

WOUND DEBRIDEMENT USING HYDROSURGERY SYSTEM

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INTRODUCTION:

Hydrosurgery system has been advocated as an alternative to standard surgical method for wound debridement. This system demonstrated some particular advantage in the surgical treatment of certain areas like the face, hand and foot which can often be difficult to reach and contour with conventional modalities. This technology which combines lavage and sharp debridement instrumentation has been described for soft tissue debridement.

REPORT:

A 38 years old male presented to our center following a motor vehicle accident (MVA) with Morel-Lavallée lesion over his right proximal thigh. The lesion later became infected and wound debridement had to be done using standard conventional surgical debridement. The patient had to undergo several wound debridement procedures over his right proximal thigh due to poor wound outcome. Eventually, another method of debridement (hydrosurgery system) was chosen, and the outcome was satisfactory that patient does not have to go another round of debridement. Once the wound was clear from infection, the wound was closed with split-skin graft (SSG).

DISCUSSION:

Hydrosurgery system utilizes high-velocity fluid technology for wound debridement. It projects a high-velocity waterjet across the operating window into an evacuation collector thereby creating a localized vacuum. The suction allows the surgeon to hold and cut targeted tissue and spare viable tissue while aspirating debris from the site. The cutting and aspiration effects can be controlled by adjusting console power settings, handpiece orientation, and handpiece pressure. This enable surgeon to achieve efficient, safe and fast debridement in all patients using the hydrosurgery system.



Figure 1: Wound prior hydrosurgery.



Figure 2: Wound post hydrosurgery.

CONCLUSION:

In this article, usage of hydrosurgery system shows that it can be an efficient alternative for soft tissue debridement. However, further studies are required to investigate its cost-effectiveness in wound management.

REFERENCES:

1. Shimada K, et al. Efficacy of Versajet hydrosurgery system in chronic wounds: A systematic review. *Int Wound J.* 2021 Jun;18(3):269-278.
2. Bekara F, et al. New techniques for wound management: A systematic review of their role in the management of chronic wounds. *Arch Plast Surg.* 2018 Mar;45(2):102-110.
3. Raffi G. Experiences with waterjet hydrosurgery system in wound debridement. *World J Emerg Surg.* 2007; 2: 10.