

Land On Your Own Feet: Case Report Bilateral Calcaneal Fracture With Talocalcaneum Dislocation In Children

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INTRODUCTION

Calcaneal fractures in children are comparatively rarer than in adults, making up around 0.005% of all fractures reported. Treatment is usually conservative however; open reduction and internal fixation are often used to manage displaced or intra-articular fractures.

CASE REPORT

We report a case of 4 years 8 months old girl, alleged fall at home from 7 feet height, while playing at the balcony; she landed on her foot. She received initial treatment at another hospital and was discharged without any cast. 5 days later, she presented to Out Patient Department with persistent pain and swelling over bilateral foot.

Anteroposterior and lateral radiographs showed bilateral calcaneal fracture. CT scan foot show left calcaneal fracture without joint disruption, however there is comminuted fracture right calcaneum body with displace posteriorly and subluxation of right talocalcaneal joint.

Figure 1: Radiographs showing a grossly comminuted intra-articular calcaneal fracture and complete loss of Böhler's angle.



She underwent closed manual reduction with k-wiring of right calcaneum under general anaesthesia. The left calcaneum fracture was treated conservatively. Post operatively she was put on boot slab for 6 weeks.

K-wires were removed 6 weeks later and radiographs showed uniting calcaneal fracture, but, however there is persistent gap in between talocalcaneal joint. Patient still having a persistent right heel pain and under rehabilitation programme through physiotherapy



Figure 2: Lateral radiographer demonstrating position of k-wire.

DISCUSSION

Pediatric calcaneal fractures are rare injuries, and those with a displaced intraarticular component are found even less frequently.

Calcaneal fractures in children are usually managed conservatively by immobilisation using a cast or splint, with open reduction and internal fixation reserved for avulsion fractures of the Achilles tendon with displacement of the posterior fracture fragment, or intra-articular fractures.

Open reduction and internal fixation of calcaneal fractures provide good anatomical reduction, essential for management of this inherently unstable fracture, but disturbing the fracture site and periosteum can result in slower healing, malunion, infection, and chronic postoperative pain. Therefore, treatment of closed calcaneal fractures with closed reduction and screwless fixation could result in reduced incidence of pain, infection and malunion, and faster patient mobilisation after injury.

Percutaneous reduction of fragments by Kirschner-wires, application of external fixators, percutaneous screw fixation after percutaneous distraction of displaced fragments is various minimally invasive techniques. Difficulty in reducing the articular surface is the main problem of percutaneous techniques. Minimally invasive and percutaneous methods developed for reducing the wound complication rate.

CONCLUSION

Calcaneal fractures should be evaluated carefully. The treatment of calcaneal fractures must be planned according to different factors such as type of trauma, classification of the fracture, skin condition and injury mechanism. Most of recent study shows that open reduction and internal fixation has better outcome in