

NEGLECTED NON-UNION OF FEMORAL DIAPHYSIS: A PREDICAMENT

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INTRODUCTION

Gold standard management for diaphyseal femoral shaft fracture is interlocking nail. Fracture complications such as mal-union or non-union is common in untreated femoral fracture. Shortening and rotational deformities are common in these complications. The treatment for these complications is more difficult that requires skillful surgeon. This is a case report of neglected non-union femoral diaphyseal fractures that was treated with two-stage procedures and successfully able to maintain the length and alignment of the femur.

REPORT

19 years of Malay gentlemen alleged motor vehicle accident in late 2021, he sustained right femur diaphyseal fracture. He was denied surgical intervention by his father for traditional treatment. On early 2023, he had a fall at home due to slippery floor. He presented with right thigh pain, swelling and deformity. His right thigh shortening was 8cm. Right femur radiograph revealed overlapping of femur 4cm (fig.1).

Two-stage surgery were performed. First stage consists of open reduction, release of fibrous soft tissue, and application of limb reconstruction system (LRS) for gradual distraction of soft tissue. Intra-operative lengthening of 4 cm was achieved (fig.1). Immediate gradual lengthening with LRS achieved till 9cm with serial x-rays (fig.1 & fig.2) and strict monitoring of soft tissue distraction complications monitoring. Second stage procedure was done using interlocking nail on traction table. Procedure was successful as evidence of equal limb length, no soft tissue distraction complications and good range of motion of the knee.

DISCUSSION

Common complications of neglected non-union of femoral diaphysis are difficulty in reduction intra-operatively, multiple operations, shortening intra-operatively and requires the surgeon to commit on plating as definitive fixations. Gradual distraction and nailing shown to prevent such complications.

Fig.1 : The evolution of radiographs from admission, gradual distraction using LRS to Interlocking nail (from left to right)



Fig.2 : Clinical picture of last day distraction before second stage procedure (Interlocking Nail)



CONCLUSION

Two-stage surgery with gradual lengthening of femoral soft tissue using LRS and Nailing in neglected diaphyseal femoral fracture is an option to prevent its common complication.

REFERENCES

- 1.AR Sulaiman, et al., One-stage Versus Two-stage Reduction of Malunited Femoral Fracture with Shortening Malaysian Orthopaedic Journal 2007 Vol 1 No 1; pg 18-21.