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HEPATITIS B AND HIV INFECTION RELATED TO DRUG ABUSE

Earlier this year EPI-ICE reported an increase in HIV infections in Iceland that were related to drug abuse (issues 3 and 9). In some cases, simultaneous infections caused by hepatitis B and HIV were diagnosed among drug addicts.

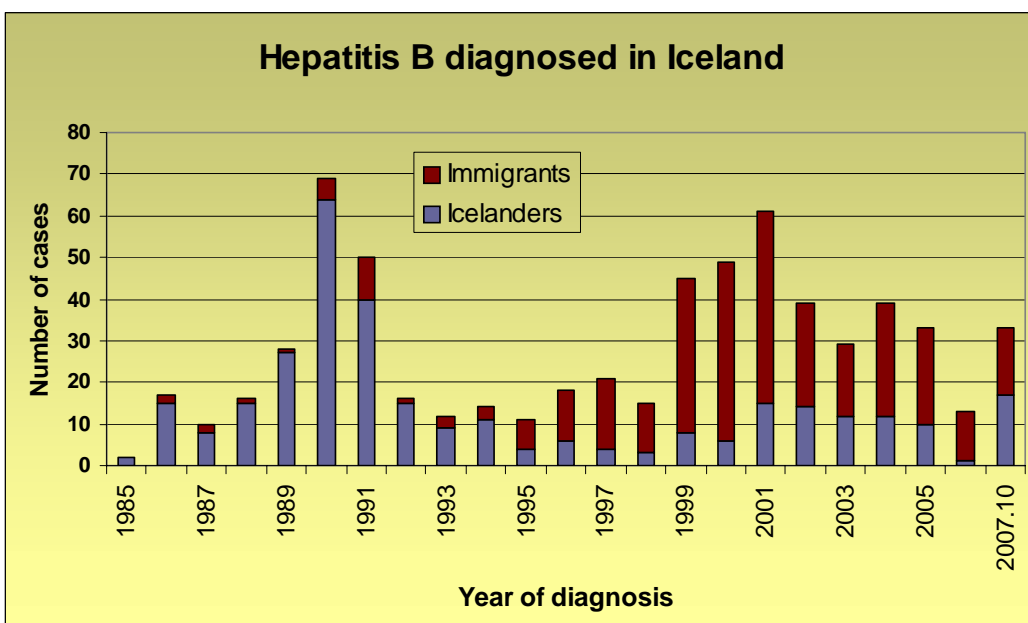
An examination of the number of cases that have been diagnosed with hepatitis B since Icelandic laboratories began making use of diagnostic laboratory testing reveals that a large epidemic of acute hepatitis B occurred in the years 1989–1991, which was for the most part related to drug abuse. Towards the close of the last century there was an increase in the percentage of immigrants among those diagnosed with hepatitis B. The majority of these immigrants, being from regions where the disease is endemic and most often transmitted from mother to child at birth, suffered from chronic hepatitis B.

So far this year there has been an increase in the number of cases of hepatitis B in Iceland. The increase is caused chiefly by increased infections among Icelanders.

Nine out of seventeen of these Icelanders (53%) have a history of drug abuse involving the use of intravenous needles. Since the above-mentioned epidemic of hepatitis B among drug addicts in Iceland occurred one and a half decades ago, it is to be expected that most of the recent cases involve individuals without immunity against the disease.

Immunisation offers protection against this disease but until now it has not been seen as economically viable to introduce vaccination against hepatitis B as part of the National Childhood Vaccination Programme in Iceland. The possibility of vaccinating drug addicts that have not been infected by hepatitis B needs to be explored, however.

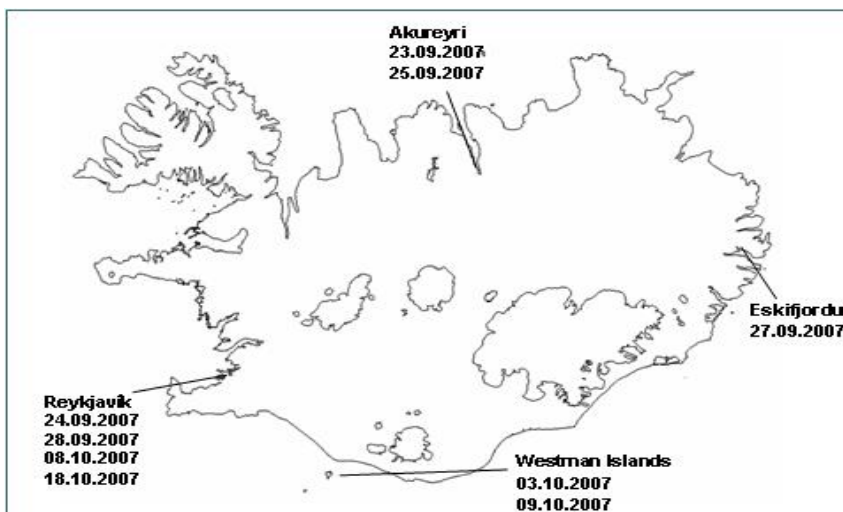
This year, 12 cases of HIV infection have been diagnosed, six of whom seem to be related to drug abuse and four of these have a simultaneous infection of HIV and hepatitis B. Contact tracing, which is a difficult process among drug addicts, is presently being carried out.



STEC OUTBREAK IN ICELAND CONSIDERED TO BE OVER

Those infected with STEC were between two and 61 years of age, residing in different parts of the country.

Figure. STEC outbreak in Iceland, September–October 2007. Distribution of cases according to onset of symptoms and place of residence (n=9).



From 28 September to 22 October, nine domestically acquired cases of Shiga toxin-producing (stx 1+2) *Escherichia coli* (STEC) O157 were diagnosed at the Department of Microbiology at Landspítali University Hospital in Iceland. All nine strains were identical according to strain typing by means of Pulse Field Gel Electrophoresis (PFGE). A common source of infection was therefore assumed. The onset of symptoms was between 23 September and 18 October. The infected were between two and 61 years of age, residing in different parts of the country (cf. Figure). No new cases have been detected since 28 October and the outbreak appears to be over.

Eight out of nine patients answered a detailed questionnaire on food consumption, travel and mass gathering and supermarket purchase records were collected from three of these patients. Seven out of eight cases consumed fish or ham and six consumed lettuce. The fish and the ham came from different producers, while consumption of lettuce imported from Holland was verified for five of the six consumers of lettuce.

These findings led to intensified surveillance of lettuce with increased sampling by the Food and Environmental Agency in Iceland, but all the samples tested so far have proved negative.

From early October, 36 cases of STEC were diagnosed in the Netherlands. The Icelandic and the Dutch strains are identical according to PFGE. The investigation in the Netherlands pointed towards pre-packaged iceberg lettuce as a possible source of infection. The exact origin of the lettuce remains unknown, but field investigation was carried out with both sampling from raw vegetables and environmental sampling from vegetable growers and shredding plants that might have been involved. All the samples collected were negative for STEC. The outbreak appears to be over in the Netherlands.

Due to the connection with the Netherlands, the investigation was done in cooperation with The National Institute for Public Health and the Environment in the Netherlands and the European Centre for Disease Control (ECDC), which is located in Stockholm, Sweden.

The increase in hepatitis B cases is caused chiefly by increased infections among Icelanders, 53% of native cases this year being connected to drug abuse.