CASE STUDY OF FABRIC-BASED BRUSH-CURETTE FOR TOE AND FOOT CREVICE WOUND DEBRIDEMENT AND TISSUE SAMPLING

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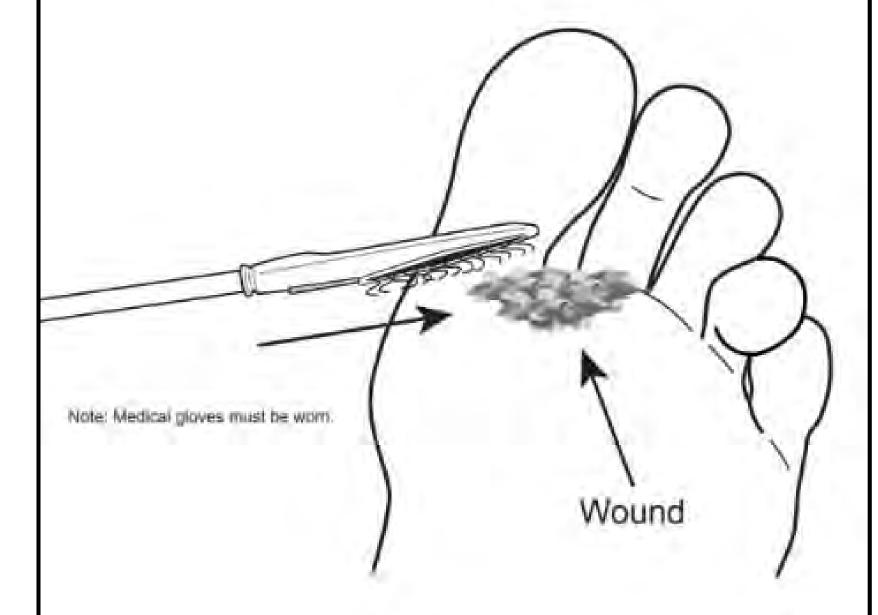
INTRODUCTION

The aim of the study was to demonstrate the effectiveness, ease of use, and functionality in a case involving debridement of the toes(s) using a novel FDA compliant sterile single-use disposable brush-curette. Soft-K-Rette® utilizes a proprietary Kylon® medical fabric capable to debride and biopsy-sample chronic wounds.

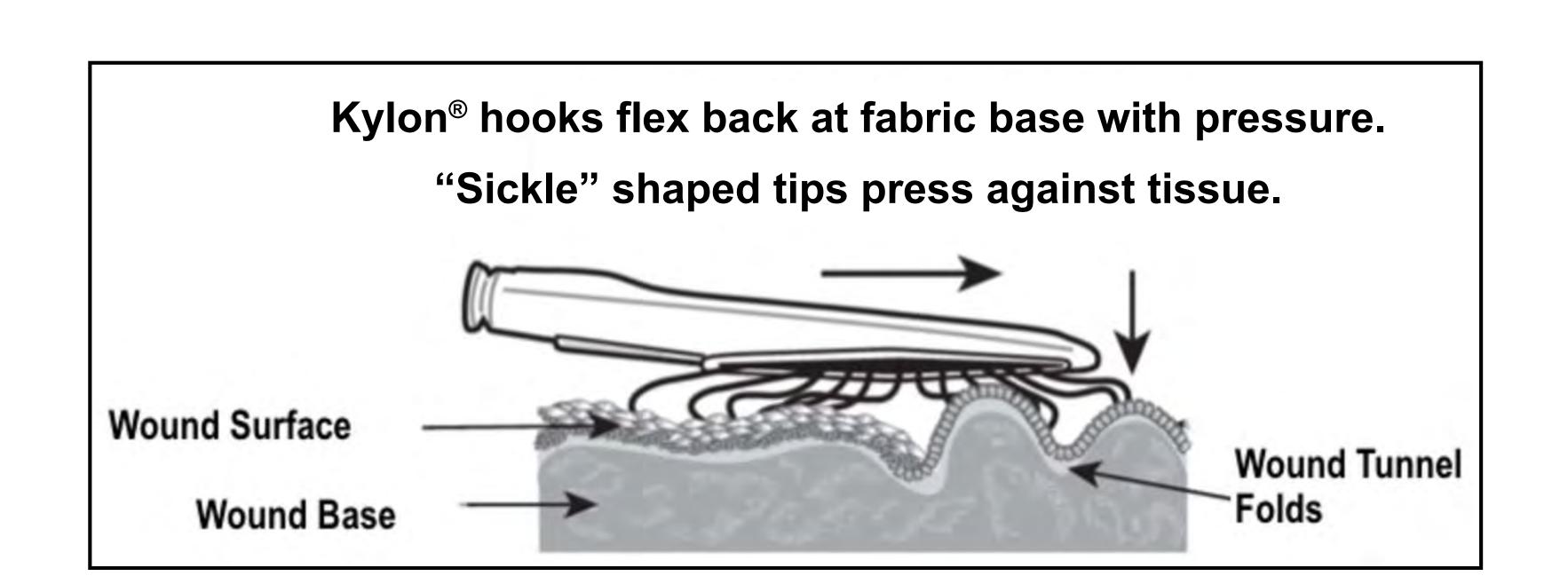
METHODS

This is a single case report of a patient with a chronic wound under the fourth toe that required both superficial and mechanical debridement of a wound apparent on the skin surface crevice(s). A Paddle shaped device with an array of nylon stiff hooks serving as curettes and biopsy brush samplers was used to clean, mechanidally debride, and excise different tissue types within the wound ranging from slough to semi-solid necrotic tissue.

