

# A NOVELTY APPROACH FOR DISTAL TIBIA-FIBULA FRACTURES: THE DIRECT LATERAL APPROACH

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## INTRODUCTION:

Distal tibia-fibula fracture is one of the common injury usually resulting from high energy trauma, often associated with extensive soft tissue damage. Limited soft tissue coverage and blood supply to distal tibia increases risk of complications.

## CASE SERIES:

We report 3 cases of distal tibia-fibular fractures fixation using direct lateral approach.

Tourniquet is applied over thigh. A longitudinal incision made along posterolateral border of the fibula. Superficial dissection plane between anterior and lateral compartment with anterior flap established. Distally, anterior ankle capsule released to expose fracture site. Anterior perforating branches from peroneal artery identified and cauterized at level of syndesmosis. Fibula fracture is first fixed to get the length reference of tibia. Reduction of fracture fragments is performed under direct vision following plate placement. Skin closed via allgower suture technique.



(A)

(B)



(C)

- (A) Surface markings for lateral incision made along the posterior boarder of fibula  
(B) Fixation of the distal tibia and fibula fractures.  
(C) Surgical site 6 weeks' post operation.

## DISCUSSIONS:

Fixation of tibia-fibula generally involves two separate incisions, lateral incision to approach the fibula followed by anteromedial incision to approach tibia. However, these incisions cause extensive soft tissue dissection damaging angiosomes and periosteal injury which increases the risk of infection. Reported 50% of cases are associated with wound complication<sup>1</sup>. Direct lateral approach to distal tibia has trident benefits of being minimally invasive but allowing excellent exposure to both the tibia and fibula fractures which enable lateral column of tibia and syndesmosis to be directly visualized and fixed. It also preserves the angiosomes over distal tibia by keeping the anterior soft tissues envelope intact which main source of blood supply from anterior tibia artery thus reducing associated wound complications.

## CONCLUSION:

The direct lateral approach is a useful surgical approach allowing adequate visualization with preserved angiosomes and implant remote from incision.

## REFERENCES:

1. Dillin-L. Delayed wound healing, infection and nonunion following ORIF of tibial plafond fractures. JTrauma. 1986;26:1116-1119.