

International Conference on **Targeting Diabetes and Novel Therapeutics** September 14-16, 2015 Las Vegas, Nevada, USA

Offloading a diabetic foot wound in developing world

L K Shankhdhar
L K Diabetes Centre, India

Ninety percent amputations are preceded by an ulcer and most are preventable. Increased plantar foot pressure is the leading cause of plantar ulceration in the diabetic population. While one is standing, both feet bear 50% of body weight but during walking, there are times when one foot bears even 1.5 times of body weight which is further increased if deformity were present. Small muscle atrophy, with consequent muscle weakness and deformity, occurs in the diabetic foot before clinical peripheral neuropathy is detected. This muscle atrophy may lead to increased plantar foot pressure even in the "low-risk," sensate diabetic feet. Many factors such as deformity, partial amputation, limited Joint mobility (LJM), calluses, corns, wrong footwear and a foreign body in the foot wear may be responsible for raised plantar pressure and plantar ulceration. Many methods of offloading are available currently but Total Contact Casting (TCC) is known to be the gold standard of offloading but is used only in 1.7% clinics in US owing to its cost, needing specially trained personnel to apply and remove and consuming too much of time in its application and removal. Removable Cast Walkers (RCWs) are the measure of choice since they cost lesser than TCC, can be applied and removed by anyone and offer comparable offloading and hence ulcer healing. Other options such as Custom Foot wear, half shoes, ankle arthrodesis and Internal Offloading measures such as metatarsal head resection are sparingly used even in developed countries. In developing countries most of the offloading methods are either unaffordable or unavailable, with the result that offloading is neglected by most physicians. The Samadhan System comprises of a rubberized foam cylinder, the "Samadhan Unit," to be placed on plantar surface to offload body weight, a piece of an elastocrepe bandage, the "retainer" to retain the Samadhan Unit in position and a fastening device, the "fasteners" to retain the edge of the retainer. In one of the oral abstracts, presented in American Diabetes Association, 2005 (OR 199), the Removable version of Samadhan System (SS-R) revealed much better healing rates of Wagner grade 1 diabetic foot wounds, compared to common footwear 73.3% vs 13.3% with much lesser healing time (42 vs 60 days).

lkdc80@yahoo.com

Making more with less in India

Kshitiij Shankhdhar
L K Diabetes Centre, India

A lower limb is lost to Diabetes somewhere in the world every 20 seconds. If a person with Diabetes has a lesion on the sole of a foot, offloading bodyweight is of vital importance; all therapeutic efforts are bound to fail if he or she continues to walk on an ulcer. In 2000, the authors of this report designed a system of offloading that was developed specifically for people living in developing countries. The Samadhan System is based on the principles of simplicity and ease of application. Requiring no special training, it is affordable and effective. The word Samadhan means 'solution' in Hindi language. In the words of Dr. Elliott Joslin, "The person with Diabetes who knows the most lives the longest." Different people with Diabetes need different education. Conventional methods (lectures/literature) are often ineffective. The author discovered The Samadhan System of Diabetes Education. In this method, Diabetes education is rendered through Mobi-films-films made using mobile phones. Then they are classified based on type, duration and complication of Diabetes-for single viewing or group education. This needs basic mobile phone (take pictures/videos/audio) with use of computer software Windows Movie Maker (available free) to edit the film. Such films are displayed in Diabetes centre/ Diabetes camps/distributed amongst doctors/patient/educators/via internet/MMS. Patients are involved in script writing/acting. Patients make mobi-films-record their activities (self insulin administration at home/diet intake etc)-show to doctor/educator-mistakes are pointed and corrected. Recently, the author successfully established a first of its kind, UPMA's Medical College of Diabetology, for a structured education program for people with Diabetes.

consultantdiabetologist@gmail.com