Pulmonary abscess and gangrene

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Наилучшие пожелания
Lung abscess and necrotizing pneumonia: two different entities

<table>
<thead>
<tr>
<th></th>
<th>Necrotizing pneumonia</th>
<th>Abscess</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspiration</td>
<td>–</td>
<td>+++</td>
</tr>
<tr>
<td>Dependent lobes</td>
<td>–</td>
<td>+++</td>
</tr>
<tr>
<td>Aerobes</td>
<td>++++</td>
<td>+</td>
</tr>
</tbody>
</table>

Tanaka et al, EJCTS, 2005
Lung abscess
Lung abscess

Images from Web Path
Lung abscess

Images from Web Path
Lung abscess

Images from Web Path
Lung abscess

Images from Web Path
Lung abscess

Images from Web Path
Necrotizing pneumonia
Necrotizing pneumonia
Necrotizing pneumonia

Images from Web Path
Necrotizing pneumonia

Images from Can Resp J, 2006
Necrotizing pneumonia

Images from Can Resp J, 2006
Necrotizing pneumonia

Images from Can Resp J, 2006
Literature search

• Lung abscess
  – Recommended management
  – Evidences for surgical therapy

• Necrotizing pneumonia
  – Results of surgical therapy
The evidence in Medicine
The evidence in Medicine

- Clinical Reference Texts
- Case Reports, Case Series, Practice Guidelines
- Other Reviews of the Literature
- Clinical Research Critiques
- RCTs Case Cohorts, Control Studies
- Evidence Summaries
- Evidence Guidelines
- Other SRs & Meta-Analyses
- Systematic Reviews
- Cochrane Reviews
Radiological confirmation
Radiological confirmation

Rule-out specific causes

- Bronchial obstruction
- Bronchial carcinoma
- Sequestration
- Hydatidic disease
Necrotizing pneumonia?
Pulmonary sequestration
Pulmonary sequestration
Radiological confirmation

Rule-out specific causes

Medical therapy
Radiological confirmation

Rule-out specific causes

Medical therapy

Resolution

Failure
Radiological confirmation

Rule-out specific causes

Medical therapy

Resolution

Failure

Pig-tail drainage
Pig-tail drainage

- 19 cases treated
  - 8 resolution
  - 5 pneumothorax
  - 2 haemoptysis
  - 2 bronchial fistula (operated)
  - 2 failure (operated)

Yunes et al, 2009
Pig-tail drainage

- 335 cases treated
  - 209 success
  - Immunodepressed success 53%
  - Immunocompetent 73%
  - 15 death (sepsis)

Yunes et al, 2009
Pig-tail drainage

Resolution

Failure

Chest tube Bronchoscopy
• 40 cases
  – 33 success
  – 5 pneumothorax
(Kelogrigooris, 2011)
Pig-tail drainage

Resolution

Failure

Chest tube
*Bronchoscopy

- 42 cases
  - 38 success

(Hertz, 2005)
Pig-tail drainage

Resolution

Failure

Chest tube
*Bronchoscopy

Resolution

Failure

Surgery
Pig-tail drainage

- 67 cases operated (4 hemoptysis)
  - 52 lobectomy
  - 5 bilobectomy
  - 4 pneumonectomy

- Mortality 1 case (bronchial fistula)

Petrov et al, 2004
Broncho-pulmonary shunts

Tanaka et al, EJCTS, 2005
Pig-tail drainage

• 67 cases operated (4 hemoptysis)
  – 52 lobectomy
  – 5 bilobectomy
  – 4 pneumonectomy

• Mortality 1 case (bronchial fistula)

Petrov et al, 2004
Bronchial fistula prevention
Bronchial fistula prevention
Pericardial fat pad
Pericardial fat pad
## Nocrotizing pneumonia: surgica series

<table>
<thead>
<tr>
<th>Author, year</th>
<th>Cases</th>
<th>Ventilator</th>
<th>Pneumo /lobe</th>
<th>Death %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reimel, 2006</td>
<td>35</td>
<td>24</td>
<td>4 / 18</td>
<td>8.5</td>
</tr>
<tr>
<td>Tsai, 2011</td>
<td>20</td>
<td>--</td>
<td>0 / 25</td>
<td>15.4</td>
</tr>
<tr>
<td>Schweigert, 2012</td>
<td>26</td>
<td>6</td>
<td>4 / 13</td>
<td>15</td>
</tr>
</tbody>
</table>
Necrotizing pneumonia

• Try first medical therapy
Take-home messages

• Rule-out other causes
• First, medical therapy
• Percutaneous drainage in abscess
• Bronchial fistula prevention
• Expected high mortality in necrotizing pneumonia