^{99m}Tc MDP BONE SCAN IN DIAGNOSTIC WORK-UP OF FIBROUS DYSPLASIA: A CASE REPORT

By: Dr. Maryam Zeb Abbasi, Dr. Muhammad Rauf Department of Nuclear Medicine, BINOR, Bannu

Introduction

- ✓ Fibrous dysplasia is a rare, benign, intramedullary disorder in which fibroblasts and cartilage masses replace the normal bone architecture.
- ✓ Fibrous Dysplasia is poly-ostotic in 20 30% of the cases and usually presents in children less than ten years old.
- ✓ Symptomatic lesions produce pain, nerve compression /sensory or motor deficits, recurrent fractures or deformity, or malignant transformation and require management including surgical interventions.

✓^{99m}Tc-MDP bone scan detects metabolically active lesions and shows poly-ostotic disease with all affected areas usually detectable after 6 years age.

Case Presentation

5 years old female child had mild pain in right thigh after a fall. Over the next 6 years, she developed limping gait, limb length discrepancy and restricted movements at right hip joint. Radiograph revealed expansile lytic lesion in right femoral shaft. Biopsy confirmed cartilaginous and fibro-collagenous tissue. Intra-medullary nail was placed. Now, at the age of 16 years, she presented with fracture of tibia and complaints of low backache and headache on and off. ^{99m}Tc MDP Bone Scan and SPECT done at BINOR revealed poly-ostotic disease pattern involving the right femur and tibia, hip bone, sacrum, bilateral sacro-iliac joints, multiple ribs and base of skull. ^{99m}Tc MDP Bone Scan predicted the need to assess clinical significance of lesions in sacrum and hip bone and in base of skull in order to avoid morbidity in future.



Conclusion

^{99m}Tc MDP bone scan should be performed early after initial diagnosis of Fibrous dysplasia to:

 > determine extent and burden of disease; poly-ostotic involvement
> optimize management strategy, especially in young patients who may require multiple interventions throughout the growing years to avoid severe deformity

>SPECT co-related with CT or MR may indicate precise sites for biopsy.