E CASE REPORT

Intra-articular synovial haemangioma of the elbow in an adolescent male

Daniel B. A. Banks & Stuart M. Hay

Upper Limb Unit, Robert Jones Agnes Hunt Hospital, Oswestry, UK

ABSTRACT

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Conflicts of Interest

The authors declare no conflict of interests

Correspondence

Daniel B. A. Banks,
Flat 2, The Carriageworks,
Dogpole, Shrewsbury SY11EZ, UK.
Tel.: +44 (0)7890 291743.
Fax: +44 (0)1204 361016.
E-mail: danielbabanks@doctors.org.uk
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Intra-articular haemangiomas are rare phenomena and are difficult to diagnose and manage. We describe a case in which a haemangioma was found at the time of elbow arthroscopy in an adolescent male. The case highlights the advantage of early arthroscopic assessment and also that synovial haemangiomas must be considered as a rare differential diagnosis in unexplained elbow and joint pain.

INTRODUCTION

Intra-articular haemangiomas are rare phenomena, usually occurring in childhood and young adults, with potential to cause significant morbidity. Although synovial haemangiomas are recognized to occur in many joints, they have never been described in the elbow of an adolescent child.

We present a case report in which a haemangioma was found at arthroscopy within the elbow in an adolescent male who had been suffering with pain and loss of movement.

CASE REPORT

A 14-year-old adolescent presented to a paediatric orthopaedic clinic with a sudden inability to extend his right elbow associated with tenderness and pain. There was no previous history of a traumatic event and he had not previously noticed any difficulties with his elbow. His past medical history of note included being born 5 weeks prematurely and having a cleft palate.

On examination, the elbow lacked approximately 25 °C of full extension but had full flexion. Prosupination was well maintained. He was tender posterolaterally on palpation. Plain radiographs failed to diagnose a cause for this and a magnetic resonance arthrogram (Fig. 1) was requested. The images from this investigation were degraded markedly by movement artefact and computed tomography was performed as well (Fig. 2). This showed a healing osteochondral lesion at the junction between the humeral trochlea and the capitellum and increased soft tissue thickening in the olecranon fossa of unknown cause. He was subsequently referred to an upper limb service and the decision was made to proceed with an elbow arthroscopy.

At surgery, anterolateral, accessory lateral, direct lateral and direct posterior portals were used, in accordance with the senior surgeon's standard technique. A bright red, bleeding lesion was seen in the posterior compartment (i.e. the olecranon fossa). This correlated to the soft tissue mass seen on magnetic resonance imaging/computed tomography (Fig. 3). This lesion was excised and sent for histological analysis and the feeder vessel was coagulated. The osteochondral lesion was debrided and microfractured.

At 4 weeks post-operatively, his elbow was already symptomatically better but still lacked 20 °C of extension. It was much less uncomfortable and painful according to the patient and he was delighted with the result. At subsequent follow-up 9 months post-operatively, he lacked only the last few degrees of extension and was completely pain free. His Oxford elbow score at this stage was the maximum 48 compared to his pre-operative score of 37 (scored retrospectively).

The histological report stated, 'a haemangioma composed of a proliferation of cavernous and capillary sized blood vessels'.

DISCUSSION

Haemangiomas are benign lesions of vascular tissues that most commonly occur in the skin and liver but may occur in any tissue [1]. Intra-articular haemangiomas are a rare finding and not only have been well described in the literature within the knee, but also to a lesser degree in the spine, hand and wrist [2–4]. In the knee, haemangiomas are a recognized cause of pain; they can arise from the anterior cruciate ligament and may even mimic medial meniscal tears with pain and locking [4–6]. The importance of

Fig. 1 Sagittal magnetic resonance arthrogram image with movement artefact and unclear findings in the olecranon fossa.

Fig. 2 Axial computed tomographic image showing osteochondral lesion.

diagnosing and treating these knee lesions arthroscopically has previously been noted by Farkas et al. [5].

Synovial haemangiomas of the elbow have been described in the literature. Devaney et al. reported on 20 cases of synovial haemangioma whose average age of presentation was 25 years. Six patients had haemangiomas arising from within the elbow [7]. Further case reports have subsequently described such a lesion within the elbow. Mohammadi et al. [8] described 30-year-old

Fig. 3 Intra-operative view of the haemangioma at time of arthroscopy.

man with a synovial haemangioma of the elbow causing pain, swelling and loss of terminal extension and Busa et al. [9] reported a 62 year old man with posterior interosseus nerve palsy secondary to a haemangioma within the elbow joint. Clearly, these lesions can be a source of significant morbidity if ignored and early diagnosis and treatment is vital. Synovial haemangiomas of the elbow have never specifically been described in an adolescent and the present case report serves to highlight that it should be considered as a rare differential diagnosis in this age group, where early treatment could offer the best chance of clinical improvement.

This case illustrates the difficulty in diagnosing these lesions and demonstrates that early arthroscopic assessment should be considered for definitive diagnosis. In our particular case, clear diagnosis was unable to be gained from radiological imaging. We would recommend that early arthroscopic assessment should be performed when conventional imaging fails to provide a credible diagnosis.

Clearly, in this young man, it is difficult to assess just how much of his symptoms arose from his haemangioma and how much from his osteochondral lesion, although perhaps his rapid improvement at 4 weeks post-operatively suggests that the haemangioma was the most significant cause of his pain. Nevertheless, the case clearly demonstrates the advantages in early arthroscopic assessment for both diagnosis and treatment and serves to reinforce the point that intra-articular synovial haemangiomas are a rare yet significant cause of morbidity within the elbow joint.

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