

Compression Stabilization Using Cortical Screws With Encirclage Wire For Stabilizing Corrective Pediatric Supracondylar Femoral Osteotomy

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I. Case presentation

An adolescent female aged 13 years was presented with post rachitic genu valgum deformity (Fig. 1) of both the knees. Patient had no history of pain, past trauma, infection or any other significant medical problem except for the treatment for rickets in childhood. The intermalleolar distance was found to be 21 cm. A decision to correct the genu valgus deformity by supracondylar corrective femoral osteotomy was taken. We resorted by making a V shaped osteotomy in sagittal plane with the apex of the V proximal to the distal femoral growth plate, subsequently corrected the coronal plane valgus deformity by correcting the mechanical axis deviation bilaterally to 6 degrees. We used two 4.5 mm cortical screws on either side of the osteotomy cut on the lateral side. The compression was achieved by winding stainless steel 16 guage wire around the already applied screws and tightening it in a figure of 8 fashion (Fig. 2). Osteotomy was supported in above knee plaster of paris cast for 6 weeks. Osteotomy consolidated radiologically in 3 months period without any loss of correction (Fig. 3). Thus this method can be aptly used for fixation of the corrective osteotomies especially in developing countries like India, where the traditionally used implants like osteotomy plates, external fixator, Tomofix plates, Puddu blade plates etc., where financial constraints are a concern [1, 2, 3].

Declarations

Conflict of interest: None of the other authors has any conflict of interest to declare concerning this paper.

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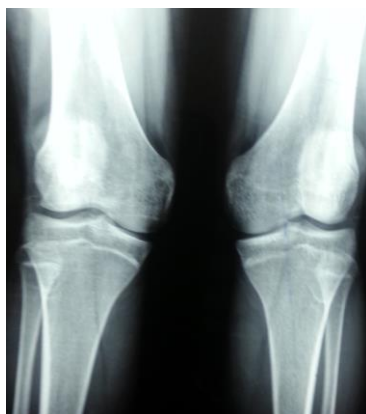


Fig.1- Radiographs showing bilateral mechanical axis deviation with genu valgum deformity at knee

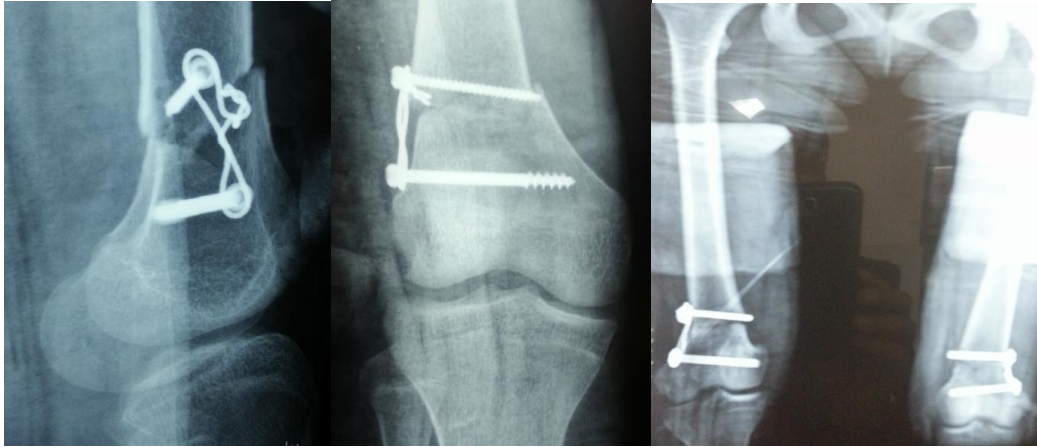


Fig.2- Radiographs showing supracondylar femoral osteotomy fixed with cortical screws with encirclage wire tied in 8 shaped fashion after surgery

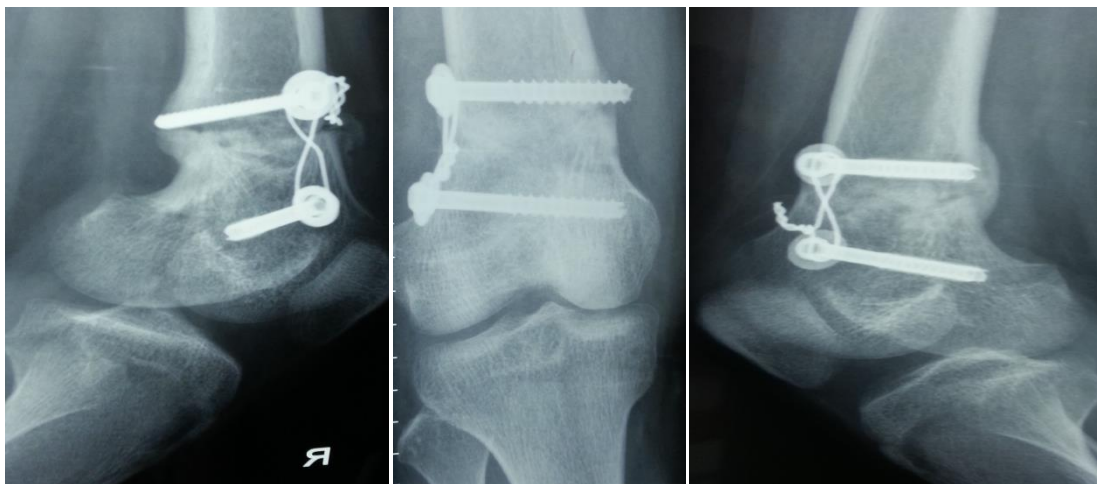


Fig.3- Radiographs showing supracondylar femoral corrective osteotomy united at 3 month follow up