Complicated *Kingella kingae* osteoarthritis

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**INTRODUCTION**

*Kingella kingae* is increasingly being recognized as a common etiology of osteoarticular infections, especially in younger children. The recent use of liquid culture medium and polymerase-chain-reaction allows improved bacterial isolation. Infections are usually mild with a favorable outcome. However, unusually complicated cases have been rarely reported.

**CASE REPORT**

**Aphthous oral lesions**

<table>
<thead>
<tr>
<th>3 y/o</th>
<th>Lower limb claudication for 15 days</th>
<th>Low grade fever (max 38.5°C) the first 3 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right tibiotarsal joint edema</td>
<td>WBC 14.600 /L</td>
<td>ESR 32 mm/h</td>
</tr>
</tbody>
</table>

**Pharyngitis**

<table>
<thead>
<tr>
<th>2 y/o</th>
<th>Lower limb claudication for 15 days</th>
<th>Low grade fever (max 39°C) for 1 week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left heel edema</td>
<td>WBC 9.700 /L</td>
<td>ESR 17 mm/h</td>
</tr>
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</table>

**No recent infection**

<table>
<thead>
<tr>
<th>2 y/o</th>
<th>Lower limb claudication for 7 days</th>
<th>Low grade fever (max 39°C) for 3 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right external malleolus edema / redness</td>
<td>WBC 11.300 /L</td>
<td>ESR 48 mm/h</td>
</tr>
</tbody>
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Radiographs: unifocal bone lytic lesions compatible with abscess (astragalus, calcaneus and external malleolus)

**US:**

- no joint effusion.

**Histology:**

- inflammatory cells + bone sequestrum.

**US:**

- small tibiotarsal effusion + calcaneus hypoechoic area suggesting liquefaction.

**Histology:**

- inflammatory cells + bone abscess.

**US:**

- significant tibiotarsal effusion.

**Surgical treatment** + **Empirical i.v. antibiotic therapy** (Flucloxacillin 200 mg/Kg/d + Gentamycin 6 mg/Kg/d)

**Blood culture:** all negative

**Bone aspirate / synovial fluid culture** (BacT/Alert Pediatric®): *Kingella kingae*

**Amoxicillin-clavulanate** OR **Cefuroxime** i.v.

**Negative inflammatory markers:** 8±2 days → oral antibiotic therapy

**Treatment duration:** i.v. 8±2 days, oral 26±5 days, total 34±6 days

**6 month follow-up:** no clinical or radiologic sequelae

**DISCUSSION**

In these cases, several characteristics of *Kingella kingae* infections are identified, as young age, mild clinical presentation, normal-to-mild elevated inflammatory markers, single focus and favorable response to antibiotics. On the other hand, they show bone lytic lesions which are rarely described. These lesions can lead to important sequels and should be vigorously treated. History of recent upper respiratory infection can be a hint for the etiology, as *K. kingae* colonizes the posterior pharynx in <2 y/o children. Growth in solid culture medium is rare, therefore liquid medium should always be preferred for the diagnosis.

**References:**


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