

PERIARTICULAR SWELLING IN CHILDREN: A BENIGN MIMICKER

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Introduction: Periarticular knee swellings in children especially popliteal region are rare. Pediatric patients presenting similarly warrant meticulous examination and workup especially to rule out malignant lesions, such as synovial sarcomas, which is the second-most prevalent soft tissue after rhabdomyosarcoma in children. The subject of my case study is a 12-year-old female who presents to the Emergency Department with night pain over popliteal region of the left knee for a month duration. Pain is localized and exacerbated upon flexion and extension with palpable inguinal lymph nodes. Otherwise, it is an atraumatic isolated presentation. Ultrasound of affected region shows a large encapsulated echogenic content measuring 6x5x6cm surrounding neurovascular bundle. MRI was done to rule out synovial sarcoma which shows hypointense T1 and hyperintense T2 septating collection encasing neurovascular bundle with surrounding inflammatory changes and marrow enhancement of femoral condyles. Subsequently patient underwent operative drainage and initiated concurrently a course of intravenous antibiotics while wound is left for secondary healing.

Discussion: Popliteal swellings in children which present atypically warrants thorough history taking, examination and workup to rule out sinister causes. Typically, malignant lesions are confirmed by MRI imaging, as well as to determine whether they are intra/extracompartmental or intramedullary involvement as well as proximity to neurovascular structures. In patient's case, imaging consistently suggest of infective origin, hence guided our management towards operative drainage. Histopathology report subsequently shows consistency with inflammatory cell infiltrate and no evidence of malignancy. In cases of malignancy, MRI would reveal heterogenous dark mass on T1 images but bright mass on T2 images.

Conclusion: In knee swellings of children, one must always be vigilant to determine whether lesion is benign or malignant, by thorough history taking, clinical examination followed by radiographic confirmation prior to definitive management. Close monitoring and timing of intervention influences patient outcomes in all children scenarios of periarticular knee swellings.