INTEGRATING VIRAL HEPATITIS INTO PUBLIC HEALTH SERVICES

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2017 Sao Paulo, Brazil
28 countries with the greatest burden of chronic hepatitis

11 countries with more than 50% of the global burden:

Brazil, China, Egypt, India, Indonesia, Mongolia, Myanmar, Nigeria, Pakistan, Uganda, Vietnam.

17 Countries with the highest spread:

Cambodia, Cameroon, Colombia, Ethiopia, Georgia, Kyrgyzstan, Morocco, Nepal, Peru, Philippines, Sierra Leone, South Africa, Tanzania, Thailand, Ukraine, Uzbekistan, Zimbabwe

Since 2003 - only acute forms of HCV-infections were registered

Since 2009 chronic forms of HCV- and HBV- infections have been registered

But, unfortunately, the registration quality needs to be better.

State clinics don’t provide obligatory testing of HCV-infections as it was done for HBV- infections.
The incidence of hepatitis C and B (CDC, Ukraine)

<table>
<thead>
<tr>
<th>Nosology</th>
<th>2010 (abs/100 000.)</th>
<th>2011 (abs/100 000.)</th>
<th>2012 (abs/100 000.)</th>
<th>2013 (abs/100 000.)</th>
<th>2014 (abs/100 000.)</th>
<th>2015 (abs/100 000.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>hepatitis C</td>
<td>4383/11,5</td>
<td>4903/13,0</td>
<td>5238/11,5</td>
<td>7520/16,6</td>
<td>6762/15,8</td>
<td>5985/12,7</td>
</tr>
<tr>
<td>hepatitis B</td>
<td>1368/3,61</td>
<td>2055/5,45</td>
<td>1564/3,4</td>
<td>3245/7,2</td>
<td>2787/6,5</td>
<td>1756/369</td>
</tr>
</tbody>
</table>

chronic HBV - 19 459/45,4
chronic HCV – 43 407/101,2
The prevalence of HBsAg and antiHCV in various countries in Europe and Asia (WHO European region, 2013)*

<table>
<thead>
<tr>
<th>Countries</th>
<th>Population aged ≥15 yr in 2008</th>
<th>Prevalence in first time blood donors</th>
<th>Prevalence in general population</th>
<th>Estimated numbers with infection (rounded to nearest 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>HBsAg</td>
<td>anti HCV</td>
<td>HBsAg</td>
</tr>
<tr>
<td>Ukraine</td>
<td>39554000</td>
<td>1%</td>
<td>1,3%</td>
<td>1,3%</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>120185000</td>
<td>1,1%</td>
<td>2,1%</td>
<td>1,5%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>19034000</td>
<td>5,2%</td>
<td>6,4%</td>
<td>7,1%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>8875000</td>
<td>0,04%</td>
<td>0,13%</td>
<td>0,2%</td>
</tr>
<tr>
<td>Estonia</td>
<td>1140000</td>
<td>0,3%</td>
<td>0,7%</td>
<td>1,2%</td>
</tr>
<tr>
<td>Germany</td>
<td>70748000</td>
<td>0,1%</td>
<td>0,1%</td>
<td>0,6%</td>
</tr>
<tr>
<td>Hungary</td>
<td>8511000</td>
<td>0%</td>
<td>0,3%</td>
<td>0%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>2823000</td>
<td>0,6%</td>
<td>1%</td>
<td>2,6%</td>
</tr>
<tr>
<td>Poland</td>
<td>23389000</td>
<td>0,5%</td>
<td>0,2%</td>
<td>2%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>52210000</td>
<td>0,04%</td>
<td>0,04%</td>
<td>0,2%</td>
</tr>
</tbody>
</table>

*V.D. Hope, I.Eramova, D. Carurro, Prevalence and estimation of hepatitis B and C infections in the WHO European Region: a review of data focusing on the countries outside the European Union and the European
Detection of anti-HCV IgM and anti-HCV IgG among some populations, % (CDC Ukraine, 2016).
Detection of HBsAg among some populations, %
(CDC Ukraine, 2016).

- Contact persons: 3.3%
- Donors: 0.7%
- Pregnant: 0.8%
- Health care workers: 0.8%
- Hospitalized patients: 1.2%
The number of patients with viral hepatitis B and C in the regions of Ukraine

<table>
<thead>
<tr>
<th></th>
<th>HBV</th>
<th>HCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>8107</td>
<td>14 560</td>
</tr>
<tr>
<td>2017</td>
<td>10 152</td>
<td>104 879</td>
</tr>
</tbody>
</table>
Among patients with co-infection HIV/HCV almost 5631 (18,3%) patients with hepatitis C require immediate specific antiviral treatment.
UNIFIED CLINICAL PROTOCOL OF PRIMARY, SECONDARY (SPECIALIZED) MEDICAL CARE FOR ADULTS AND CHILDREN

VIRAL HEPATITIS C (EASL)

APPROVED
By the Order of the Ministry of Health of Ukraine 02.04.2014 № 233

Updated in 2016
WHO CURES?

1. Infectious diseases doctors
2. Gastroenterologists
3. Family doctors – revealing, testing, prophylaxis
2014 – PEG-INF+RIBA (State program, region program)

2015 - PEG-INF+RIBA, PEG-INF+RIBA+SOF (State program, region program, Alliance of Public Health)

2016 - PEG-INF+RIBA, PEG-INF+RIBA+SOF, SOF+LED, 3D (State program, region program, Alliance of Public Health, MSF)
Fig. 10. Reported prices (originators and generics) for a 28-day supply of sofosbuvir in selected countries, per country income group (price information updated as of November 2016)

HIC: high-income country; LIC: low-income country; LMIC: lower-middle-income country; UMIC: upper-middle-income country
Source: Global report on access to hepatitis C treatment: focus on overcoming barriers. Geneva: World Health Organization; October 2016 (103)

Fig. 11. Reported prices (originators and generics) for a 28-day supply of daclatasvir in selected countries, per country income group (price information updated as of November 2016)

HIC: high-income country; LIC: low-income country; LMIC: lower-middle-income country; UMIC: upper-middle-income country
Source: Global report on access to hepatitis C treatment: focus on overcoming barriers. Geneva: World Health Organization; October 2016 (103)
Peculiarities of implementation of state program

Priority groups of patients:

- Patients with liver fibrosis stage F3-F4 (METAVIR);
- Patients with some extrahepatic manifestations;
- Women who are going to be pregnant;
- Patients having long contacts with biological liquids and others.
Treatment of chronic hepatitis C in Ukraine throughout the years

Interferon regimens

- IFN + RBV
- Peg-IFN + RBV

LDV/SOF

DCV?

Eradication?

1999 2002 2012 2015 2017

TVR

SMV

BOC

SOF

* * currently not registered in Ukraine (07.10.2017 г.)
PROBLEMS

1. Week system of epidemiology surveillance.
2. Poor funding of the “State program for the prevention, diagnosis and treatment of viral hepatitis”.
3. The lack of national laboratories involved in the diagnosis of viral hepatitis; absence of reference laboratories
4. **The high price of original medicine – needs generics.**
5. Impossibility of revealing RAVs.
6. There are no registered DAA to treat patients infected 2-3 G HCV (daclatasvir) and pangenotypes medicines – limited opportunities of retreatment (3D-regimes only in the frame of state program).
7. Limited opportunities of treatment of patients with terminal diseases of kidney and decompensating of liver fibrosis.
8. Poor attention to some special groups (hemophilia).