

LETTER TO THE EDITOR

Modification of tool used in self-care of anesthetic hands and feet in patients with leprosy

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Accepted for publication 12 May 2016

The cover page of September 2015 (volume 86, number 3) issue of *Leprosy Review* displays an image showing a health-care staff teaching 'self-care of anaesthetic feet' to patients of leprosy; the staff herself is demonstrating how to soak the anesthetic foot and rub with a pumice stone upon a lady, and a man side-by looks on as he tries the same on himself. From the attires and jewellerys it is apparent that the image was taken in India.

Daily self-care of hands and feet is an important measure to detect inadvertent injury to anesthetic limbs early in patients with leprosy. In addition, soaking in water and rubbing the wet feet with a pumice stone is recommended to remove dead and friable skin so that cracks and subsequent infections are prevented.¹ Rubbing the affected limb on a rough surface or stone has also been recommended.^{1,2} An earlier textbook even suggests rubbing on coarse granite or coarse bricks for excessive hyperkeratotic feet.³

As a clinician working with patients of leprosy for nearly two decades, we have some reservations about the suggestion of the use of a pumice stone, or any other rough surface for the self-care of anaesthetic feet. As the sensation is impaired, these patients may tend to rub hyperkeratotic hands and feet vigorously in order to get rid of dead skin, creating micro-abrasions on the involved areas. In the long run, these may lead to fresh wounds which may act as a nidus for infection. Such a risk is most likely with coarse granite or brick surfaces; pumice stones, though they have a softer and porous abrasive surface (Figure 1a), are not absolutely safe.

Dead skin gets accumulated in the pores and requires cleansing with a brush under running water after each use.⁴ Moreover, after repeated use, these stones may harbour bacteria deep in the pores, because of retained dead tissue. Hence, periodical deep cleansing of the pumice stone in boiling water is necessary.⁴

There are simple household alternatives which may replace the pumice stone in the self-care of anaesthetic hands and feet in patients with leprosy. Abrasive cleaning pads or

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Figure 1. Display of various tools for self-care of anaesthetic hands and feet in patients with leprosy; a) conventional pumice stone with porous surface. Newly proposed ones; b) domestic scrub pad, c) coconut husk.

scrubbers (Scotch Brite[®]) used for cleaning utensils is one such tool (Figure 1b). These are made up of spun polypropylene fibres with various grades of alumina and silicon carbide grits, marketed as small square pieces.⁵ When wet, this provides an abrasive surface much less harsh on human skin than pumice stone. Moreover, it is easy to clean by holding in running water and thereafter squeezing out the excess water and drying for the next use.

In a country like India, where coconut trees are plentiful especially along the coastal areas on southern, western and eastern territories, the inner aspect of outer fibrous cover of ripe coconut fruit (coconut husk) can be utilised as a scrubber for anaesthetic hands and feet in patients with leprosy. Coconut husk (Figure 1c) can provide an abrasive surface, so that the dead skin can be rubbed off easily, without the risk of inflicting extra injury to anesthetic skin. As the use of coconut is ubiquitous across the length and breadth of India because of religious and culinary needs, it would constitute an inexpensive, disposable tool for this purpose.

Both the commercially available domestic scrub pad and the coconut husk have an added advantage over a pumice stone and other hard surfaces in that these are malleable and can be used easily over the rounded contours of hands and feet, as well as in toe-web spaces.

Necessity is the mother of invention! The idea of using coconut husk for this purpose came to our mind about 15 years ago, when pumice stone was not readily available in the area where we work (a rural district in south India). The region was drought-hit and underdeveloped without many commodity outlets and pieces of pumice stone had to be procured from adjacent bigger townships. Subsequently, we observed that a domestic scrubber pad may well serve the same purpose as coconut husk. In our institution we run a leprosy clinic attached to the department of Dermatology. Here, the faculties and postgraduate medical students routinely provide lessons on 'care of anaesthetic hands and feet' to both newly detected leprosy patients as well as those under treatment/released from treatment, during follow up. In such sessions we use small pieces of coconut husk and domestic scrub pad for demonstration of self-care of anesthetic hands and feet. During 'demonstration sessions' we suggest the patients use a fresh piece of coconut husk every day; for the scrub pad, washing in running water followed by squeezing out the extra water, and

drying is recommended before its next use. Over the years our experience of using these tools is; 'acceptability' for both is excellent as these are 'easily available' and 'understandable' even by the poor and illiterate. Moreover these are 'gentle tools' appropriate for anesthetic skin.

The cost of a domestic scrub pad and ease of availability is comparable to pumice stone. Coconut husk is inexpensive, easily available and disposable. Hence we suggest the use of a domestic scrub pad and coconut husk as tools for self-care of anaesthetic hands and feet in patients with leprosy, which may replace pumice stone used for this purpose so long.

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