Pregnancy and viral hepatitis

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Introduction

Hepatitis B screening is routinely performed in pregnancy

Children from HBsAg-positive mothers receive HBIg (300 IU) and are vaccinated (2,3,4,11 months)

What happens with the mothers?

Project, financially supported bij Fonds Nuts-Ohra
How many pregnancies?

- Yearly about 200,000 deliveries
- Lues prevalence: 0.12%
- HBsAg prevalence 0.35% (n=700)
- Hiv prevalence 0.06% (n=120)
Ethnic background HBsAg-positive pregnant women in 2006
How many perinatal HBV infections?

Before the postnatal vaccination program: 30% of the children HBV infected
- HBeAg-negative: 10-30%
- HBeAg-positive: 90%

After the introduction of the postnatal vaccination: 1% (?)
<table>
<thead>
<tr>
<th>HBV DNA levels (log_{10} copies/mL)</th>
<th>Mothers</th>
<th>Perinatal HBV infections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study</td>
<td>Control</td>
</tr>
<tr>
<td>Grade 1 (&lt;5.0)</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Grade 2 (5.0–5.99)</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>Grade 3 (6.0–6.99)</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Grade 4† (7.0–7.99)</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>Grade 5 (8.0–8.99)</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>Grade 6 (9.0–9.99)</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Grade 7 (10.0–10.99)</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Grade 8 (≥11.0)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>117</td>
<td>133</td>
</tr>
</tbody>
</table>
What happens with the mothers?

Before 2008:

‘Draaiboek hepatitis B-immunisatie bij zuigelingen van hepatitis B-draagsters’ – VKH responsible for reporting to the GGD and informing the physician

Checklist verloskundigen: same

NHG-richtlijn ‘virushepatitis en andere leveraandoeningen’: nothing

CVZ- draaiboek ‘prenatale screening’. Specific for screening and the newborn
Projectmembers

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- Marijke Mostert  GGD / NHC
- Irene Veldhuijzen  GGD
- Maurice Wouters  Gynaecologists

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What happens with the mothers?

**After 2008:**

- Guidelines adjusted
- New ‘checklist verloskundigen’
- NHG-richtlijn ‘virushepatitis en andere leveraandoeningen’: special paragraph ‘HBV and pregnancy’
- Guideline treatment HBV: special paragraph ‘HBV and pregnancy’
Changes:

- Responsibility for the obstetrician in controlling if the pregnant woman is tested for HBeAg
- Responsibility for the obstetrician in controlling if the mother-to-be is seen by a specialist
- Pregnancy can be monitored by the obstetrician
zwangere

1e consult VKH

1e bloedafname

uitslag

HBsAg positief

Confirmatietest, Tweede monster, HBeAg

Uitslag naar VKH Contact met GGD (nieuwe infecties)

HBeAg negatief

Contact VKH met huisarts

HBeAg positief

Contact VKH met huisarts, verwijzing

zwangere

specialist

Lamivudinebehandeling
Indien HBV-DNA > 2x10^8 IU/mL
Vanaf week 32
Na bevalling evt overschakelen op ander middel
Why lamivudine?

- Used (in higher doses) in pregnant women with HIV.
- No experience with adefovir-dipivoxil, entecavir, telbivudine.
- Some experience in pregnant women with HBV and high viral load.
- Advance: More HBV-positive women see a specialist.
Questions and cautions:

- Toxicity?
- Lamivudine, not officially but unofficially safe during pregnancy
- Flare-up: normal 45% after pregnancy, 60-65% after lamivudine-treatment during pregnancy
- Does it really decrease HBV-transmission? (ref)
- Breast-feeding (OK after 48 hrs)?
- Communication between obstetricians, physician, gynaecologist, mdl-specialist or infectiologist
- Communication: often immigrants (African, Asian)
Hepatica nobilis