Submuscular plating for pediatric femoral fractures. indications and technique.

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Background: Pediatric femoral fractures are one of the most commonly fractures faced by orthopedic surgeons. There are special subgrouped pediatric femoral fractures which cannot be treated by the most commonly used Titanium elastic nails (TENs). So, other operative strategies should be implemented to solve this problem. Objective: This article reviews the authors` experience technique and results of submuscular plating for treating pediatric femoral fractures population, which cannot be treated by ordinary (TENs). Methodology: 15 patients with 15 closed femoral fractures were operated on using submuscular bridging plate technique using 4.5 mm narrow Low Contact Dynamic Compression Plate (LCP). There were 10 boys and 5 girls. Mean age at time of surgery was 9.8 years (5-15 years). Fracture location was 9 diaphyseal, 3 proximal end (subtrochanteric) and 3 distal end (supracondylar). All patients were followed up with a follow up period 15.4 months (6-27 months). Results: All these fractures were united without any noticeable deformity or limb length discrepancy. Union was confirmed radiologically in all patients within a period 6-10 weeks, and a solid union at 12 weeks postoperatively. There was no recorded complication. Conclusion: submuscular plating has been found to be a successful alternative option for management of length-unstable and complex femoral fractures in school-age children and/or heavier children, whom an ordinary (TENs) cannot be done properly. Key words: submuscular plating, femoral fractures, pediatrics, bridging plate.