



**Service Priorities and Programmes**  
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**A review on the use of total contact cast at high risk diabetic foot patients in Podiatry clinic**

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**Introduction**

Diabetic foot (DMF) complications can be a limb and life threatening problem. Up to 85% of all amputations are preceded by an ulcer. Peripheral neuropathy causes 50-60% of the DMF ulcers. Due to loss of protective sensations, diabetics are more prone to develop Charcot foot which is a disease causing bone fractures and bone disintegration. Eventually the foot becomes severely deformed and is prone to develop recurrent foot ulceration. Total contact cast (TCC) is known as the gold standard to heal diabetic plantar foot ulcers and for the management of Charcot foot. TCC is a special casting technique to off load the pressure of the foot and to stabilise the foot and ankle structure, especially in the early stage of Charcot foot. However, TCC may induce a number of known complications, including secondary ulceration, skin maceration etc. which may deter its widespread use in area with hot and high humidity weather as in Hong Kong.

**Objectives**

To review the effectiveness and outcome of the TCC treatment at Podiatry KWH.

**Methodology**

The project is a retrospective study. Patients with diabetes mellitus and treated with TCC or removable TCC during Aug 2009 to Dec 2012 at KWH Podiatry department were included.

**Result**

15 patients were treated with TCC at Podiatry Department. Age range from 34 – 77 years old (mean age 53). All subjects were categorized as high risk or ulcerated DMF. 7 patients were diagnosed with Charcot foot and 10 patients suffered from 14

neuropathic foot ulcers (Wagner grade 1 to 3). In total 76 TCCs and 10 removable TCCs were performed by podiatrists. 78.6% (11 ulcers) ulcers healed with TCCs from 17 - 122 days (mean = 54.6 days) which is similar with overseas studies. 3 patients quitted TCC treatment due to personal reasons. 3 incidents of skin abrasion wound were recorded which healed with secondary intention. In conclusion, TCC is an effective treatment for high risk DMF. Due to the nature of TCC and absence of protective sensation in patients with peripheral neuropathy, specialist skill and knowledge is required in order to provide prompt assessment, wound management and safe treatment. Especially a close connection with the orthopaedic surgeon and diabetologist to provide a team approach management is essential throughout management of high risk DMF diseases.