

Focal Sclerosing Bone Dysplasia: A Diagnostic Dilemma

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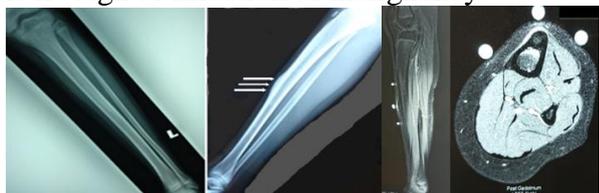
INTRODUCTION:

Sclerosing bone dysplasia is a group of skeletal deformities with a range of clinical, radiological and genetic features. Literature suggests that they are results of abnormal regulation of osteoblasts or osteoclasts, leading to abnormal bone accumulation. We present a case of focal sclerosing bone dysplasia at the tibia.

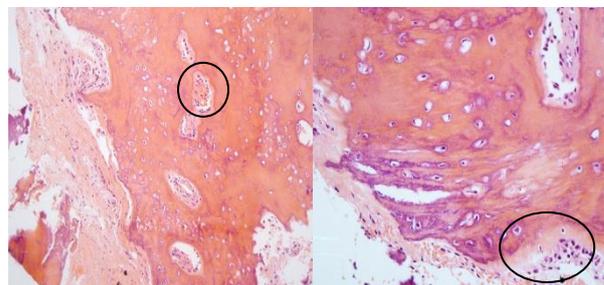
CASE REPORT:

SU, an 11-year-old girl with no known medical illness, presented with pain at her left shin for 1 year. There is no history of trauma or fall. There is no family history of the similar problem. Clinically, she is not dysmorphic. There is a non-progressive bony swelling at the left anterior shin with normal overlying skin. Her white blood cell count (WBC) is within normal range ($7 \times 10^3/\mu\text{L}$) and her erythrocyte sedimentation rate (ESR) is also normal (5mm/hour). Other blood investigations and skeletal survey are unremarkable.

Both plain radiographs and magnetic resonant (MR) images of her left leg show a focal cortical thickening at the mid-tibia with MR images showing oedematous soft tissues and adjacent bone marrow with no gadolinium contrast enhancement. There is no periosteal reaction and no nidus seen. A core biopsy is taken, and histopathological study reveals multiple fragments of bony trabeculae and bony spicules with osteoblastic rimming. There is no sign of infection or malignancy.



Plain radiographs of the left leg show focal homogenous sclerotic thickening of the cortical bone at the mid-tibia which is confirmed on the MR image.



Histopathological examination reveals multiple fragments of bony trabeculae and bony spicules with osteoblastic rimming (circle) under 200x and 400x magnifications.

DISCUSSION:

Sclerosing bone dysplasia is a group of skeletal deformities with different features. Clinicians should always beware of the pitfalls of misdiagnosing sclerosing bone dysplasia which can mimic an acquired syndrome with increased bone density such as osteomyelitis, osteosarcoma, stress fracture, osteoid osteoma, and lymphoma as each of them has different treatment options.

CONCLUSION:

Sclerosing bone dysplasia is a diagnosis of exclusion. Quadruple assessments consisting of clinical, biochemical, radiological and histopathological examinations are needed to rule out other differential diagnoses.

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