Antiglide buttress plating for Salter-Harris II distal tibia fracture

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INTRODUCTION

Displaced Salter-Harris (SH) injury requires special attention to ensure that there are no complications such as premature physeal closure and growth arrest leading to shortening and impaired function. When operative management is required, care must be taken not to make worse an already jeopardized physis.

REPORT:

A 14-years-old boy presented to our center following a road traffic accident (RTA) with a closed SH II fracture of the left distal tibia. Open reduction and fixation done using a distal radius T-plate which was slightly pre-bent anteriorly to provide direct compression and buttressing effect when applied to fracture outer cortex. Three proximal screws were inserted to secure the plate and to act as an antiglide construct. No hardware had been inserted through the physis during this procedure.

DISCUSSION:

Injury involving the physis which have displacement of fracture fragments often require open reduction and internal fixation (ORIF) to achieve anatomical reduction, stable fixation during union. Care must be taken to minimize damage to the physis during ORIF to ensure that the physis does not undergo growth arrest. Post-operatively, injuries such as this needs close observation for several after achieving union to monitor normal bony growth of the child.

CONCLUSION:

Buttress plating is a useful method in addressing SH II fractures of the distal tibia as it could be used to reduce the fracture anatomically without having to violate the physis during fixation. When introduction of implants is definitively required, consideration of using temporary fixation with least damage to physis is paramount and should always be practiced.

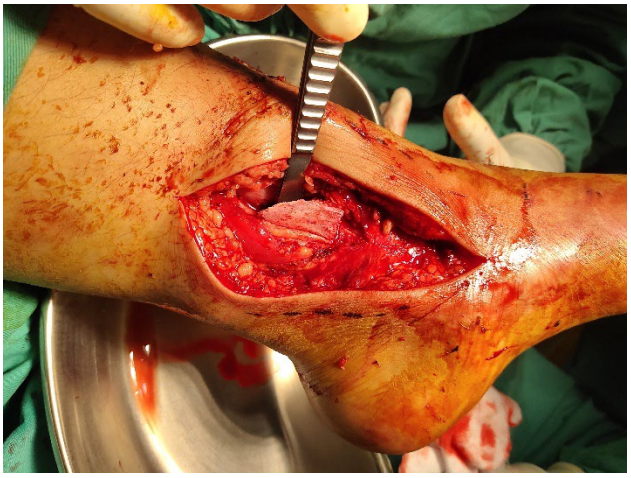

Figure 1. Intraoperative fracture reduction

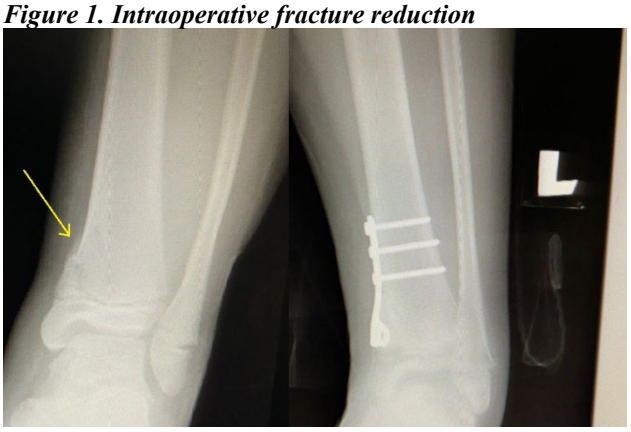

Figure 2. Pre & Post operative x-rays

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