



Standard Treatment Workflow (STW) TIBIAL PLATEAU FRACTURES

ICD-10-S82.109A

DEFINITION
A fracture involving the proximal end of the tibia which may or may not extend to the articular surface and/or diaphyseal region

MECHANISM OF INJURY

- High-energy trauma in young patients (RTA)
- Low-energy falls in elderly

Management of patient as per ATLS protocols
Presentation:

- Pain, swelling, deformity at or below the knee

PHYSICAL EXAM

- Look circumferentially to rule-out an open injury
- Tenderness below the knee
- Rule out compartment syndrome (blisters, ecchymosis, swelling, pain out of proportion)
- Look for distal neurovascular deficit

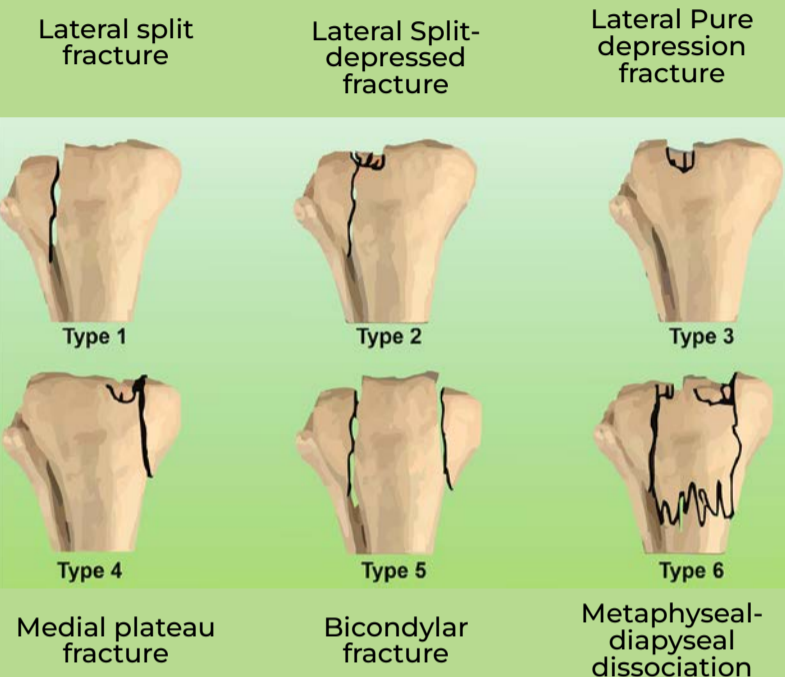
- A. Airway and cervical spine
- B. Breathing and ventilation
- C. Circulation and haemorrhage control
- D. Disability and neurological status
- E. Exposure and environment control

Open Fractures - STW
Urgent referral to higher centre for consideration for Fasciotomy and External Fixator application

INVESTIGATIONS

RADIOGRAPHS

- AP View – Schatzker classification
- Lateral View – Posterior fracture component



CT SCANS REQUIRED FOR

- Detailed assessment of fracture pathoanatomy & Preoperative planning
- Column classification – Luo

THREE COLUMN CLASSIFICATION (LUO)

- One column fracture is defined as an independent articular depression with a break in the column
- Zero-column fracture = purely articular

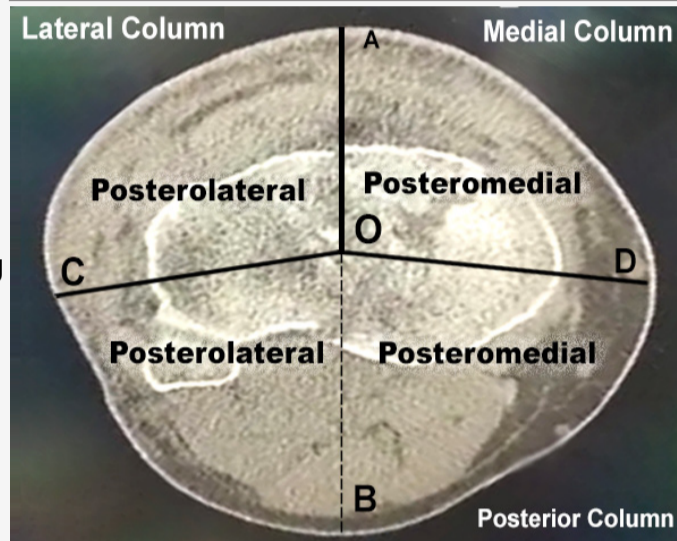
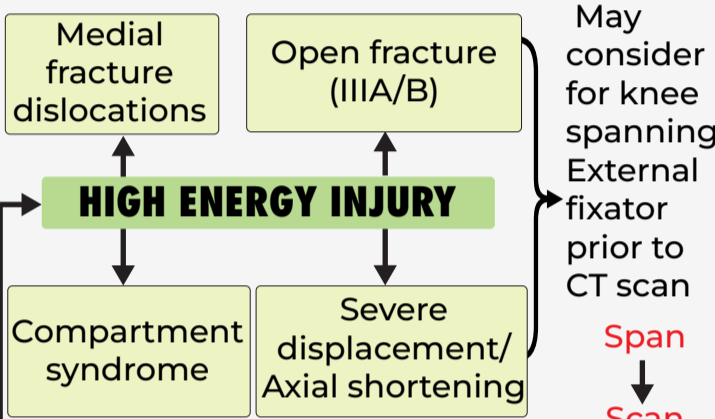


