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RESEARCH ARTICLE

GIANT BILATERAL CYAMELLA: A CASE REPORT

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Abstract

Cyamella, an accessory sesamoid ossicle of the popliteus in the region of the proximal myotendinous junction, is an extremely unusual finding, with a paucity of current published literature describing its MR appearance. In this case report, we describe a case of cyamella in a 60 year old female with classic features diagnosed on MRI and CT scan with illustrations.

Introduction:

Cyamella often referred to as a fabella-like sesamoid, is a small sesamoid bone located within the tendon of the popliteus muscle at the knee. Although its incidence and clinical significance are often overlooked, the cyamella holds particular importance in radiology for diagnosing and managing certain knee pathologies. This case report provides detailed observations supported by magnetic resonance imaging (MRI), illustrating the presence and characteristics of the cyamella.

Case Report:

A 60-year-old woman presented with chronic right knee pain. Magnetic resonance imaging (MRI) revealed bi-compartmental gonarthrosis and a posterior horn tear of the medial meniscus (Figure 1). An additional structure was identified on the posterior surface of the proximal tibiofibular joint, near the intersection of the popliteus tendon. This structure appe ared oval with regular contours, exhibiting low signal intensity on T2-weighted images and high signal intensity on T1-weighted images. The marrow signal intensity was consistent with that of the adjacent bones (Figure 2).

On CT scan, the lesion is bilateral, of fatty density, surrounded by an ossified layer in contact with the popliteal tendon (Figure 3).

These findings suggest the presence of a sesamoid bone. The diagnosis of cyamella was considered.

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Figure 1:**Sagittal DP fat-saturated MR image demonstrating a posterior horn tear of the medial meniscus (indicated by an arrow).**

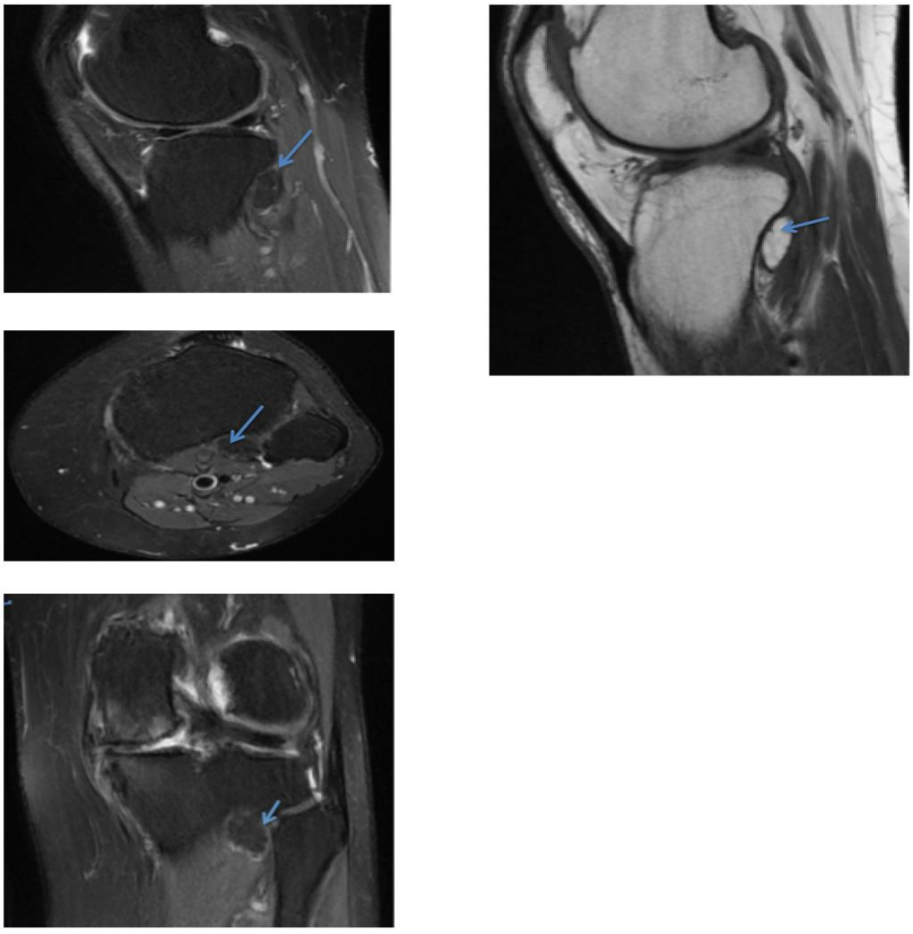

Figure 2:(A, B, C): Sagittal, axial and coronal DP Fat sat MR image, D: sagittal T1: demonstrating an ossific corticated body at the popliteus musculo- tendinous junction consistent with a cyamella (Arrow).

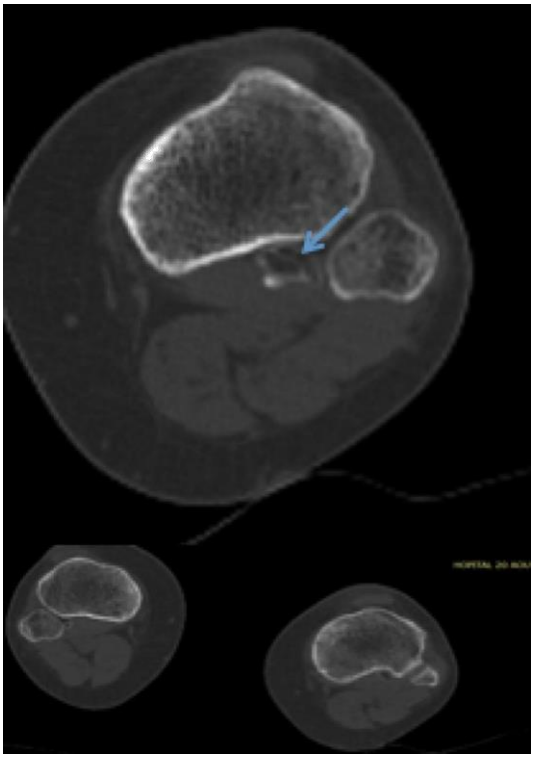

Figure 3: CT scan depicting the cyamella as a rounded osseous body (indicated by an arrow)."

Discussion:

The cyamella is notably absent or extremely rare in humans but is commonly found in many other primates. It is theorized to contribute to joint function by altering tendon pressure, similar to other sesamoid bones (1). When present, it may articulate with the lateral condyle of the tibia and lies in close proximity to the head of the fibula. Located within the popliteus muscle, it qualifies as a sesamoid bone.

The cyamella is typically situated within the tendon or occasionally at the myotendinous junction of the popliteus muscle, which extends posteriorly and distally from the lateral femoral epicondyle to its origin on the proximal third of the posterior aspect of the tibial diaphysis (3). Due to the rarity of cyamella, it is essential to consider and rule out other differential diagnoses.

Common differentials include fabella,heterotopic ossification, soft-tissue tumors with osseous metaplasia, osteocartilaginous loose bodies, free bone fragments post-trauma, and detached osteophytes (4).

The location within the popliteus muscle distinguishes cyamella from the fabella, which is a sesamoid bone of the lateral gastrocnemius. Clinical history, including trauma, neurological injury, or burns (in cases of heterotopic ossification), can provide valuable diagnostic clues. Evaluation of bone marrow signal and assessment of soft tissue can also aid in distinguishing this condition from aggressive malignancies such as osteosarcoma.

Magnetic resonance (MR) signal characteristics can assist in assessing the probability of alternative etiologies such as osteocartilaginous loose bodies, osteochondromatosis, or the presence of osteophytes (5).

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