms on 9, 12 and 13 February, respectively. The following three Danish cases were women aged 23, 30 and 39 who all developed symptoms on 25 February.

The final three Danish cases were a man aged 35 and two children of 23 months and 7 years who developed symptoms on 10, 11 and 25 March, respectively.

The remaining eight Swedish cases were one 5-month-old infant, four women and three men aged 30-52. The last patient to develop symptoms did so on 10 March 2006.

Investigation

The first two cases had no known source of infection. Both had at some point been to Copenhagen Airport, but no common contacts are known in the airport.

Two of the other Danish cases were connected, but for the remaining cases, the source of infection was unknown

For six of the remaining Swedish cases, the source of infection was known. However, in two cases the source could not be identified.

Genotype B3 measles virus was detected by PCR in one Swedish and seven Danish patients. The isolated virus was found to be almost identical to the genotype 3B measles virus that previously circulated in Central and West Africa, but it differs from other B3 strains found in Europe

Comments

The outbreak stresses that measles virus is highly contagious and will readily spread across borders. Measles virus genotyping builds a stronger basis for investigation of future outbreaks. However, the source of infection for several of the Danish cases remains unknown, and several further cases presumably remain undetected.

In adults who have not had measles or been vaccinated, the diagnosis should be considered when symptoms consistent with measles are observed.

(S. Glismann, A. H. Christiansen, Dept. of Epidemiology, B. Böttiger, Dept. of Virology, A.-M. Plesner, MOH Copenhagen).

5 April 2006

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2006 figures are preliminary)

Table 1	Week 13 2006	Cum. 2006 [1]	Cum. 2005 [1]
AIDS	1	12	19
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	6	2
Diphtheria	0	0	0
Foodborne diseases	2	95	76
of these, infected abroad	1	24	16
Gonorrhoea	7	114	156
Haemorrhagic fever	0	0	0
Hepatitis A	1	4	29
of these, infected abroad	1	1	7
Hepatitis B (acute)	0	5	15
Hepatitis B (chronic)	4	137	41
Hepatitis C (acute)	2	3	1
Hepatitis C (chronic)	19	222	73
HIV	6	58	86
Legionella pneumonia	1	17	16
of these, infected abroad	0	2	2
Leprosy	0	0	0
Leptospirosis	0	3	7
Measles	0	9	0
Meningococcal disease	0	20	27
of these, group B	0	13	17
of these, group C	0	1	2
of these, unspec. + other	0	6	8
Mumps	0	8	2
Neuroborreliosis	0	14	15
Ornithosis	0	5	6
Pertussis (children < 2 years)	0	18	64
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	1	0
Listeria monocytogenes	0	3	1
Streptococcus pneumoniae	0	14	43
Other aethiology	0	1	2
Unknown aethiology	0	4	4
Under registration	4	23	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	0	18	27
of these, infected abroad	0	16	25
Syphilis	0	18	28
Tetanus	0	0	2
Tuberculosis	16	105	98
Typhoid/paratyphoid fever	0	8	9
of these, infected abroad	0	8	8
Typhus exanthematicus	0	0	0
VTEC/HUS	2	29	36
of these, infected abroad	0	9	17

[1] *Cumulative number 2006 and in corresponding period 2005*

Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received in SSI laboratories

Table 2	Week 13 2006	Cum. 2006 [2]	Cum. 2005 [2]
Bordetella pertussis			
(all ages)	6	77	197
Gonococci	12	109	108
of these, females	2	24	17
of these, males	10	85	91
Listeria monocytogenes	0	6	8
Mycoplasma pneumoniae			
Resp. specimens [3]	3	194	529
Serum specimens [4]	9	151	381
Streptococci [5]			
Group A streptococci	8	44	43
Group B streptococci	3	27	14
Group C streptococci	1	7	5
Group G streptococci	8	36	36
S. pneumoniae	22	363	409
Table 3	**Week 11 2006**	**Cum. 2006 [2]**	**Cum. 2005 [2]**
Pathogenic int. bacteria [6]			
Campylobacter	35	367	448
S. Enteritidis	5	64	76
S. Typhimurium	1	58	70
Other zoon. salmonella	9	104	102
Yersinia enterocolitica	4	36	45
Verocytotoxin-producing E. coli	6	22	23
Enteropathogenic E. coli	7	51	46
Enterotoxigenic E. coli	2	41	51

[2] *Cumulative number 2006 and in corresponding period 2005*

[3] *Resp. specimens with positive PCR*

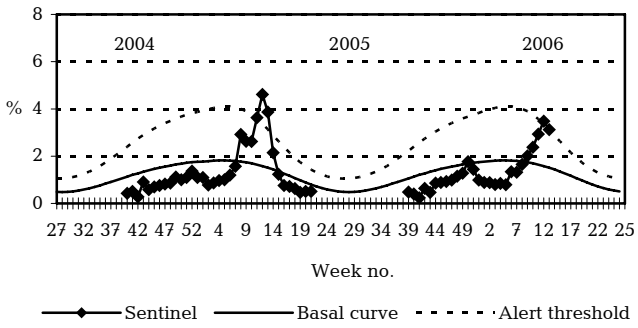
[4] *Serum specimens with pos. complement fixation test*

[5] *Isolated in blood or spinal fluid*

[6] *See also www.germ.dk*

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2004/2005/2006



Sentinel:	Influenza consultations (as percentage of total consultations)
Basal curve:	Expected frequency of consultations under non-epidemic conditions
Alert threshold:	Possible incipient epidemic

5 April 2006