Plate application is based on the column concept.
Attempt to reduce and fix each column individually

LOW ENERGY INJURY

Preferable to get a CT scan



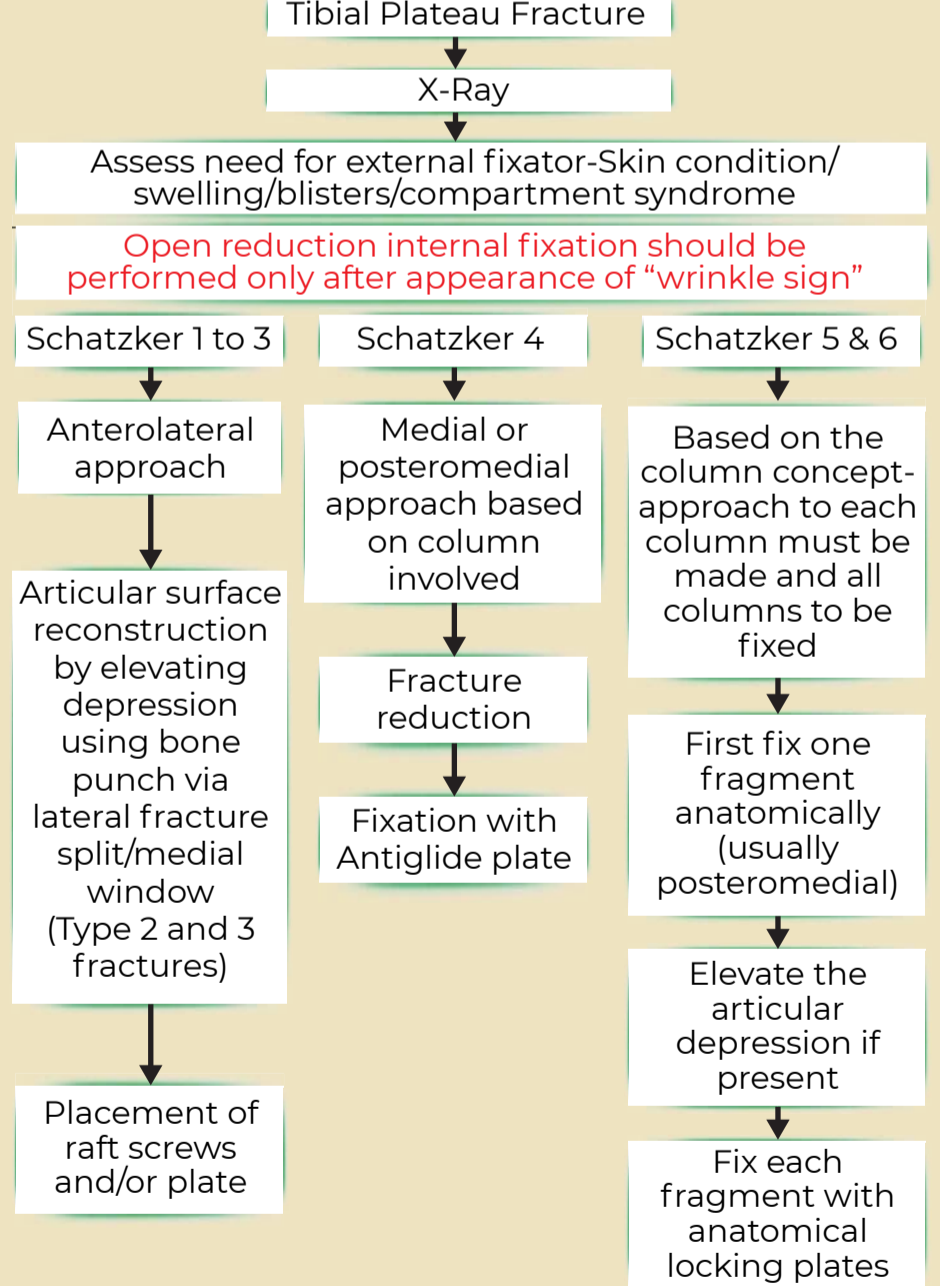
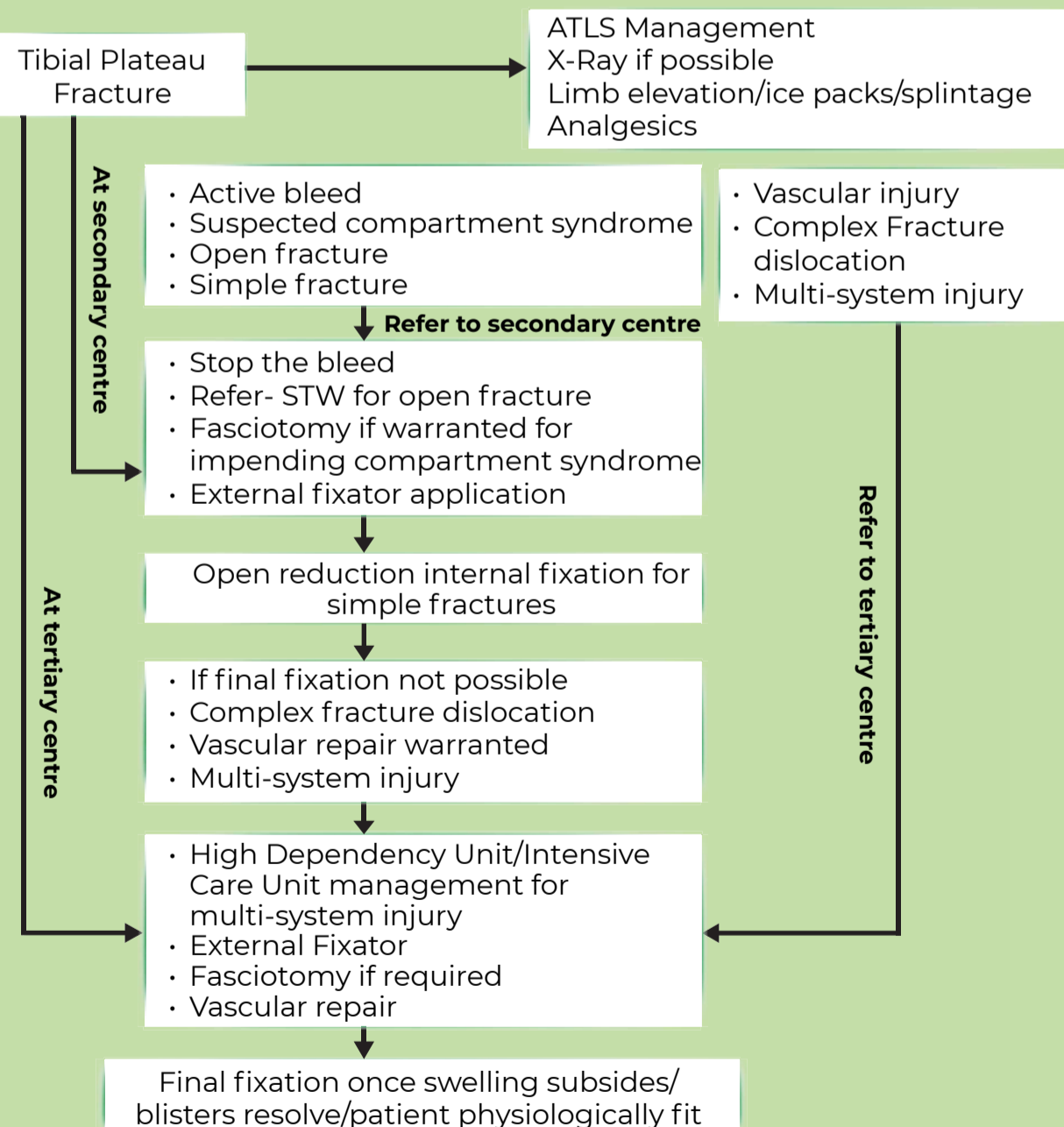
MANAGEMENT

GOALS OF TREATMENT

- Restoration of joint stability**
- Anatomical reduction of the articular surface
 - Restoration of the mechanical axis of the lower limb

IMPLANT OPTIONS

- Screws alone**
- Simple split
 - Depressed fracture elevated percutaneously
- Hybrid External fixator/Ilizarov:** Poor skin condition, post fasciotomy
- Anatomical locking plates**
- Buttressing against shear forces or Neutralizing rotational forces
 - Additionally** – Rim plates/fragment specific small plates/bone graft substitutes may be used on case to case basis



ABBREVIATIONS

- ATLS: Advanced Trauma Life Support CT: Computed Tomography RTA: Road Traffic Accident

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LOOK FOR RED FLAGS AND ACT TIMELY