Thomas Splint Application

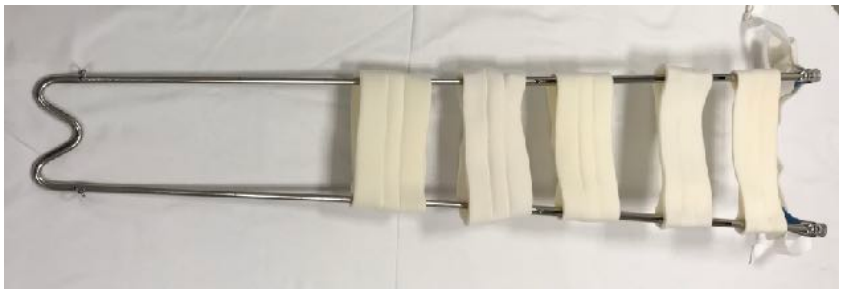
Equipment

Two people are required for the effective application of the traction.

- Thomas splint frame with appropriately sized ring
- Thomas splint straps (3-5 dependant on patient size)
- Hoop strap cover
- Skin traction kit (non adhesive)
- K-lite bandage x 2
- 3 tongue depressors
- Tape (elastoplast and micropore)
- Scissors
- Wool for pressure relief

Preparation

Explain to the patient what you are going to do and why.
Ensure adequate analgesia, ideally this should be a femoral nerve block.
Select a splint of the correct size, the shorter side goes medially and the buckle should be over the outer thigh.



Apply the straps adequately to provide a sling like cradle for the leg to rest in, this ensures limited movement to the fracture site and is more comfortable for the patient.

Procedure

Apply firm manual traction to the limb maintaining the foot in a dorsiflexed position.

- Apply the skin traction around the leg, it should extend to the upper part of the thigh along both sides.
- The spongy part should be located symmetrically under the sole of the foot, with a gap of approx 4 cm between it and the foot, to allow for plantar extension.
- The foam should extend to cover each malleolus for protection.
- Then apply bandage from the skin traction kit from ankle to the thigh, leaving the knee and fibula head free from the bandage to reduce the risk of peroneal nerve compression at the fibular head.



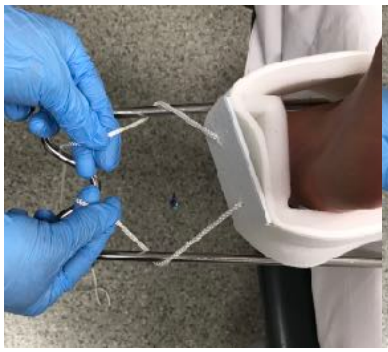
Whilst maintaining traction put the Thomas splint frame in place, it should fit snugly into the groin and up against the ischial tuberosity.

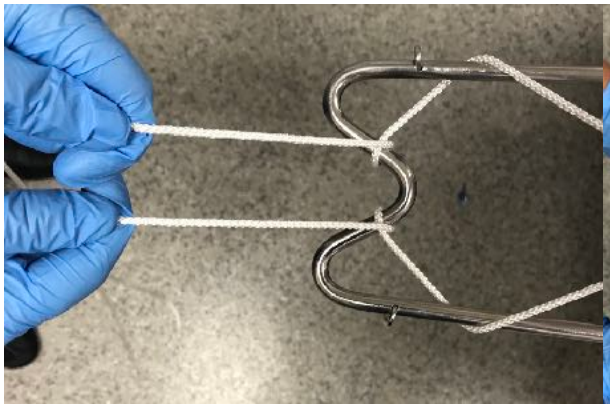


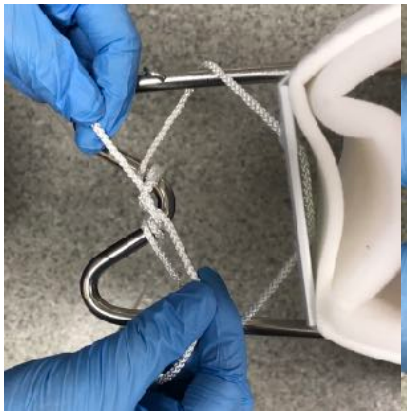
Apply the K-lite bandage around the splint and leg from ankle to the thigh leaving the knee and fibula head free from the bandage. Secure with tape and apply gauze if needed to protect against pressure damage in the groin area.



The traction cords are now pulled tightly around the W shape of the bottom of the splint and secure firmly as shown below in pictures.

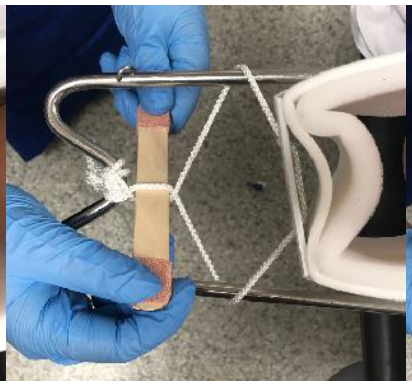



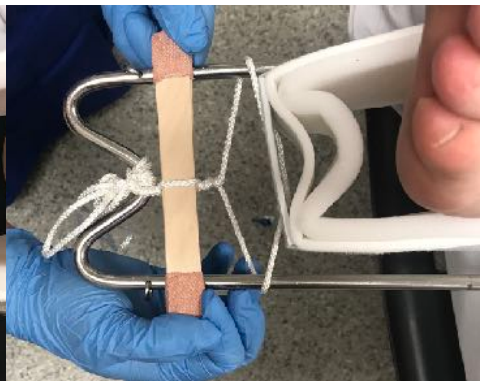





Tape the three tongue depressors with elastoplast as shown in the diagram.

The tongue depressor is then inserted between the cords as demonstrated in the photos and twist around several times. this creates the traction.





It is important to then check the foot for colour, sensations, warmth and movement and manually check for pulses and cap refill in the foot.

Elevate the foot with the use of pillows or multiple blankets, and arrange for the limb to be X-rayed post Thomas splint application.