

Innovation in Podiatry: the Samadhan Foot Stand

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Rec date: Nov 16, 2016; Acc date: Nov 25, 2016; Pub date: Nov 29, 2016

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Abstract

Podiatric care is often an ignored aspect of diabetic foot care. Foremost thing in podiatric care is a podiatric table which serves many purposes ranging for clinical examination to procedures but it is quite expensive and very few physicians, at least in developing countries, can afford it. So we designed a very economical and affordable Samadhan Foot Stand which serves effectively as substitute for a podiatric table. Word Samadhan is a Hindi word meaning solution. We offer this as solution to a hard pressed need for an affordable podiatric table, so we named it Samadhan Foot Stand.

Introduction

The vast majority of people with diabetes, around 80%, living in developing countries, shall face the largest increases in the burden of diabetes over the coming decades [1].

Diabetic foot problems are a major cause of morbidity and premature mortality in people with diabetes and contribute substantially to the health care costs associated with diabetes [2-4].

Foot problems are a threat to every person with diabetes. Worldwide, more than a million lower leg amputations are performed each year as a consequence of diabetes. Approximately 3-4% of all people with diabetes have a foot problem. In some developing countries, foot problems may account for up to 40% of available resources [5].

Diabetic foot care is one of the most ignored aspects of diabetes care in developing countries such as India [6,7].

Good Foot care includes physicians, specially trained in Podiatry and paramedic staff, besides some gadgets, including special podiatric chair/table. Practicing Podiatry in some developing country like India, is a difficult task since infrastructure is missing and many gadgets are unaffordable.

Most physicians cannot afford a podiatric chair since it costs thousands of dollars and even a few who can afford it do not see any proportionate return out of it. I saw proper podiatric chairs [Figure 1], for the first time, in King's Hospital, London in 2003 while my son and co-author of this article, Dr. Kshitij Shankhdhar, was undertaking observership under the then Head of the Department, Mike Edmonds.

The convenient features of the chair included changing the height of the chair and raising and lowering of the feet and even bending knee as per the need of the examiner. When I returned to India, I had a peculiar zest to create some improvised version of the table. Then the team of physician in LK Diabetes Centre designed an improvised foot

stand, which delivers most features, if not more, of a podiatric chair [Figure 2].

We named it Samadhan Foot Stand (SFS), since the word Samadhan, which is a Hindi word, means solution and we felt that it was good solution of a podiatric chair.

Parts of Samadhan Foot Stand (SFS)

Base of Foot Stand: The stand has a solid heavy wooden base to support weight of the foot and leg.

Column: Flat broad column establishes connection between leg rest and base.

Leg rest: It is a cut in the column on the top with padding where a patient accommodates his ankle.

Pocket: The column has a pocket to accommodate necessary equipments e.g., Monofilament, Wartenberg wheel, Tuning fork, Hammer, Thermo tip, measuring tape, caliper for 2 point discrimination, cotton wool etc. Nail care related instruments can also be placed in the same pocket e.g., calipers and files. The same pocket can accommodate dressing related material too during management of a foot ulcer or lesion.

Utility of Samadhan Foot Stand

It serves as a good working foot examination platform [Figure 3]. When an observer is sitting in his chair he has to lean a little to examine the foot in detail. He can undertake neurological examination using a tuning fork [Figure 4] and Monofilament [Figure 5]. Even peripheral pulses can be easily examined [Figure 6].

The examiner can keep all necessary gadgets in the pocket of the SFS. Range of foot joint can be assessed to diagnose limited joint mobility (LJM).

Skin temperature and deformities of foot can also be checked. Even Audio Doppler can be accommodated in the pocket and Ankle Brachial Index (ABI) can be calculated [Figure 7].

While patient accommodates his foot in the SFS, Biothesiometry can also be conducted.

The same SFS might be used for minor surgical interventions too such as ablation of a corn or callus. Full nail care can be rendered while foot is placed in the SFS.

Even dressings can be undertaken while foot is in the SFS.

Even photography of the foot lesions is very convenient while foot is placed in the SFS

Interestingly, SFS might be placed in the physician's chamber anywhere since it occupies little space [Figure 8].



Figure 1: Proper Podiatric Chair.



Figure 2: Samadhan Foot Stand.



Figure 3: Placing a foot for examination.



Figure 4: Tuning For Examination.



Figure 5: Monofilament examination.



Figure 6: Peripheral Pulse examination.



Figure 8: Doctor's Chamber with Samadhan Foot Stand.



Figure 7: Hand held Audio-doppler.

Conclusion

Thus to say that Samadhan Foot Stand is a basic research which is capable of making a sea change in the podiatric care globally.

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