

STANDARD TREATMENT WORKFLOW (STW)

ANKLE FRACTURES

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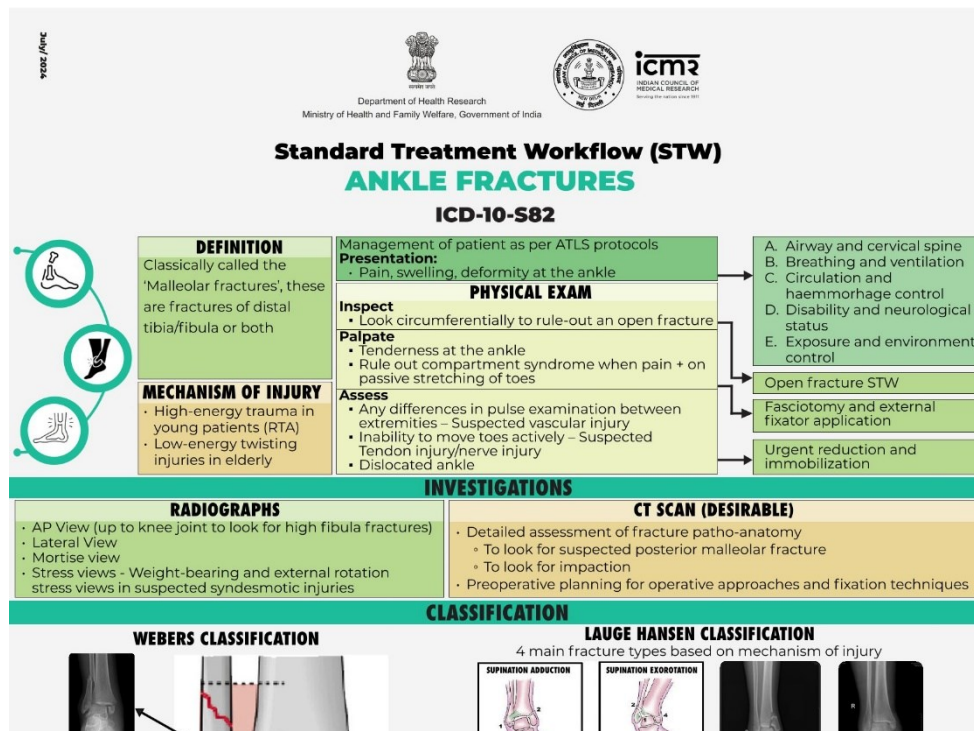
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Standard Treatment Workflow (STW)
ANKLE FRACTURES
ICD-10-S82

	<p>DEFINITION Classically called the 'Malleolar fractures', these are fractures of distal tibia/fibula or both</p> <p>MECHANISM OF INJURY • High-energy trauma in young patients (RTA) • Low-energy twisting injuries in elderly</p>	<p>Management of patient as per ATLS protocols Presentation: • Pain, swelling, deformity at the ankle</p> <p>PHYSICAL EXAM Inspect • Look circumferentially to rule-out an open fracture Palpate • Tenderness at the ankle • Rule out compartment syndrome when pain + on passive stretching of toes Assess • Any differences in pulse examination between extremities – Suspected vascular injury • Inability to move toes actively – Suspected Tendon injury/nerve injury • Dislocated ankle</p>	<p>A. Airway and cervical spine B. Breathing and ventilation C. Circulation and haemorrhage control D. Disability and neurological status E. Exposure and environment control</p> <p>Open fracture STW Fasciotomy and external fixator application Urgent reduction and immobilization</p>
<p>RADIOGRAPHS</p> <ul style="list-style-type: none"> • AP View (up to knee joint to look for high fibula fractures) • Lateral View • Mortise view • Stress views - Weight-bearing and external rotation stress views in suspected syndesmotic injuries 		<p>INVESTIGATIONS</p> <p>CT SCAN (DESIRABLE)</p> <ul style="list-style-type: none"> • Detailed assessment of fracture patho-anatomy • To look for suspected posterior malleolar fracture • To look for impaction • Preoperative planning for operative approaches and fixation techniques 	
<p>CLASSIFICATION</p>			
<p>WEBERS CLASSIFICATION</p>		<p>LAUGE HANSEN CLASSIFICATION 4 main fracture types based on mechanism of injury</p>	
<p>MANAGEMENT</p>			
<p>GOALS OF TREATMENT</p> <ul style="list-style-type: none"> • Restoration of joint stability • Anatomical reduction of the articular surface • Maintenance of ankle joint and medial clear space • Assess and manage the syndesmotic joint 	<p>Choice of implant is related to</p> <ul style="list-style-type: none"> • Fracture pattern • Degree of displacement • Familiarity of surgeon <p>Fibula (Lateral malleolus)</p> <ul style="list-style-type: none"> • Anti-glide plating • Anatomical locking plates • Screw/K-wire/TENS 	<p>IMPLANT OPTIONS</p> <p>Medial Malleolus</p> <ul style="list-style-type: none"> • Screws – ensure proximity to strong bone tibia plafond • Tension band wiring • Anti-glide plating (SAD injury) <p>Posterior malleolus</p> <ul style="list-style-type: none"> • Cancellous cannulated screws • Buttress plating 	<p>Syndesmosis</p> <ul style="list-style-type: none"> • Screws • Tightrope <p>Ankle spanning Ex-fix – for temporary splintage</p> <p>Open fractures Waiting for soft tissues to settle until definitive surgery</p>
AP: Antero-posterior	ICU: Intensive Care Unit	PM: Posterior Malleolus	SAD: Supination Adduction
ATLS: Advanced Trauma Life Support	LM: Lateral malleolus	ROM: Range of Motion	TENS: Titanium Elastic Nail System
HDU: High Dependency Unit	MM: Medial Malleolus	RTA: Road Traffic Accident	