

Summary

Intact fish skin graft has demonstrated real-world effectiveness and proof of several logistically advantageous properties.

Abstract body

A 2020 armed conflict has prompted a surge of new military tactics, including utilizing drones in combat. Drone assaults and the suspected use of white phosphorus ammunition resulted in higher numbers of deep partial and full-thickness burns, flash burns, and blast injuries than seen in more traditional conflicts.

The large numbers of burn victims overwhelmed the field hospital and civilian hospital systems, making early surgery impossible. In many instances, patients would have to wait upwards of a week for surgery. During that time, the burns would be managed with regular dressing changes, and severe pain was controlled with high-dose opiates.

Throughout two trips as part of an international aid effort, 13 patients were managed with intact fish skin. The age of the wounds was between 3 to 5 days old with initial debridement prior to the first application of intact fish skin graft. When necessary, the wounds received further debridement. The intact fish skin graft was applied, followed by NPWT, and follow-up was performed 7 days later. At follow-up, it was assessed if the patient was ready for skin grafting. Intact fish skin graft management induced rapid wound granulation, allowing for earlier skin grafting procedures. No infections were reported in any of the cases where intact fish skin was used.

Conclusions

The concept of employing intact fish skin in military medical facilities, such as field hospitals, should be further explored.