Retropharyngeal Abscess in children
A Ten year experience

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Abnormal pharyngeal abscess in children: 10-year study.

PMID: 15971649 [PubMed - indexed for MEDLINE]

Paediatric retropharyngeal abscess.

PMID: 15667676 [PubMed - indexed for MEDLINE]

Ologe FF, Busari SS, Amole AO
Anatomy

- Base of the skull → 2\textsuperscript{nd} T-vertebrae
- Buccopharyngeal fascia → Alar fascia
- Carotid sheath
- Danger space.
- Parapharyngeal
- Mediastinum
- Loose connective tissue
- Lymphatic chains: ear, nasopharynx, nose and PNS.
Retropharyngeal Abscess

- The most common deep neck infection
- Usually affects young children
- Disastrous sequelae
- Current literature
  - Few references.
  - Case report
  - Case series (small numbers)
Items 1 - 20 of 424

1: Woolley SL, Smith DR.
   History of possible foreign body ingestion in children: don't forget the rarities.
   PMID: 16276264 [PubMed - as supplied by publisher]

2: Paul CA, Kumar A, Raut VV, Garhnam A, Kumar N.
   Pseudomonas cervical osteomyelitis with retropharyngeal abscess: an unusual complication of otitis media.
   PMID: 16280661 [PubMed - as supplied by publisher]
Pseudomonas cervical osteomyelitis with retropharyngeal abscess: an unusual complication of otitis media.

PMID: 16259661 [PubMed - in process]

Fourth branchial arch anomaly and pyriform sinus fistula as a rare cause of recurrent
? Management

? Diagnosis
- ? Organism... Throat Culture
- CT (Radiation, sedation, cost, ET tube...)
- Ring enhancement & free air...? pathognomonic

? Treatment
- ? Organism → ? Antibiotic
- Surgical management ? Immediate
Objectives

- **Diagnosis**
  - Symptoms and signs
  - Radiological workup

- **Treatment**
  - Antibiotic choice & Duration
  - Microbiological findings
  - Surgery

- **Complications**
Methods

- Retrospective
- Pediatric patients
- Montréal children hospital
- CT scans were reviewed in blinded fashion
Results
<table>
<thead>
<tr>
<th>Age</th>
<th>Medical Rx</th>
<th>Surgical Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>3-6</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>6-9</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>&gt; 9</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
Medical Rx  Surgical Rx

Age

Number of patients

<3  3-6  6-9  >9

<3  3-6  6-9  >9

McGill
Male 76%
Female 24%
Medical treatment

- 96% patients received IV clindamycin
- 5 days intravenous followed by 10 days of oral as outpatient
- Allergic to clindamycin (4%).
Surgical intervention

- impending complication
- No response to medical treatment after 48 hours.
- only 17 patient (25%) required surgical intervention.
- All patients were treated postoperatively with courses of IV followed by oral antibiotics
<table>
<thead>
<tr>
<th>S/S</th>
<th>Medical Rx (%)</th>
<th>Surgical Rx (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>45 (88)</td>
<td>15 (88)</td>
</tr>
<tr>
<td>Torticolus</td>
<td>18 (35)</td>
<td>7 (41)</td>
</tr>
<tr>
<td>Dysphagia</td>
<td>3 (6)</td>
<td>4 (24)</td>
</tr>
<tr>
<td>Neck Swelling</td>
<td>16 (31)</td>
<td>12 (70)</td>
</tr>
<tr>
<td>Trismus*</td>
<td>11 (22)</td>
<td>4 (24)</td>
</tr>
<tr>
<td>Sore throat</td>
<td>28 (55)</td>
<td>9 (53)</td>
</tr>
<tr>
<td>Drooling</td>
<td>7 (14)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Temp</td>
<td>Medical Rx (%)</td>
<td>Surgical Rx (%)</td>
</tr>
<tr>
<td>----------</td>
<td>----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>&lt;37.8</td>
<td>6 (12)</td>
<td>2 (12)</td>
</tr>
<tr>
<td>37.8-38.5</td>
<td>18 (35)</td>
<td>4 (23)</td>
</tr>
<tr>
<td>38.5-39.3</td>
<td>22 (43)</td>
<td>7 (41)</td>
</tr>
<tr>
<td>&gt;39.3</td>
<td>5 (10)</td>
<td>4 (24)</td>
</tr>
</tbody>
</table>
Median duration of IV antibiotic

- 5 days in medical
- 6.5 days in surgical

<table>
<thead>
<tr>
<th>Home AB</th>
<th>Number ( % )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clidamycin</td>
<td>40 ( 59)</td>
</tr>
<tr>
<td>Clavulin</td>
<td>5 ( 7 )</td>
</tr>
<tr>
<td>Ceflixen</td>
<td>3 ( 4 )</td>
</tr>
<tr>
<td>Penicillin V</td>
<td>9 ( 13 )</td>
</tr>
<tr>
<td>Other</td>
<td>11 ( 16 )</td>
</tr>
</tbody>
</table>
All patients had a CT scan.
62 of the patients were available for re-evaluation.
Abscess (hypodensity lesion with ring enhancement)
The CT scan shows
- Sensitivity of 43%
- Specificity of 63%
Throat swab

- 13 patients +ve culture
- All of them grew group A strept
- -ve OR culture
Complication

- No death, no major complication nor recurrence.
- One patient had Kawasaki disease.
- 2 were admitted to ICU for airway monitoring.
- 1 was left intubated after the surgical procedure for three days.
Discussion
Discussion

- Shift of this disease towards older children
- Boys > Girls (?more URTI)
- Boys respond better for medical treatment
Diagnosis

- Symptoms and signs
  - Not specific and can mimic many grave diseases like meningitis and epiglottitis

- Radiological workup (CT scan)
  - Confirm the clinical diagnosis of infection.
  - Low sensitivity (43 %)
  - Low specificity (63 %)
Treatment

- We fail to isolated pathogen
- Clindamycin is the drug of choice for empirical Rx
- 5 days IV → 10 days of oral as out patient.
- 48 h no improvement → Sx
Conclusions

- E.B.M
- Largest case series in the literature
- CT scan has low sensitivity & specificity
- Clindamycin is the drug of choice
- Not responding → surgery
Future

- E.B.M
- Double blind case control studies
- CT scan, MRI, Gallium
- Clindamycin vs Penicillin
- Saudi experience
CT scan

- Can map out the location
- Extent
- Relation to the vital structures
- Early diagnosis of complication like mediastinitis
- Guided localizing and draining of retropharyngeal abscesses
CT scan

- Radiation
- Cost
- Inaccuracy in diagnosing abscess
- Requirement of intubation
- Should not be use for re-imaging to roll out abscess formation with time
- Individualize cases
Acknowledgments

- Dr. Basel Al-Sabah
- Dr. Hashim Bin Salleen
- Dr. Choi-Rosen J
- Dr. Ted Tewfik
Thank You