

Delayed Occurrence of Compartment Syndrome in Maisonneuve Fracture – Timely Catch To Save A Limb

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Introduction

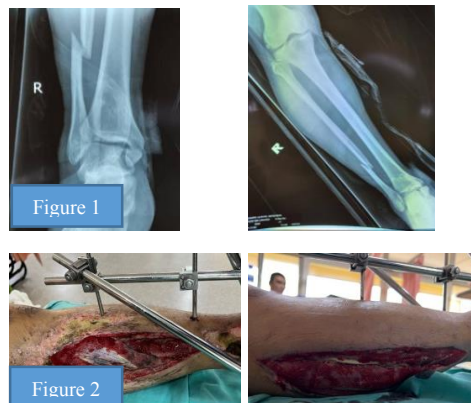
Maisonneuve Fracture is associated with 1–11% of all ankle fractures and is recognized as being one of the most unstable¹. We present a case of such fracture with delayed occurrence of compartment syndrome.

Report

38-years-old gentleman, was rolled over by a forklift over patient's right leg. He was brought to emergency department. Multiple abrasion wound noted over right anterior knee and anteromedial aspect of right leg with Laceration wound over medial malleolus. Right leg was tender but compartment of foot and leg was soft; neurovascular status intact. Plain radiographs revealed segmental fracture at neck and distal third of fibula and trimalleolar fracture. Initially wound debrided over medial malleolus and calcaneal pin inserted. 9 hours post-surgery, noted patient has pain over the leg, swelling over the leg worsening, compartment tense and passive stretch test positive. Subsequently patient underwent compartment release of right leg and foot with cross ankle external fixation under emergency setting. Post fasciotomy, pain and swelling improved. Neurovascular status of right lower limb remained intact.

Figure 1: Plain radiograph of right ankle and tibia/fibula

Figure 2: Post compartment release right leg



Conclusion

Maisonneuve fracture results from high energy trauma². Therefore, it is advisable to have low threshold for admission for observance of symptoms. Even though occurrence of compartment syndrome in Maisonneuve fracture rarely being reported, yet the risk persists due to the nature of the trauma. Thus, orthopaedicians should have high index of suspicion for compartment syndrome. Requesting plain radiographs one joint above and one joint below the affected part prevent misdiagnosis. Discharging these patients from ED might lead to poor outcome.

Reference

- 1.Thangarajah T et al. Journal of the Royal Society of Medicine. 2011
2. Ryan R Richmond et al. *Military Medicine*. 2018
- 3.Stacey Duchesneau et al. Journal of Foot and Ankle Surgery. 1995