



ACUTE AND CHRONIC HEPATITIS C 2009

No. 19/20, 2010

ACUTE HEPATITIS C

2009 saw four notifications of acute hepatitis C virus (HCV) infection including three males aged 32-43 years.

Three were infected by sexual contact (two homosexuals and one heterosexual) and in one case the mode of infection was unknown.

CHRONIC HEPATITIS C

In 2009, a total of 256 cases of chronic HCV infection were notified, including 181 (71%) males, [Table 1](#).

Table 1. Notified persons diagnosed with chronic HCV infection, by age and sex, 2009

Age (yrs)	M	F	Total
0-9	0	0	0
10-19	0	1	1
20-29	14	9	23
30-39	48	19	67
40-49	60	22	82
50-59	45	20	65
60 +	14	4	18
Total	181	75	256

The median age was 44 years for males (range 20-74 years), and 43 years for females (range 15-63 years).

Distribution by area and incidence per 100,000 is presented in [Table 2](#).

Table 2. Notified persons diagnosed with chronic HCV infection, by region and area, 2009

Region & area	No.	Incidence
Capital		
Cph. City	61	9.1
Cph. Suburbs	19	2.6
North Zealand	8	1.8
Bornholm	4	9.4
Zealand		
W & S Zealand	18	3.1
East Zealand	3	1.3
North Jutland		
North Jutland	3	0.5
Central Jutland		
West Jutland	7	1.6
East Jutland	27	3.3
South DK		
Funen	22	4.6
South Jutland	82	11.5
Other/not stated	2	-
Total	256	4.6

Transmission

A total of 201 (79%) were of Danish origin and 55 (21%) were of foreign origin (24 nationalities).

The mode of infection is shown in [Table 3](#).

Six persons were infected in Denmark by blood products prior to the introduction of HCV screening of

Table 3. Notified persons diagnosed with chronic HCV infection, by mode of infection, 2009

Mode of infection	M	F	Total
IV drug use	140	48	188
Nosocomial	7	3	10
Heterosexual	6	6	12
Homosexual	1	0	1
Mother/newborn	2	0	2
Tattoo/piercing	3	0	3
Needle injury	1	1	2
Unknown	21	17	38
Total	181	75	256

donor blood in 1991.

Four persons were infected nosocomially abroad.

Commentary

HCV infection rarely presents as an acute illness, and it is generally not diagnosed until the chronic stage.

The notified cases of HCV infection therefore primarily represent infection acquired many years earlier.

In Denmark, HCV infection is most frequently acquired via IV drug use.

Among persons with a known mode of infection, 73% were infected via IV drug use, 74% of whom were males.

Abroad, the frequency of HCV infection among men who have sex with men, and particularly among HIV positives, is reportedly increasing. In Denmark this route of infection was stated in two of the four acute cases notified in 2009.

The HCV infection treatment options are constantly improved, and it is therefore important to refer patients infected with HCV to specialised departments. (M. Malling, S. Cowan, Dept. of Epidemiology)

ANNUAL REPORT 2009

The SSI's Annual Report 2009 is now available in Danish language at www.aarsrapport.ssi.dk.

With regards to preparedness, 2009 was characterized by an influenza pandemic by which a new A virus (H1N1)v spread from Mexico to the rest of the world during the first half of the year. SSI plays a pivotal role in pandemic preparedness as various epidemiological, diagnostic and vaccine-related competences come together to ensure quality services.

With regard to research, the SSI in 2009 maintained the positive trend from previous years and achieved considerable external funding, facilitating, among others, the establishment of a national biobank.

(Secretariat of the Management, SSI)

ORNITHOSIS 2009

Ornithosis (psittacosis, parrot fever) is caused by infection with the zoonotic bacterium *Chlamydophila psittaci* from birds, EPI-NEWS 5/08. 2009 saw a total of 12 notified ornithosis cases, five females and seven males. The median age was 64 years (range 38-70 years).

Two patients are thought to have been infected in connection with feeding of wild pigeons, one abroad. Two were probably infected in connection with contact to bird excrements at their places of work.

Another six were infected after contact with pigeons, parrots and chickens, respectively, from privately held flocks of birds. In several cases, the birds of the privately held flocks died following ornithosis symptoms. In two cases, the source and mode of infection were unknown.

Another two cases with laboratory-confirmed ornithosis have not been notified; one of whom died around the time of the ornithosis diagnosis.

Diagnostics

Nine of the 14 laboratory-confirmed cases were diagnosed by PCR performed on airway secretion. All these patients were admitted to hospital, and in five cases it was stated that they had pneumonia. The remaining five cases were diagnosed by serology, three of these were not admitted during the course of the disease.

