NOSOCOMIAL INFECTIONS AND THEIR RISK FACTORS IN PEDIATRIC ICUs IN LITHUANIA

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MAIN OBJECTIVE

- To determine the incidence of nosocomial infections and their risk factors in pediatric ICUs in Lithuania

METHODS

- Prospective study in randomly selected ICU
- Modified HELICS protocol and CDC definitions used
MATERIAL

- 11 ICU of 9 hospitals
- 1061 patient examined:
  - male - 59.5%
  - mean length of stay - 6.0 days
  - mean age - 6.3 years

INCIDENCE OF NI

- 157 patients had total 175 NI
- Incidence of NI in ICU:
  - 17.2 % of patients
  - 28.7 infections/1000 patient days
# RISK FACTORS OF NI

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Exposed patients (%)</th>
<th>Device days</th>
<th>Mean (median)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical ventilation</td>
<td>30,2</td>
<td>1511</td>
<td>5,0 (4)</td>
</tr>
<tr>
<td>Arterial/Central line</td>
<td>24,5</td>
<td>1592</td>
<td>6,4 (5)</td>
</tr>
<tr>
<td>Urinary catheter</td>
<td>51,8</td>
<td>2363</td>
<td>4,5 (3)</td>
</tr>
<tr>
<td>Peripheral catheter</td>
<td>90,7</td>
<td>4392</td>
<td>4,8 (4)</td>
</tr>
<tr>
<td>Intracranial pressure monitoring</td>
<td>21,1</td>
<td>76</td>
<td>3,5 (3)</td>
</tr>
</tbody>
</table>
NI INCIDENCE BY AGE

Age, years

<1
1-5
6-12
>12

1000 patient days

21.4
28.0
34.8
32.2
STRUCTURE OF NI

- Pneumonia: 29.7%
- Other RTI: 25.7%
- Other: 22.8%
- BSI: 7.4%
- SSI: 8.0%
- UTI: 6.3%

Other RTI: 25.7%
INCIDENCE OF MAIN NI BY AGE

- PNE
- OLRT
- BSI
- UTI
- SSI
ETHIOLOGY OF NI

- H. influenzae 20.5%
- Acinetobacter spp. 17.9%
- S. aureus 17.9%
- Ps. aeruginosa 7.4%
- E. coli 5.8%
- St. pneumonia 5.3%
- Enterococcus spp. 4.2%
- Candida 2.6%
- Other 18.6%
CONCLUSIONS

- Our study revealed the highest nosocomial infections rates among 6-12 years old children
- Pneumonia and other respiratory tract infections are the most common nosocomial infections
- Gram-negative bacteria are main pathogens of nosocomial infections