LOCAL RESECTION OF NORA'S LESION IN DIFFERENT BONES OF THE HAND IN 4 PATIENTS

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INTRODUCTION

Bizarre parosteal osteochondromatous proliferation (BPOP, Nora’s lesion) is a benign bone tumor mainly of the hands and feet, other locations have been described. Trauma has been discussed as one risk factor among others.

Standard radiologic examination shows an irregularly shaped mass of bone adjacent to usually intact cortical bone.

MRI typically shows no communication between the tumor and the medullary canal. This feature has been questioned recently (see figure 1).

Histologic examination reveals bone and cartilage tissue with bizarre appearing chondrocytes and hypercellularity with a cartilage cap and adjacent zone of enchondral ossification (blue bone).

Surgical excision is the treatment of choice while recurrence rates are described up to over 50%.

Figures 1-3:
- Figure 1: Clinical, radiological and MRI appearance of a left index proximal phalanx BPOP in a 14 years old girl. The above mentioned usually intact cortical bone is involved in this case.
- Figure 2: Intraoperative findings (case from figure 1). A: left index proximal phalanx BPOP, note the cartilage cap. B: after excision with the underlying periosteum.
- Figure 3: A: cartilage and bone with spindle cell components. B: areas of enchondral ossification (blue bone). C: irregularly shaped chondrocytes and osteoblastic activity.

MATERIALS AND METHODS

All BPOP resections performed by or with the senior author were included in this retrospective study.

Patient demographics, medical history, history of trauma and postoperative complications as well as clinical signs of recurrence were noted.

Operative technique was total resection of the tumor with the underlying periosteum in regional or general anaesthesia. Specimens underwent histological examination for confirmation of the diagnosis. Follow-up was performed by outpatient clinical examination and telephone interview.

RESULTS

Table 1: Overview of all included patients.

<table>
<thead>
<tr>
<th>Patient</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs/sex)</td>
<td>67/m</td>
<td>14/f</td>
<td>24/f</td>
<td>27/f</td>
</tr>
<tr>
<td>Location</td>
<td>D1 P2 L Left thumb distal phalanx</td>
<td>D2 P1 L Left index proximal phalanx</td>
<td>MC3 L Left third metacarpal</td>
<td>D3 P2 R Right long finger middle phalanx</td>
</tr>
<tr>
<td>History of trauma</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Time to operation</td>
<td>Not known</td>
<td>1 year</td>
<td>½ year</td>
<td>3 years</td>
</tr>
<tr>
<td>Follow-up</td>
<td>9 years</td>
<td>6,5 years</td>
<td>6 months</td>
<td>3 months</td>
</tr>
<tr>
<td>Complications</td>
<td>None</td>
<td>None</td>
<td>CRPS</td>
<td>None</td>
</tr>
<tr>
<td>Recurrence</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
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</tbody>
</table>

DISCUSSION

Less than 200 cases or BPOP have been described in the literature since the original publication in 1983.

According to current publications, first line therapy for BPOP should be surgical resection, preferably with the underlying periosteum.

While 3 out of 4 patients did not suffer recurrence, one patient did so after only 3 months. Time to recurrence has been described between 2 and 24 months. Still, in our case incomplete primary resection must be assumed to be one possible cause.

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