Debride Focal Areas with Press / Rotation



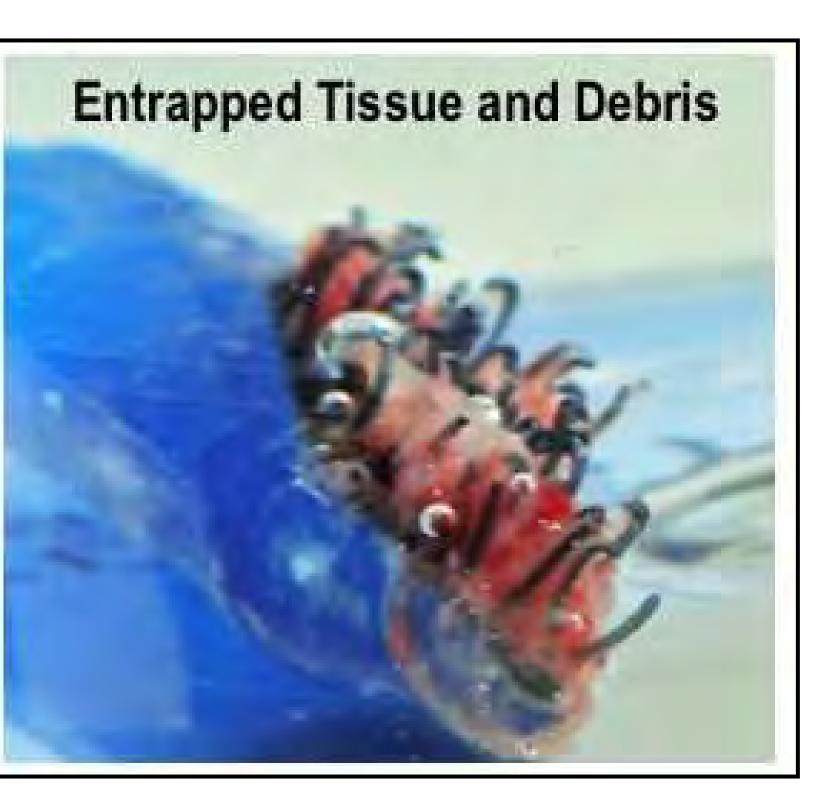
Wipe Across the Wound Slough: Mechanical Press and Twist Semi-Solid Area - Excision



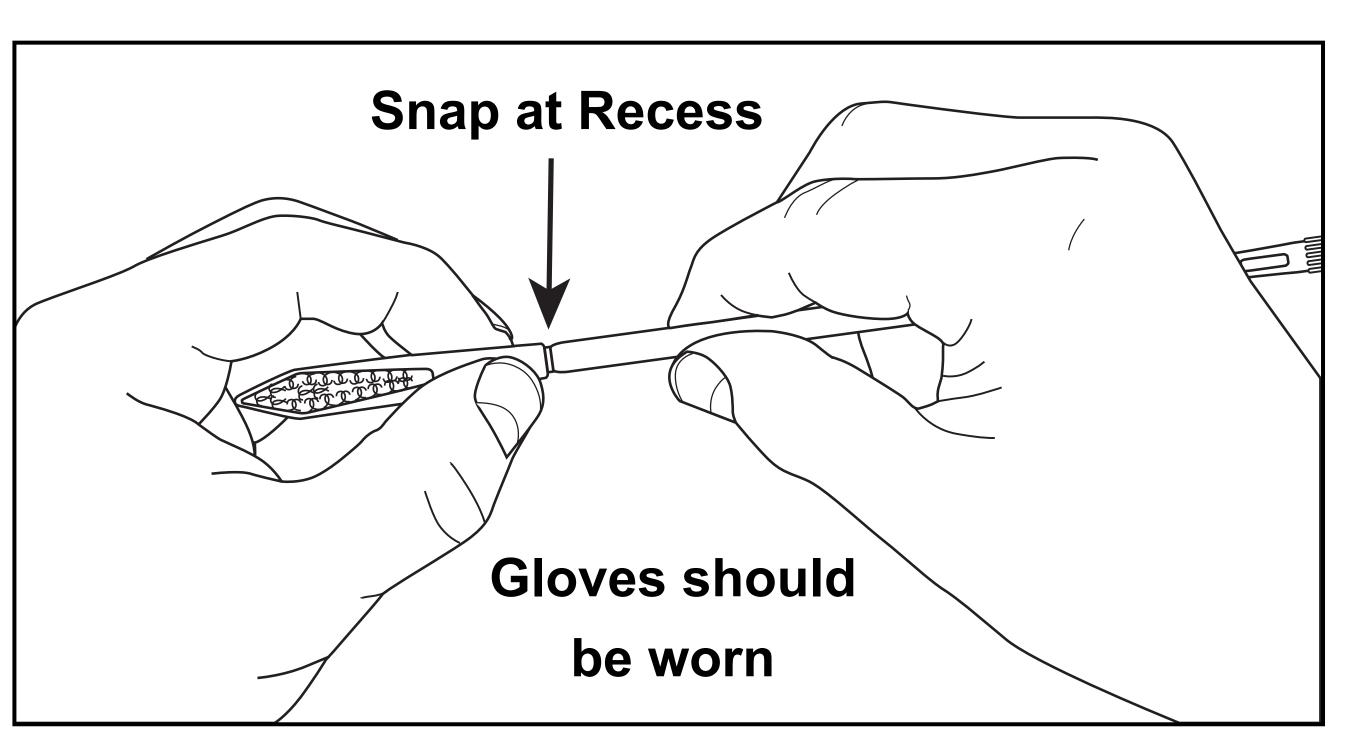
Debrided Wound Base with apparent Biofilm and Rotational Application and Tissue Sampling