A married couple were among the infected. They fell ill at a five-day interval, approximately 14 days after acquiring a parrot, the bird died before they developed symptoms. Both patients were admitted and in both cases the diagnosis was made by PCR on tracheal secretion.

Commentary

Symptoms of ornithosis in birds, including breathing difficulties, diarrhoea and sudden death, may assist in the diagnosis of the disease in humans. The incubation period is usually 5-14 days, but longer periods have been reported. Ornithosis typically presents as flu-like symptoms, dry cough, chest pain and difficulty breathing. Ornithosis may lead to severe pneumonia, affection of other organs and in some cases death.

(C. Kjelsø, S. Cowan, Department of Epidemiology, S. Uldum, DBMP)

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2010 figures are preliminary)

Table 1	Week 19 2010	Cum. 2010 ¹⁾	Cum. 2009 ¹⁾
AIDS	1	20	11
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	5	4
Diphtheria	0	0	0
Food-borne diseases	8	87	144
of these, infected abroad	0	23	25
Gonorrhoea	38	201	211
Haemorrhagic fever	0	0	0
Hepatitis A	1	14	9
of these, infected abroad	0	5	5
Hepatitis B (acute)	2	14	13
Hepatitis B (chronic)	3	70	76
Hepatitis C (acute)	0	0	2
Hepatitis C (chronic)	0	157	134
HIV	0	81	102
Legionella pneumonia	0	40	40
of these, infected abroad	0	6	4
Leprosy	0	0	0
Leptospirosis	0	0	0
Measles	0	3	9
Meningococcal disease	0	26	38
of these, group B	0	3	9
of these, group C	0	6	4
of these, unspec. + other	0	6	1
Mumps	1	5	8
Neuroborreliosis	0	6	4
Ornithosis	0	6	1
Pertussis (children < 2 years)	1	35	44
Plague	0	0	0
Polio	0	0	0
Pneum. disease, invasive (IPD) ²⁾	3	62	54
Purulent meningitis			
Haemophilus influenzae	0	0	3
Listeria monocytogenes	0	3	2
Other aethiology	0	8	7
Unknown aethiology	0	0	1
Under registration	1	3	0
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	4	37	37
of these, infected abroad	2	23	31
Syphilis	31	145	108
Tetanus	0	0	0
Tuberculosis	5	139	143
Typhoid/paratyphoid fever	0	17	8
of these, infected abroad	0	14	7
Typhus exanthematicus	0	0	0
VTEC/HUS	1	50	42
of these, infected abroad	1	14	8

¹⁾ Cumulative number 2010 and in corresponding period 2009

²⁾ Meningitis, all age groups, invasive pneumococcal disease < 5 years

Selected laboratory diagnosed infections

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

Table 2	Week 19 2010	Cum. 2010 ³⁾	Cum. 2009 ³⁾
Bordetella pertussis (all ages)	3	51	57
Gonococci	4	172	148
of these, females	1	50	34
of these, males	3	122	114
Listeria monocytogenes	0	15	20
Mycoplasma pneumoniae			
Resp. specimens ³⁾	2	41	28
Serum specimens ⁴⁾	2	86	59
Streptococci ⁵⁾			
Group A streptococci	4	73	77
Group B streptococci	3	44	39
Group C streptococci	1	19	13
Group G streptococci	6	62	61
S. pneumoniae	17	502	561
Table 3	Week 17 2010	Cum. 2009 ³⁾	Cum. 2008 ³⁾
MRSA	14	262	228
Pathogenic int. bacteria ⁶⁾			
Campylobacter	22	691	516
S. Enteritidis	1	89	80
S. Typhimurium	10	153	305
Other zoon. salmonella	10	204	219
Yersinia enterocolitica	2	50	77
Verocytotoxin-producing E. coli	0	51	39
Enteropathogenic E. coli	2	53	43
Enterotoxigenic E. coli	2	143	74

³⁾ Cumulative number 2010 and in corresponding period 2009

⁴⁾ Resp. specimens with positive PCR

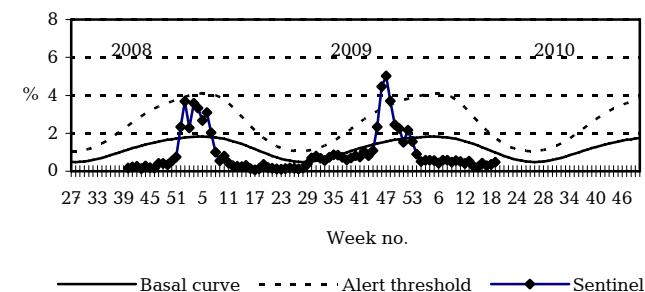
⁵⁾ Serum specimens with pos. complement fixation test

⁶⁾ Isolated in blood or spinal fluid

⁷⁾ See also www.germ.dk

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2008/2009/2010



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