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Uncommon Bilateral Multipartite Patella With Multiple Large Fragments: A Case Report

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

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BACKGROUND

Multipartite patella is a rare anatomical variation characterized by the presence of multiple ossification centers that fail to fuse during skeletal development. It is most commonly asymptomatic and discovered incidentally on imaging. Multipartite patella typically affects the superolateral aspect of the patella and is more frequently observed bilaterally.

CASE DESCRIPTION

We report the case of a 50-year-old male mine laborer, with no significant medical history, who presented to our physical medicine clinic with anterior left knee pain persisting for approximately two years. Clinical examination of the knees revealed enlarged patellae with bilateral symptoms of patellofemoral syndrome, more pronounced on the left side, characterized by a positive grind test and Zohlen's sign. Knee radiographs, including anteroposterior, lateral, and 90° patellar skyline views, revealed bilateral patellofemoral impingement and multipartite patella with five fragments. The patient was prescribed simple analgesic treatment, including nonsteroidal anti-inflammatory drugs (NSAIDs) and codoliprane, along with rehabilitation focusing on quadriceps strengthening, stretching of the tensor fasciae latae and iliotibial band, and analgesic physiotherapy. The evolution was marked by functional and pain improvement.

DISCUSSION

Clinically, symptoms can develop following direct trauma, repetitive strain, or increased physical activity, resulting in localized pain, tenderness, and swelling. In symptomatic cases, the condition may resemble a patellar fracture, emphasizing the need for precise diagnosis. Radiographic evaluation is crucial in identifying multipartite patella. Standard knee radiographs, reveal multiple well-corticated patellar fragments, differentiating it from an acute fracture. Magnetic resonance imaging (MRI) may also be useful in assessing soft tissue inflammation, bone marrow edema, or associated cartilage damage. Most cases of multipartite patella are managed conservatively with rest, activity modification, physiotherapy, and analgesics. Strengthening exercises, particularly for the quadriceps and vastus medialis obliquus, along with stretching of the ITB and TFL, can help reduce pain and improve knee function. For persistent symptoms unresponsive to conservative measures, surgical options include excision of the symptomatic fragment, patellar realignment, or fragment fixation. With appropriate management, the prognosis for multipartite patella is generally good. Most patients respond well to conservative treatment, and surgical intervention is rarely required.

CONCLUSION

Multipartite patella is a rare anatomical variant that is often asymptomatic. Accurate diagnosis through imaging is essential to differentiate it from fractures and other patellar disorders. While conservative management remains the first-line treatment, surgical intervention may be necessary for refractory cases. Early recognition and appropriate management ensure optimal outcomes.

Statement of Disclosures

None

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