Before Debridement with Soft K-Rette®



Kylon® Hook array curettings



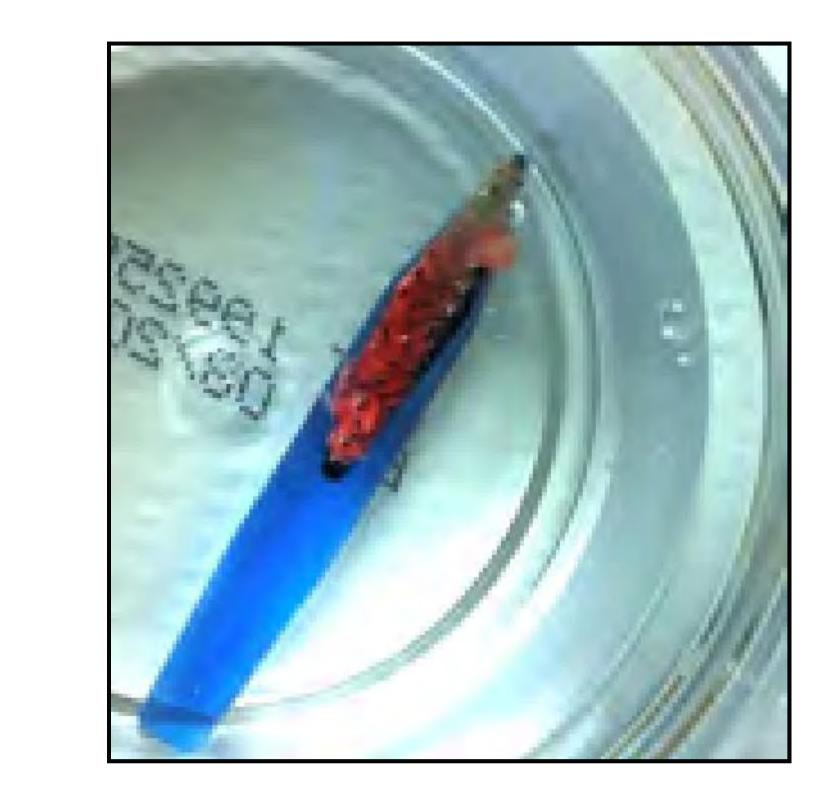
After gently removing the Soft K-Rette® from the wound site, separate the head (with Kylon® pad and tissue sample) from the body of device by snapping at the recess

RESULTS

The fabric-based curette device with the paddle parallel to the handle deployed in a paint brush-like motion, provided a hygienic effect scraping free surace debris. When pressed more firmly and used in a rotational motion for mechanical debridement, it easily dislodged and removed necrotic surface tissue and slough completely and effiently (rapidly) with minimal to no discomfort for the subject patient. The twisting motion could be excisional as the fabric tip functions as a curette as well but will not excise solid tissue, which would usually require sharp debridement. When necessary, a second sterile fabric-based hooked brush array can trap tissue specimens suitable for histological, molecular, or microbiologic evaluation.

After Debridement with Soft K-Rette®





For evaluation of wound organisms, use sterile technique to detach the tip from the handle and place into the vial for transport to the lab for histology, culture, molecular testing.

DISCUSSION

A novel minamally invasive approach to cleaning, mechanical or excisional debridement of non-solid wound tissue in crevice areas of the body including the toes/digits and inter-digit area is demonstrated. The hook array will trap biopsy tissue for anatomic pathology or molecular/culture analysis. It deserves more study in comparison to other debridement or tissue collection technology.

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