



North East London & Essex Trauma Network

Adult Lower Limb Complex Periarticular Fracture Pathway Trauma Unit Management

Inclusions:

- Complex periarticular lower limb fractures that cannot be treated locally
- This applies to adult patients
- Polytrauma patients should follow the major trauma pathway

Exclusions:

- It is anticipated that the large majority of isolated fractures would be managed locally by the TU's orthopaedic team.

ED management / orthopaedic Initial management:

- In tibial plateau fractures; align and immobilise the injured limb in an above knee backslab or a splint and re-document neurovascular status post immobilisation
- In tibial plafond (pilon) fractures; align and immobilise in a below knee backslab and re-document neurovascular status post immobilisation
- Perform a CT scan of the affected joint
- In both scenarios, if there is loss of limb length due to the deformity in the x-rays post immobilisation, consider performing a CT scan AFTER applying a joint spanning external fixator and restoring length and alignment (see below) according to local procedures.
- For tibia plafond (pilon) fractures, if photography is immediately available and permitted within your TU please take photographs of the soft tissues around the ankle on admission and after any intervention. Ideally 3 photos at 120 degrees to each other to achieve a 360-degree view of the ankle should be taken (*Figure 1*). Please include the photographs in your referral or send via NHS mail
- Daily soft tissue checks should be performed and documented, and regular neurovascular assessment should continue according to local policy.

MTC Referrals and Transfers:

- Utilise refer-a-patient to refer the patient to the RLH orthopaedic team for discussion in next day's MDT meeting
- The large majority of patients with these injuries are not time critical, and so if transfer is required this can be accommodated ward to ward. Always aim to admit locally in the first instance
- In the referral, please ensure you add the name of the referring **consultant** and clarify the need for transfer and treatment in a major trauma centre. An orthopaedic consultant to consultant conversation may be requested.
- Please transfer images via IEP to The Royal London Hospital.

Surgery:

- If the soft tissues are amenable, early definitive fixation can be considered. Otherwise the standard of care is staged treatment (span-scan-plan)
- If there is need for a joint-spanning external fixator due to soft tissue swelling/bruising/blistering and/or to restore limb length and alignment, please keep the fixator half pins away from the zone of potential metalwork placement and keep the bridged joints in neutral position (extension for the knee, 90 degrees for the ankle).
- In ankle spanning external fixators please add a "kickstand" to the side bars (NOT the calcaneal pin) (*Figure 2*).

Repatriation:

- Reverse transfer of care will follow the Network Repatriation Procedure. It is essential that flow is maintained through the Orthopaedic Service at the Major Trauma Centre. If flow cannot be maintained, this may delay the treatment for other patients within the Network. TU's should remain aware that if a bed has not been identified within the timescales outlined in the network handbook, the patient may be transferred via the TU ED.
- If a bed has not been identified within the timescales outlined in the network handbook, the patient will be transferred to the TU ED.



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Trauma Unit Checklist

Date and Time of INJURY:

Patient Demographics

- Refer-a-patient sent to RLH Orthopaedics.....
- Photograph of wound sent via NHS.net or uploaded to refer-a-patient.....
- Joint spanning external fixator applied if indicated.....
- Neurovascular status and skin condition recorded pre and post immobilisation, and regularly throughout admission.....
- Image transfer including CT scan initiated.....

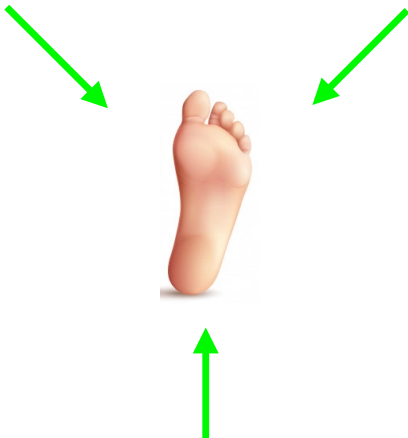


Fig 1. Pilon soft tissue photography angles



Fig 2. Ankle-spanning external fixator with pins outside the zone of potential metalwork placement and “kickstand”