Hepatitis A epidemiology in Thailand

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GEOGRAPHIC DISTRIBUTION OF HEPATITIS A VIRUS INFECTION

Anti-HAV Prevalence
- High
- High/Intermediate
- Intermediate
- Low
- Very Low
Reported cases of hepatitis in Thailand

Fig. 1 Reported Cases of Hepatitis (total) per 100,000 Population, by Year, Thailand, 1997-2006.

Rate per 100,000 Pop.

Annual Epidemiological Surveillance Report 2006
Reported cases of hepatitis in Thailand by age-group (2004)
Number of hepatitis A cases by region (2007)
Reported HAV & percent of households with toilet & safe drinking water

Annual Epidemiological Surveillance Report 2006
Changing seroepidemiology of HAV infection in Thailand

- Year 2004
- Subject aged 6 mos – 60 yrs
- Specimens collection 6237 samples
- Selected to test anti-HAV 3997 samples
Seroprevalence of anti-HAV among different age groups in Thailand (overall 27.4%)

Seroprevalences of hepatitis A virus in Thailand

Seroprevalence of anti-HAV among medical student in Bangkok

## Predicted outcome of HAV infection

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Children (&lt;5 years)</th>
<th>Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inapparent infection</td>
<td>80-95%</td>
<td>10-25%</td>
</tr>
<tr>
<td>Anicteric or icteric disease</td>
<td>5-20%</td>
<td>75-90%</td>
</tr>
<tr>
<td>Complete recovery</td>
<td>99+%</td>
<td>98+%</td>
</tr>
<tr>
<td>Chronic disease</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Mortality rate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 14 years</td>
<td>0.1%</td>
<td></td>
</tr>
<tr>
<td>• 15-39 years</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>• 40 years</td>
<td>2.1%</td>
<td></td>
</tr>
</tbody>
</table>

Severity of HAV infection

Severity of HAV infection among different age groups. The graph shows the percentage of jaundice and asymptomatic cases.

- **< 6 yr**: 8% jaundice, 92% asymptomatic
- **6 – 12 yr**: 50% jaundice, 50% asymptomatic
- **Young adults**: 90% jaundice, 10% asymptomatic

Hepatitis A: high-risk groups

- School children
- Homosexual men
- Intravenous drug users
- Travellers to high endemic area
- Hospital workers
- Nursery / child day care center employees
Hepatitis A outbreak in a child care institution

- Number of children: 112 cases
- Anti-HAV IgM positive: 65 cases
- Children with clinical hepatitis: 5 cases
- Symptomatic : asymptomatic: 1:13
- No virus was detected in saliva
- HAV-RNA can be detected in stool for at least 3 wks

Hepatitis A outbreaks in Thailand during 2001-2005

<table>
<thead>
<tr>
<th>Duration</th>
<th>Location</th>
<th>District / Province</th>
<th>Affected population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Central</td>
<td>Meaung/Suphanburi</td>
<td>Children, adolescents</td>
</tr>
<tr>
<td>2001</td>
<td>south</td>
<td>Hatyai/Songkhla</td>
<td>ND</td>
</tr>
<tr>
<td>2001-2</td>
<td>south</td>
<td>Yeengor/Narathiwat</td>
<td>Children</td>
</tr>
<tr>
<td>2001-2</td>
<td>south</td>
<td>Ruso/Narathiwat</td>
<td>Children, adults</td>
</tr>
<tr>
<td>2002</td>
<td>south</td>
<td>Yeengor/Narathiwat</td>
<td>ND</td>
</tr>
<tr>
<td>2002</td>
<td>south</td>
<td>Sukhirin/Narathiwat</td>
<td>ND</td>
</tr>
<tr>
<td>2002</td>
<td>east</td>
<td>Pongnamron/Chantaburi</td>
<td>ND</td>
</tr>
<tr>
<td>2002-3</td>
<td>central</td>
<td>Pakkred/Nonthaburi</td>
<td>Children</td>
</tr>
<tr>
<td>2005</td>
<td>south</td>
<td>Hatyai/Songkhla</td>
<td>Children, adults</td>
</tr>
<tr>
<td>2005</td>
<td>north</td>
<td>Wangnuer/Lampaang</td>
<td>Adults</td>
</tr>
<tr>
<td>2005</td>
<td>north</td>
<td>Wiangpapao, Maesruai/Chiangrai</td>
<td>Children, adults</td>
</tr>
</tbody>
</table>
The location of Ruso and Yeengor districts in Narathiwat province, southern Thailand

The distribution of admitted acute hepatitis cases in the Ruso outbreak
Genotype of HAV in Thailand

Control of hepatitis A virus infection

- Implementation of standard and public health
- Pre & post exposure prophylaxis
  - Active immunization
  - Passive immunization
Cost-benefit analysis of hepatitis A vaccination in Thailand

Acknowledgements

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Thank you for your attention