

VERSAJET[®] Hydrosurgery System is a useful tool for burn wound debridement prior to skin graft compared with conventional surgical debridement (SD) as shown in a retrospective study of registry data

Predictors for hydrosurgery use include young age, scalds, large total body surface area (TBSA) burned and irregular body contours



Study overview

- A retrospective cohort study of all patients admitted to three burn centres in the Netherlands from 2009 to 2016 (Dutch Burn Repository R3 registry) who underwent surgical debridement
- Eligible patients, 59.5% male, with a median age of 41 years and a median 5% TBSA of burn received either VERSAJET with SD (n=599) or without SD (n=506), or SD alone (n=1,008)



Key results

- Significant independent predictors of VERSAJET use were young age, scalds, a large TBSA burned, head or neck burns and arm burns (multivariable analysis)
 - Burns of one area, particularly neck, scalp and genitals, were often treated with VERSAJET alone
- Median TBSA excised was greater with both VERSAJET groups compared with SD alone (Figure)
- Fewer patients treated using VERSAJET alone (0.2%) received dermal substitutes than those treated using VERSAJET with SD (2.2%) or SD alone (1.5%)
- Patients treated with VERSAJET alone underwent fewer surgical procedures (p=0.019) and had a lower mean volume of blood transfusion (p=0.036) compared with SD alone
- Wound infections were less frequent with VERSAJET alone than with SD (1.6 vs 3.8%; p=0.019); the combination group had the highest infection incidence (6.7%)

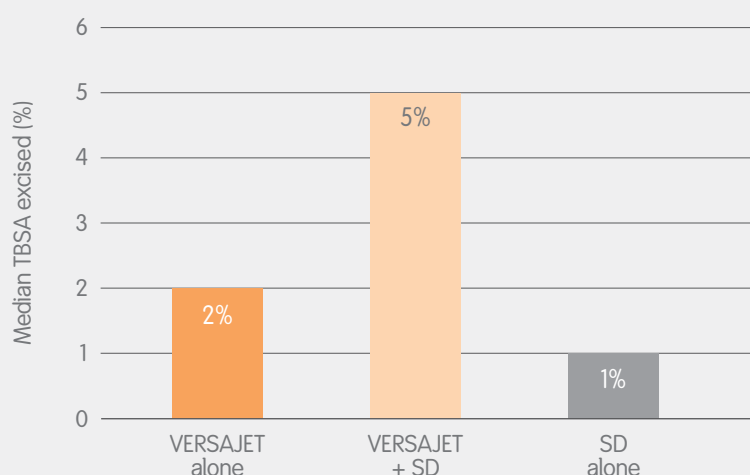


Figure. Median TBSA excised (%) with VERSAJET alone, VERSAJET plus SD and SD alone. Missing data (n=188)

Evidence in focus (continued)



Conclusion

VERSAJET[®] is a useful tool for burn wound debridement prior to skin grafting and is often used in combination with conventional SD. Predictors for hydrosurgery use are young age, scalds, high TBSA burned and burn sites with irregular (convex) contours.



Considerations

- Some data on wound and surgery characteristics was not available from the Dutch registry
- Wounds debrided with VERSAJET were likely to be superficial, which may explain differences in surgical management and outcomes



Study citation

*Legemate CM, Goei H, Gostelie OFE, Nijhuis THJ, van Baar ME, van der Vlies CH. Application of hydrosurgery for burn wound debridement: an 8-year cohort analysis. *Burns*. 2019;45(1):88-96.

Available at: [Burns](#)

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