

Rapid communications

COMMUNITY-WIDE OUTBREAK OF HEPATITIS A IN LATVIA, IN 2008

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Since November 2007, an increase in the number of reported hepatitis A cases has been observed in Latvia. The aim of this report is to provide an update on the descriptive epidemiology of hepatitis A in Latvia and suggest some possible explanations of the recent increase in incidence.

Methods

Hepatitis A is a disease under mandatory notification in Latvia. Cases of hepatitis A are notified by health care practitioners including general practitioners and clinicians working in hospitals as well as by laboratories.

A probable case is defined as any person with a discrete onset of symptoms (e.g. fatigue, abdominal pain, loss of appetite, intermittent nausea and vomiting) and at least one of the following three: fever, jaundice, elevated serum aminotransferase levels, and with an epidemiological link with a confirmed case. A confirmed case is defined as any person meeting the clinical and the laboratory criteria – detection of IgM antibodies against hepatitis A virus (IgM anti-HAV positive). The case definitions used are based on the European Union case definitions [1].

All notified hepatitis A cases are subject to epidemiological investigation. Epidemiologists of local branches of the Latvian Public Health Agency (PHA) interview patients or their relatives, and visit places of work or study of the patients (kindergartens, schools, food enterprises, etc.) to collect epidemiological information and organise control measures. Epidemiologists also perform investigation in any other place if two or more hepatitis A cases are epidemiologically linked to it.

Results

From 1990 to 2007, the incidence of hepatitis A in Latvia had been declining (Figure 1). The last community wide outbreak of hepatitis A in Latvia was registered in 1988–1990 with almost 20,000 cases reported during three years. Since then the number of hepatitis A cases steadily declined over the next eight years, and remained at a very low level between 2000 and 2007 (mean 87, range 15–237). The decrease of incidence of hepatitis A can be explained primarily by the overall improvement in hygiene.

In 2007, only 15 cases were registered (22 cases according to the date of onset); 8 of them imported. However, since October 2007, an increase in hepatitis A cases has been observed. Between 1 January and 24 September 2008*, a total of 759 confirmed cases of hepatitis A have been notified in Latvia (Figure 2). Additionally, five cases were exported to Estonia, one to Lithuania, one to Germany and one to Denmark.

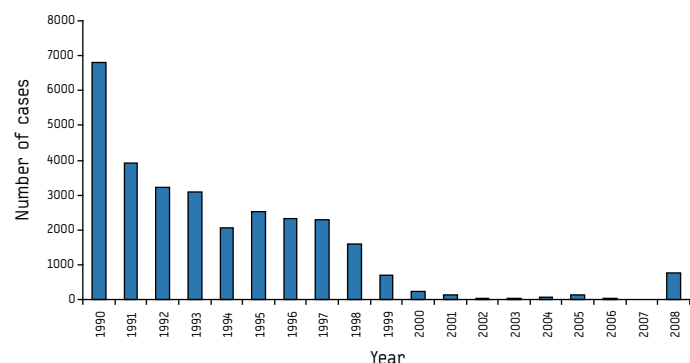
The incidence of hepatitis A increased especially intensely at the end of August – beginning of September and continues to grow. Only on 24 September*, 285 suspected cases of hepatitis A were under investigation.

Of the 759 confirmed cases reported in 2008, 706 (93%) were treated in hospitals. Five cases were fatal, all in women (age range 25–45 years, average 35). All death cases occurred in patients with underlying diseases.

The highest incidence of hepatitis A was observed in the age group 18–29 years (Figure 3). During the first seven months of

FIGURE 1

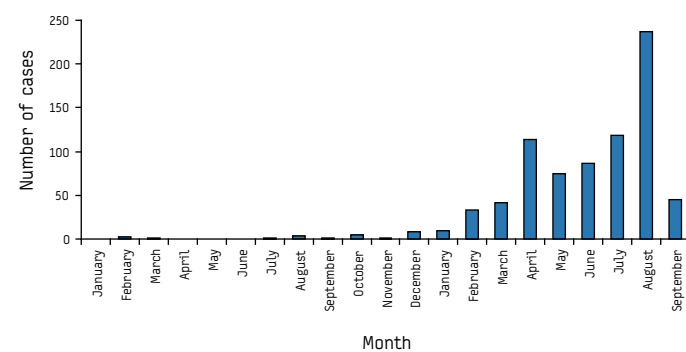
Reported number of cases of hepatitis A in Latvia, 1990 – 2008 (as of 24 September 2008)



Note: The number of cases in 2008 does not include the 285 suspected cases which are currently investigated (as of 24 September)

FIGURE 2

Distribution of confirmed cases of hepatitis A in Latvia in 2007 and 2008, by month of onset (n=22 in 2007, n=759 in 2008)



Note: the number of cases in September 2008 does not include the 285 suspected cases which are currently investigated (as of 24 September)

2008, the majority of hepatitis A cases occurred in males (65% of all cases); while in August the numbers of cases among males and females were equal (Figure 3). Among 639 confirmed cases in adults, 287 (45%) were in patients who were unemployed or pensioners.

The majority of the cases reported in 2008 were registered in the capital city of Riga (598 cases) and in the Riga region (73 cases).

Since December 2007, 108 cases of hepatitis A were registered among intravenous drug users (IDUs). From December 2007 till March 2008, IDUs constituted about one third of all hepatitis A cases; however, a decrease in the proportion of hepatitis A cases among IDUs has been observed in recent months because of the overall increase of cases.

In April 2008, an outbreak of hepatitis A associated with a restaurant in Riga was reported, involving 47 cases [1].

