

FIXING FRACTURE NON-UNION IN FRAGILE BONE DISEASE

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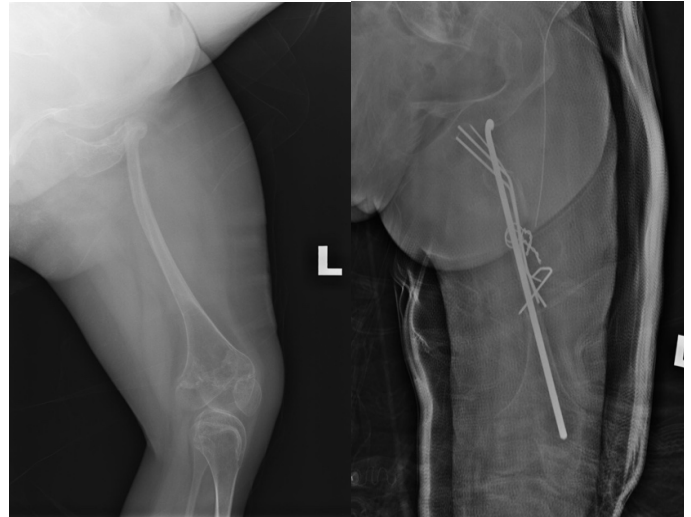
INTRODUCTION:

Osteogenesis Imperfecta (OI) also known as fragile bone disease is an inherited disorders of connective tissue caused by gene mutation resulting in overall reduced in collagen type 1 with abnormal collagen cross-linking.

REPORT:

We would like to report a 14-year-old girl with history of multiple lower limb fracture since birth and was diagnosed with Osteogenesis Imperfecta Sillence type IV by the previous orthopaedic center. She was referred to us for non-union of left femur. On further examination, the left hip was abducted with prominent deformity over the proximal thigh. Together with shortened and externally rotated left lower limb. The deformity over the left thigh was painless and highly mobile with ability to external rotate up to 160°. Plain radiograph and Computed-tomography(CT) scan of the femur was done and noted non-union fracture over proximal 3rd femur evidenced by tapering/penciling over the fracture ends with generalized osteopenia, thin cortex and poor bony trabeculation. The fracture is medially angulated up to almost 90° with medial bowing over the femoral shaft.

Open reduction, resection of non-union end and intramedullary reaming was done. Osteotomy of the shaft distal to the fracture site was carried out to accommodate rod insertion and to address the excessive bowing and malrotation of the femur and perhaps to restore some shortening. Intramedullary rod was antegradely inserted through the piriformis fossa and multiple pinning over the femoral neck was done as described by Wagner, where the pins were inserted from lateral side of proximal femur and molded to the shaft and fixed with cerclage wire in order to cover most of the femur length.



CONCLUSION:

This described fixation for non-union fracture in patient with OI benefits patient and caretaker in term of nursing care, potential regaining walking ability, reducing risk of fracture in future and as a cheaper implant option.

REFERENCES:

1. Burnei G, Vlad C, Georgescu I, Gavriliu TS, Dan D. Osteogenesis imperfecta: diagnosis and treatment. J Am Acad Orthop Surg.