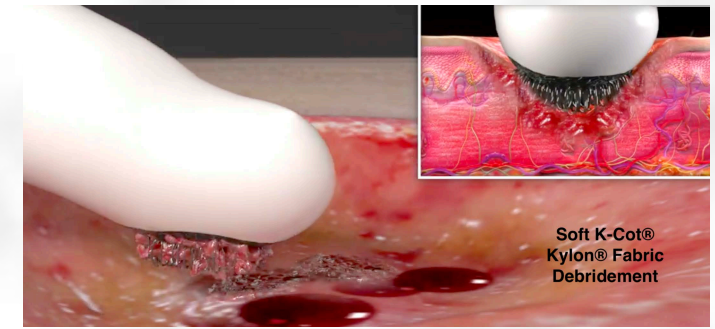


# Wound hygiene and debridement in variable resource settings

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**Introduction:** A novel minimally invasive wound hygiene and debridement technique utilizing kylon fabric was utilized in the conflict zone settings of the occupied Palestinian Territory of Gaza. The aim of the study was to demonstrate the clinical utility of the device to support wound bed preparation in resource limited settings.

**Methods:** Wounds were cleansed as able with available cleansing solutions in the environment then fractionally debridement utilizing sterile, non-latex finger cot device (Soft K-cot). This device has medical fabric coated with an array of stiff nylon hooks serving as curettes and brushes to clean and mechanically debridement different tissue types within the complex wounds. These plastic hooks become micro curettes with pressure and were used to remove varying levels of tissue including slough, hypergranulation, biofilm, and fibrin. Patient response to treatment was noted and reported.

**Results** The frictional debridement finger cot device required minimal instruction on use to achieve desired wound hygiene and mechanical/ frictional debridement in the complex wounds encountered. Surgeons, wound providers, wound specialist nurses, and clinical nurses reported ease of use and positive clinical efficacy. Patients tolerated the procedure with minimal pain. Disposal of the device was amenable to the low resource setting as sharps containers were not routinely available. The single use, low cost, and small foot print of the device was also amenable to the conflict zone setting as reusable debridement supplies were not able to be routinely safely sanitized between patient use.



**Discussion:** The common goal of care in conflict settings is to assist the victims of armed conflict and to preserve their dignity. Compassionate debridement with nylon medical fabric allows for low cost, clean, and expeditious wound bed preparation that is well tolerated. Standard peacetime health services are already limited or lacking in many low-income countries. With the addition of weapon wounded and those affected by adverse environmental conditions such as sanitation, housing, and poor nutrition, the hospital systems are quickly overwhelmed. The ease of use, disposal, and toleration of this device makes it a good choice for these settings.

\*Images 1 & 2: Stage 4 pressure injuries, recent war related traumatic paraplegia; caregivers are friends and family

\*\*Image 3: sensate left extremity in external fixation with open full thickness wound exhibiting signs of necrosis

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