An analysis of 420 cases of hepatitis A registered in Riga during the first eight months of 2008 yielded the following results: 11 cases were connected to schools (two clusters with four and seven cases, respectively); at least 47 cases were linked to the restaurant outbreak [2]; one cluster with nine cases was registered in prison; at least 93 cases were linked to households in the community, including 26 clusters with 2 cases, 5 clusters with 3 cases, 4 clusters with 4 cases, and 2 clusters with 5 cases. In the remaining 260 cases no clear epidemiological link could be established.

No epidemiological links were identified between different clusters/outbreaks, either, but there were secondary cases, including family members of IDUs.

Genotyping has not been performed yet but is planned.

Discussion and conclusion

The following possible causes for the ongoing community-wide outbreak of hepatitis A cases in Latvia in 2008 have been suggested:

- a large number of susceptible individuals (young people) as a result of rapidly decreased exposure to hepatitis A virus;
- the initial spread of hepatitis A virus among IDUs – during the first four months of the outbreak up to 35% of cases occurred in drug users;

- a large outbreak (at least 47 cases with clinical forms of hepatitis A) associated with a restaurant;
- a considerable proportion of unemployed persons among adult cases (45%), implying low income and possibly bad living conditions; clusters of cases registered in dwelling-places of low-income inhabitants (apartment houses).

To sum up, the most likely reason for the large and still increasing number of hepatitis A cases in Latvia in 2007 is the increased susceptibility of the population, especially among young people, and the increased virus circulation in the community, which because of different routes of transmission led to community-wide spread of infection and outbreaks in different groups.

Control measures and recommendations

In Latvia vaccination against hepatitis A is recommended but not refunded within the public health system. Immunoglobulin as post-exposure prophylaxis has not been used for many years. To prevent further spread of infection, control measures are put in place in institutions at risk – educational establishments, food enterprises, social care institutions etc.

Information on preventive measures against hepatitis A is regularly disseminated via the mass media. Recommendations for inhabitants, food handlers, and staff of educational establishments have been prepared, distributed and also available on the PHA website (<http://www.sva.gov.lv>). Communication with school boards, Health Inspectorate, Food and Veterinary Service and other services is taking place to disseminate information and recommendations on prevention of hepatitis A. Seminars on hepatitis A prevention for healthcare workers including medical staff of educational establishments were organised. Additional control measures such as medical observation and quarantine are implemented in places at risk, including children groups in kindergartens or school classes where hepatitis A cases were registered.

It is important to further strengthen the prevention through communication with public, and to continue surveillance and control measures, as well as to perform genotyping of HAV isolates.

Exchange of information on international level is also necessary. To date eight cases of hepatitis A linked to Latvia have been registered in other European countries. We therefore consider

FIGURE 3

Distribution of confirmed cases of hepatitis A in Latvia, 2008, by age and sex (n = 758)

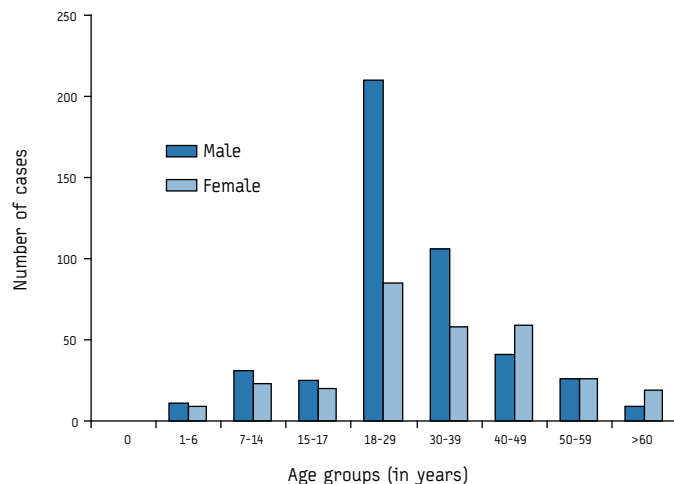
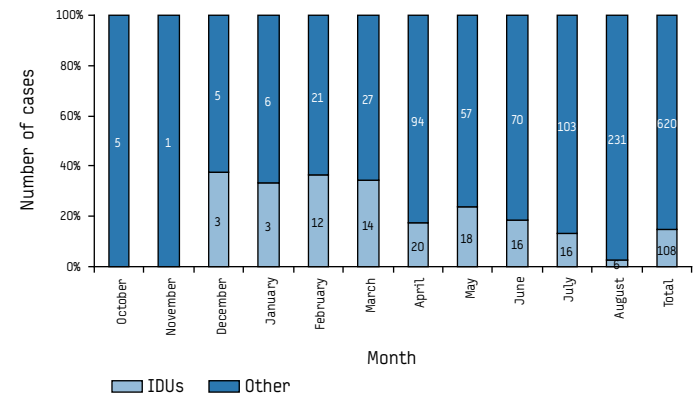


FIGURE 4

Proportion of injecting drug users (IDUs) among hepatitis A cases, by month of onset, Latvia, October 2007 - August 2008 (n=728)



Note: Information on cases with onset in August 2008 is not complete

that there exists a risk for international spread, especially among travellers with risk behaviour.

*Update of the situation as of 2 October: Since 24 September (analyzed in the article), the number of confirmed cases of hepatitis A has increased by 257, reaching the total of 1016 confirmed cases. Further 265 suspected cases are under investigation.

References

1. Commission decision of 28/IV/2008 amending Decision 2002/253/EC laying down case definitions for reporting communicable diseases to the Community network under Decision No 2119/98/EC of the European Parliament and of the Council.
2. Perevoscikovs J, Lucenko I, Magone S, Briļa A. Increase in hepatitis A cases in Latvia, in 2008, including an ongoing outbreak associated with a restaurant in Riga – preliminary report. *Euro Surveill.* 2008;13(20):pii=18871. Available from: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=18871>

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