<table>
<thead>
<tr>
<th>Virus</th>
<th>Main route of transmission</th>
<th>Vertical transmission</th>
<th>Clinical features during pregnancy</th>
<th>Maximal risk of foetal/neonatal infection</th>
<th>Treatment for mother and foetus to protect neonate</th>
</tr>
</thead>
</table>
| Hepatitis A| Faecal/oral                | Rare                  | • Acute • Self-limiting                                                | Around delivery                          | Neonatal:  
  • Immunoglobulin at birth                      |
| Hepatitis B| Blood                      | Common (risk increased with phase of disease and viral load) e.g. HBsAg+ HBeAg+ 95% HBsAg+ HBeAg– 2 to 15% | • Rarely presents with ALF during pregnancy                           | Around delivery Small proportion trans-placentally | Maternal:  
  • In selected cases, risk of vertical transmission can be reduced with antiviral therapy (e.g. tenofovir) in 3rd trimester  
  • Salvage liver transplantation  
  Neonatal:  
  • Hepatitis B immunoglobulin  
  • Passive immunisation within 24 h of birth (highly effective) |
| Hepatitis C| Blood                      | Uncommon (rate ~5% but dependent on viral load and presence of co-infection with human immunodeficiency virus) | • Increased risk of developing early-onset intrahepatic cholestasis of pregnancy\(^{10}\)  
• Not particularly associated with adverse pregnancy outcomes | 3rd trimester                               | Maternal & Neonatal:  
  • None, but pilot studies looking into safety of direct-acting antiviral therapies during pregnancy  
  • Interferon and ribavirin not recommended during pregnancy |
| Hepatitis D| Blood                      | Uncommon               | • Requires presence of hepatitis B virus for replication              | As per hepatitis B virus                 | Maternal:  
  • As per hepatitis B virus                      |
| Hepatitis E| Faecal/oral                | Common (up to 50%)     | • Usually a mild self-limiting infection  
• More common in pregnant women (? immune alterations)  
• Increased incidence of hepatic encephalopathy and ALF (70%) with a mortality rate of up to 20% (in developing countries), particularly if acquired late in pregnancy\(^{11}\)  
• Associated high rate of obstetric complications: | 3rd trimester                               | Maternal:  
  • Ribavirin not recommended during pregnancy  
  • Salvage liver transplantation               |
<table>
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<th>Disease</th>
<th>Transmission</th>
<th>Mode of acquisition</th>
<th>Clinical presentation</th>
<th>Diagnosis and treatment</th>
<th>Maternal</th>
<th>Neonatal</th>
</tr>
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<tbody>
<tr>
<td>Herpes simplex</td>
<td>Oral to oral contact, sexually transmitted</td>
<td>Dependent on primary or recurrent infection: up to 65% if primary infection</td>
<td>Rare, accounts for &lt;1% of acute viral hepatitis in pregnant women • Immunosuppression is a risk factor • May cause fulminant hepatitis in pregnant women with associated high mortality • Typical presentation with prodromal illness: fever, respiratory or gastrointestinal symptoms • Oral or genital lesions absent in 50% • Jaundice uncommon • Development of high aminotransaminases with coagulopathy • Liver biopsy: extensive/focal haemorrhagic necrosis and intranuclear inclusion bodies</td>
<td>Around delivery Maternal: • Aciclovir therapy (7–10 days) • Salvage liver transplantation may also be required Neonatal: • Caesarean section if active genital lesions</td>
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<tr>
<td>Cytomegalovirus</td>
<td>Close non-sexual contact, sexual exposure, transfusion, transplantation</td>
<td>Dependent on primary or recurrent infection: up to 45% if primary infection, &lt;5% if recurrent infection</td>
<td>Pregnancy does not affect clinical severity • Can cause hearing loss and neurodevelopmental disorders in foetus</td>
<td>Acquisition of foetal infection increases with advancing gestational age Maternal &amp; Neonatal: • No proven treatments for effective prevention of foetal disease or risk: - Valganciclovir - Cytomegalovirus hyperimmunoglobulin therapy (conflicting data)</td>
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<tr>
<td>Epstein-Barr</td>
<td>Salivary secretions</td>
<td>Rare</td>
<td>Little evidence of teratogenic risk to foetus in women who have developed infection during pregnancy</td>
<td>Not well defined Maternal &amp; Neonatal: • No proven treatments for effective prevention of foetal disease</td>
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