A VIEW OF DEMOGRAPHIC FACTORS OF HEPATITIS B VIRUS INFECTION IN DURRES REGION DURING 1995-2015

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Abstract
HBV infection is a healthcare problem worldwide because it is the major cause of acute and chronic liver disease. A considerable number of cases are reported every year at our Service. The objective of this study is to identify the demographic factors of this infection in Durres Region. A descriptive study was done using statistics from Control of Infectious Diseases Service in Durrës. The analysis was done by counting the cases every year for each demographic factor (area, gender, age). From the total number of cases confirmed by serological analysis are resulting as follows: 72% of cases are from city area and 28% from villages. More cases occur in males 61%. The highest rate occurred in 25-29 years age group. The results can be explained by factors such as sexual transmission and the additional risk factors may be the high number of sexual partners and low educational level about this infection. It is important to increase the awareness of risks for this infection and the diseases that comes from it and planning Health educational programs to show the importance of a healthy sexual life. The application of vaccine to people who are at risk groups would be very important to decrease the number of cases in the future.

Key words: Infection HBV, chronic liver disease, vaccination

Introduction
HBV infection is a healthcare problem worldwide because it is the major cause of acute and chronic liver disease. Hepatitis B can lead to a chronic form, which can cause cirrhosis and hepatocellular carcinoma. This form of hepatitis can occasionally present with fulminant hepatic necrosis and acute liver failure. Below are shown the main features of this infection (table 1).

Table 1. Main features of HBV infection

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incubation period</td>
<td>4-6 weeks</td>
</tr>
<tr>
<td>Virus</td>
<td>DNA polymerase</td>
</tr>
<tr>
<td>Onset</td>
<td>Insidious (variable)</td>
</tr>
<tr>
<td>Transmission</td>
<td>Parenteral, sexual</td>
</tr>
<tr>
<td>Severity</td>
<td>Occasionally severe</td>
</tr>
<tr>
<td>Fulminant Hepatitis</td>
<td>Very rare (1% of icteric patients )</td>
</tr>
</tbody>
</table>
A view of demographic factors of …

Symptoms
Fever malaise headache anorexia vomiting dark urine jaundice 10-20% with serum sickness-like (joint pain , rash

Chronicity
5-10%

Antigens
HBsAg outer surface coat HBcAg inner nucleocapsid core HBeAg circulating form of HBcAg

Antibodies
Anti-HBs Anti- HBc Anti-HBe

Postexposure prophylaxis
HB Ig/ Hep B vaccine

Table 2. Recommended Immunization Schedule for infants 0-6 months in Albania since 1 march 2014

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Age by month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuberculosis</td>
<td>Birth 2 months 4 months 6 months</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>HepB</td>
</tr>
<tr>
<td>Diphtheria Tetanus whooping cough Hepatitis B Influenza type</td>
<td>DTP- HepB- Hib DTP- HepB- Hib DTP- HepB- Hib</td>
</tr>
</tbody>
</table>

HBV can be found in the blood and to a lesser extent, saliva, semen, tears and other body fluids of an infected person. Way of transmission:
1. By the parenteral route as:
   - Acquired perinatal
   - blood transfusion
   - needle stick
   - needle sharing
2. By sexual contact with someone infected with HBV

Knowing the way of transmission, we can identify the risk groups:
- Infant born to an infected mother
- Drug users sharing needles to each other’s
- Adults having unprotected sexual contact with multiple sex partners or with someone who is infected with HBV
- Men who have Homosexual contact
- Who live with someone that has a chronic HBV infection

- Medicine staff that make injections and so are exposed to human blood and body fluids
- Persons traveling to areas where hepatitis B infection is endemic like South Africa, Nigeria, Sudan, Uganda etc.
- Those undergoing hemodialysis
- Adolescents with bleeding disorders who receive clotting factor concentrates

Vaccination against HBV in Albania
Vaccination of neonates and infants against HBV is operating since May 1994 and at the present. In 2004 hepatitis B vaccine has been administered at all medical staff all over Albanian three-dose series.
In 2009-2010 have been vaccinated:
- adolescents born in years 1992 and 1993 and those born in first months of 1994
- medicine staff, physicians, doctors and nurses that have not been vaccinated in 2004 or that are new staff
- students of Medicine Faculty and Nursery Faculty
A considerable number of cases are reported every year at our Service. So a descriptive study was conducted to identify demographic factors of this infection in Durres Region during 1995-2015. The analysis was based on data reported to the Regional Director of Health in Durres those data are collected by Infectious Diseases Service specially those data come from Regional Hospital Durres, Microbiological laboratories in Durres than collected through 14-Sh monthly form. We operated by counting the cases during 20 years through 14-Sh annually for each demographic factor (area, gender, age).

*All cases are confirmed by clinical symptoms and serological analysis than reported

**Results**

From the analysis the results are as follows:

- 72% of cases are from city area and 28% from villages.
- More cases occur in males than females (61% / 39%)
- The highest rate occurred in 25-29 years age group

The demographic factors are shown in figures below.

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**Figure 1.**

The percentage of cases that lives in city area 72% compared to 28 % of cases that lives in villages of Durres Region.
Figure 2. Distribution of cases by age groups

In this graph is shown that the majority of cases are males compared to Females in percentage (61% / 39%)

Figure 3. Distribution of cases by age groups
From this graph it is noticed that the highest number of HBV cases are among the 25-29 year age group.

Conclusions

• The results can be explained by sexual transmission as a main way of transmission and the risk factors may be unprotected sexual contact with a high number of partners and low educational level about HBV

• Is necessary to increase the awareness for this infection and the diseases that comes from it. Planning Health informative programs and seminars by collecting people at risk groups ,young adults which are sexually active and other categories of people would be useful to inform them about how is this transmitted and telling them that they can prevent the infection by having a healthy sexual life and by vaccination.

• The vaccination of risk groups and health educational programs would be very important to reduce future cases of HBV infection.

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