***Figure 8 (Heel open) short leg cast.***

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**Introduction/Purpose:** To report the results of applying heel open (figure 8) short leg cast on foot & ankle trauma or disease patients requiring short leg casts.

**Methods:** 380 patients who were confirmed and treated by diagnosed of foot & ankle trauma or diseases were included between November 2014 and July 2016. Comprised of 222 males and 158 females, their mean age was 46 years old. The bottom of the figure 8 cast covered the metatarsal head to half portion of the medial longitudinal arch, while leg portion covering consisted from the prominence of the both malleolus to halfway of the lower leg, resulting in complete exposure of the heel and distal portion of the achilles tendon. After application of the figure 8 cast, changes in the ROM in active ankle dorsiflexion & plantarflexion, passive foot inversion & eversion, and foot internal & external rotation were measured.

**Results:** In all cases, measurements of active ankle dorsiflexion & plantarflexion was less than 5 degrees, measurements of passive foot inversion & eversion was less than 5 degrees, foot internal & external rotation was less than 0 degrees, and were stably held without skin or soft tissue injury until cast removal. Notable were 22 cases of foot & ankle fractures treated with conservative therapy with figure 8 short leg cast resulting in bone union and stabilization without surgery. VAS discomfort score was an average of 2.6 (0~5) and figure 8 short leg cast was selected in all cases requiring a short leg cast.

**Conclusion:** The use of figure 8 short leg cast in patients of foot & ankle trauma and diseases requiring short leg cast provides safety and prevention of skin necrosis and pressure sores from open heels while providing high patient satisfaction in daily life, such as heel touch. We believe that figure 8 short leg cast could replace the traditional short leg cast, if the safety of the figure 8 cast could be proven through long-term follow up study with various patient and cases.