Increased anterolateral bowing of the femur increases the risk and magnitude of atypical femoral fractures. This may lead to complications following intramedullary (IM) nailing, which is used to surgically treat such fractures.

Study assesses the effect of correcting femoral curvature, using an osteotomy, on the healing of atypical fractures.

Minimally invasive osteotomy and reconstruction combined with IM nailing

17 female patients (20 femora)

Incomplete diaphyseal atypical femoral fracture associated with anterolateral bowing

Surgical treatment

Corrective osteotomy in combination with IM nailing promotes the healing of incomplete atypical femoral fractures associated with increased anterolateral bowing by reducing lateral tensile stress.

Outcomes

Primary union 19/20 femora

Time to union 24.9 weeks

Complications Delayed union in 2 cases (36 weeks and 40 weeks)

Assessment of:

- Lateral bowing angle improved from 12.0° to 3.3°
- Anterior bowing angle improved from 17.3° to 11.5°
- Lateral distal femoral angle improved from 93.5° to 88.8°

Incomplete Diaphyseal Atypical Femoral Fracture due to Increased Anterolateral Bowing: Treatment with Corrective Osteotomy and Intramedullary Nailing with Augmented Plate Fixation

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