

A Neglected Non-Union Displaced Transverse Patella Fracture Complicated By A Closed Supracondylar Fracture Of Ipsilateral Femur Treated Operatively

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INTRODUCTION:

A 66 year old man had a fall 2 years ago sustained closed transverse fracture of right patella and refused medical treatment. He was unable to fully extend his right knee but was able to ambulate unaided. Unfortunately he had another fall 2 years later and sustained closed supracondylar fracture of right femur. Physical examination of right lower limb revealed quadriceps muscles atrophy and deformity of the right thigh. Radiograph of right knee shows a displaced osteoporotic patella fracture with 6cm gap and minimal arthritic knee.

METHODS:

Midline incision over the patella was made. The proximal and distal fragments of the patella were exposed and a 6cm gap was noted. Retinacula were divided. Patella tendon was intact. Retrograde nailing of the femur was performed first through the patella fracture site. The fibrous tissues at the fracture surfaces were then debrided to exposed raw freshened surfaces. We faced difficulty in achieving reduction as the patella failed to approximate. Hence quadriceps lengthening V-Y-plasty (Codivilla technique) was performed. The fracture fragments were reduced and held with 2 K-wires and a circlage wire. Post operatively the patient was immobilized with a posterior splint for 3 weeks.

RESULTS:

Diagram 1,2 and 3,4 showing pre and post-operative knee X-ray respectively



Diagram 1&2

Diagram 3&4

DISCUSSIONS:

Loss of patella reduces the efficiency of knee extension up to 30%.¹ Till date there's no consensus on standard treatment of this fracture. Treatment methods include 2 stage patella traction followed by tension band wire / circlage wire or patellectomy, or single stage procedure of quadriceps V-Y-plasty to approximate patella followed by tension band wire.² The presence of osteoporosis presents a risk of disruption of tension band wire,³ hence K-wire with circlage were done. Patellectomy should only be considered when fixation could not be applied due to severe comminution or small fragment size.⁴

CONCLUSION:

Neglected patella nonunion is very challenging to manage and is best treated operatively in this case in view of the presence of concomitant supracondylar fracture of ipsilateral femur. Difficulty in patella reduction is expected. Our case demonstrated that nonunion fragments of the patella with a large gap can be opposed with V-Y plasty.

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