

Radiology Quiz:

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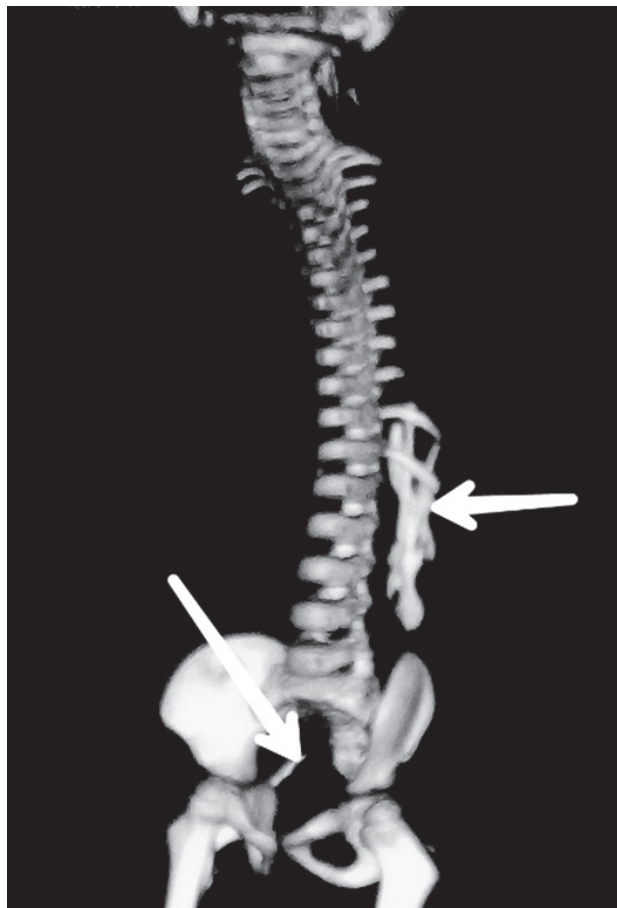
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Case presentation:

A 6 year old female child came to the OPD complaining of worsening pain while sleeping on her back and while sitting. On examination, distinct swellings on back and gluteal region were observed, that were hard in consistency. A computed tomography (CT) of her abdomen and pelvis was ordered, to visualize the nature of the swelling. And in one of the slices, the following could be seen (as depicted by arrows).

Differential diagnosis:



These findings are mostly suggestive of myositis ossificans.

Discussion:

Myositis ossificans is a benign condition characterized by abnormal heterotopic bone formation, typically involving the striated muscle and soft tissue. It can present incidentally or acutely with pain, limitation of joint movement, or complications arising from nerve compression. It is important to recognize plain radiographic features of myositis ossificans because it can be mistaken for a malignant condition. Myositis ossificans shows differing radiographic features in different disease stages. Soft tissue swelling and faint peripheral calcification characterizes the early stage (less than 2 to 4 weeks); later (5 to 24 weeks), well-defined calcification develops, which may be associated with coarser central calcification. After it has fully matured (more than 6 months), a densely calcified lesion, usually parallel to the long axis of adjacent bone, is visible. Features that suggest malignancy over myositis ossificans include central mineralization, attachment to underlying bone, and increasing size with time (myositis ossificans may shrink as it matures). Laboratory findings are typically normal; however, erythrocyte sedimentation rate and alkaline phosphatase may be elevated during the acute phase.

Factors contributing to myositis ossificans:

- 1) Traumatic: Most commonly seen after a quadriceps contusion, or after a quadriceps

muscle strain. However, it can develop at any site of muscle injury.

- 2) Genetic: Can be inherited or nonhereditary.
- 3) Metabolic: Due to derangement in calcium and phosphorus metabolism, as a result of parathyroid gland abnormalities.

Imaging: X-Rays or CT scans

Treatment: Depending on the nature and intensity of presenting complaint, conservative management involving analgesics and physiotherapy, or excision could be considered. Treatment is usually conservative with analgesics and physical therapy, and excision is considered when excessive pain, joint limitation, or nerve compression is present. In this case, the patient was treated with analgesics and was discharged well the following day.

Conflicts of Interest: nil**References:**

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