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A Study of Enders Nailing in Paediatric Long Bone Fractures

Dr. S. Arun Prabhakar

1. Introduction

A study of enders nailing in paediatric long bone fractures in terms of fracture union, complications and postoperative mobilisation. Routine treatment options for long bone fractures in children are Cast immobilization, ORIF, External fixator and Intramedullary nailing

2. Materials and Methods

This study includes 33 patients of which 24 males and 9 females with fractures of either femur or tibia shaft operated with enders nailing from November 2006 to august 2014.All fractures were operated within the first 2 days, and Non weight bearing for 6 weeks and Early mobilisation done in all cases.Patient discharged from 2^{nd} to 6^{th} POD. Nailremoval done from 4 months to 1 year

Operative technique for femur enders nailing
Done Under spinal anaesthesia/GA on Fracture table With Traction applied Then Reduction confirmed under C arm and Entry point taken as follows 2cm to 3cm proximal to the distal epiphyseal plate, postero-medially and postero-laterally

Operative technique for tibia enders nailing
Done Under spinal anaesthesia / GA. Entry Few cm distal to the epiphyseal plate Antero-lateral and antero-medial aspects and Nail inserted under C arm control

3. Discussion And Results

Results were evaluated using Flynn et al. criteria

Excellent results were achieved in 24 patients satisfactory results in 9 and poor results in none.All fractures united within 3 months.

Limb length discrepancy <1cm was seen in 1 patient and no angular deformities and there was migration of the nail in 2 and mild soft tissue infection in 4 patients.

Disadvantages of spica with or without traction are limb length discrepancy angulation, rotation deformity, physiological and economical complications

Complications of external fixator are pin tract infection, loss of knee range of motion, delayed union, non-union and re-fracture after fixator removal.

Complications of ante-grade nailing areAVN of femoral head, trochanteric epiphysiodesis and Coxavalga

4. Conclusion

Thus Ender's nailing still appears to be simple, easy and effective method for paediatric long bone fractures, is a Load sharing internal splint, Early mobilization possible Maintains length and alignment without endangering blood supply to epiphysis with minimal complications and cost.

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