

Traumatic Isolated Medial Cuneiform Fracture: A Commonly Missed Fracture**Dr. Manish Malik***

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Abstract: We report a case of isolated medial cuneiform fracture in a young adult male. He presented with right foot dorsum pain following a road traffic accident. Initial radiographs taken in emergency were reported as soft tissue injury with no obvious fracture. Computed tomography (CT) was performed 5 days later on suspicion of fracture as symptoms persisted and show medial cuneiform fracture.

Keywords: Medial cuneiform fracture, bipartite cuneiform, lisfranc dislocation.

INTRODUCTION

Cuneiform fractures generally occurs along with metatarsal injuries, such as Lisfranc dislocation fractures. Traumatic as well as stress isolated non-displaced medial cuneiform fractures are rare[1,2]. Only few cases have been reported in literature[3]. The mechanism of injury is usually direct blow or axial load through the mid-foot.

Isolated medial cuneiform fractures are difficult to diagnose at initial admission especially in casualty department because plain radiographs often grossly underestimate the extent of injury and thus can be easily missed[4].

Cross sectional imaging like computed tomography (CT) or magnetic resonance imaging (MRI) are helpful in diagnosing the isolated medial cuneiform fracture in high clinically suspected cases with normal radiographs and helps in guiding further management.

DISCUSSION

A 29-year old gentleman presented to emergency department with right foot dorsum pain after a motorcycle accident. Radiographs of right foot antero-posterior and lateral views were advised and reported as 'soft tissue injury' with no obvious fracture (fig.1).

Patient was discharged with the use of non-steroidal anti-inflammatory drug (NSAID), ice and bandage. He was presented to the orthopaedic outpatient department 5 days later with no relieve in symptoms. In the physical examination of the limping patient, tenderness was elicited over the medial tarsal region of the right foot. There was no significant swelling or ecchymosis. Patient was referred to us for Computed tomography (CT) right foot to rule out any underlying fracture.

CT was done in multiple planes and reformatted images also obtained in various angles.

CT (fig.2) show undisplaced comminuted fracture of medial cuneiform bone with soft tissue edema. Rest of the tarsal, metatarsal, phalanges and distal tibia and fibula were normal.

Patient was treated with non-weight-bearing activity for two weeks without any immobilization. Partial weight-bearing activity was allowed from the fourth week after the injury, full weight-bearing activity was allowed from the sixth week after the injury.



Fig-1: AP & Lateral radiograph right foot show no obvious fracture

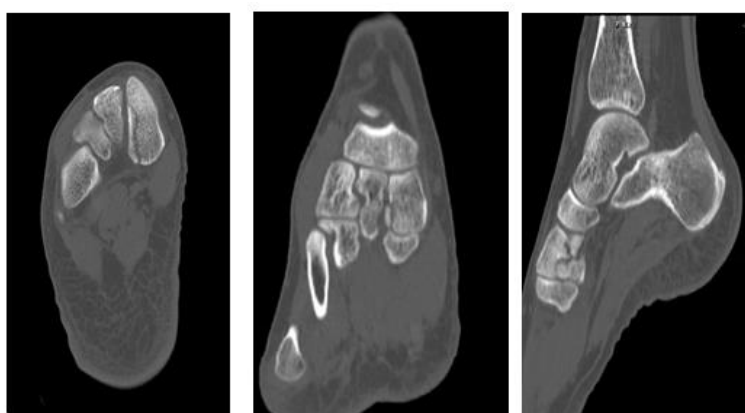


Fig-2: CT axial, coronal & sagittal sections show undisplaced fracture medial cuneiform bone

The midtarsal joint has limited motion and complications are infrequent and include non-union. In the differential diagnosis, bipartite medial cuneiform should be considered [5]. These cases may seem similar to cuneiform fracture in the radiological examinations and mis-diagnosed as a fracture.

CONCLUSION

Traumatic isolated medial cuneiform fractures are rare and may be missed at initial admission especially in emergency services because plain radiographs often grossly underestimate the extent of injury. Computed tomography (CT) or magnetic resonance imaging (MRI) should be done upon clinical suspicion. In context of foot trauma, bipartite medial cuneiform, a normal anatomic variant, may be misdiagnosed as isolated medial cuneiform fracture.

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