

Dilemma In Managing Physeal Injury Of Distal Femurs Type 1 Salter Harris

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INTRODUCTION:

Type I Salter-Harris fracture is uncommon. Child could present with trauma history with normal radiographs but sometimes it will come with unrelated symptoms which can cause confusion with infection or acute osteomyelitis.

REPORT:

6 years old boy was presented to us with bilateral knee swelling, associated with pain and fever for 3 days with history of his sister fell on his knees prior.

Upon examination, his knees were swollen in flexed position and tender upon palpation. Total white cell count, erythrocyte sedimentation rate and c-reactive protein were elevated rising suspicion of infective lesion.

Initial radiology revealed no obvious bony lesion, fracture or joint destruction. Ultrasonography showed subperiosteal collection and computed tomography (CT) showed ossified subperiosteal hematoma. Child was treated for infected hematoma, subsequently was discharged home after completed 1 course of antibiotic.

Whilst all the parameters lead us to infective causes, repeated radiology after 2 weeks showed early phase of callous formation (figure 1). Repeated CT scan revealed organizing bilateral knee subperiosteal hematoma. Despite improving symptoms, he refused to move his knees. Diagnosis was then revised to Salter Harris I fracture.

Radiographs at 12 weeks showed healing of fractures (figure 2), and the range of motion of knee were recovered. The backslabs were then removed and he returned to full mobility with no restrictions of movement (figure 3).



Figure 1



Figure 2



Figure 3

CONCLUSION:

Type I or V physeal injuries can easily be missed due to the nature of injury. Dealing with this injury requires careful evaluation and assessment. Whenever plain films are inadequate, CT scan can be considered to rule out any infective or tumour causes. Untreated physeal injury could be disastrous that may result in growth arrest with potential for deformity and limb length discrepancy.

REFERENCE:

1. Arkader A, Warner WC Jr., Horn BD, et al. Predicting the outcome of physeal fractures of the distal femur. *J Pediatr Orthop* 2007; 27:703 - 708