

Bridging Gaps in Surgical Care: Facial Trauma Management Through the Surgeons in Humanitarian Alliance for Reconstruction, Research, and Education Initiative

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Summary: Facial trauma presents a significant healthcare challenge in low- and middle-income countries (LMICs) due to limited access to specialized surgical care. This case report describes the management of a complex forehead degloving injury in a 20-year-old woman in Somalia, highlighting the role of remote surgical mentorship in resource-limited settings. The patient sustained a right forehead degloving injury in a motor vehicle collision, exposing a 3 × 5 cm segment of the frontal bone. Initial debridement resulted in a large soft-tissue defect, and the local surgical team faced challenges in selecting an optimal reconstructive approach due to limited experience and resources. The patient's aesthetic concerns further complicated decision-making. Through the Surgeons in Humanitarian Alliance for Reconstruction, Research, and Education program, the team sought virtual expert consultation via a secure WhatsApp platform. Based on expert recommendations, conservative management with daily Vaseline dressings was initiated to promote granulation tissue formation. Over 6 weeks, complete bone coverage was achieved, followed by full-thickness skin grafting, resulting in a satisfactory aesthetic outcome. This case demonstrates the value of global surgical networks in guiding complex reconstructions in LMICs, allowing local teams to deliver high-quality care despite resource constraints. Although short-term results were successful, long-term follow-up is necessary to assess functional and aesthetic durability. The success of this case underscores the importance of international collaborations in improving surgical education, patient outcomes, and sustainability of reconstructive techniques in LMICs. (*Plast Reconstr Surg Glob Open* 2025;13:e6631; doi: [10.1097/GOX.00000000000006631](https://doi.org/10.1097/GOX.00000000000006631); Published online 21 March 2025.)

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Facial trauma, accounting for 1 in 4 injuries globally, represents a significant health burden, particularly in low- and middle-income countries (LMICs).^{1,2} Studies from similar LMICs, such as Kenya and Nigeria, have reported high incidence rates of facial trauma—32.7% during a 4-month period in Kenya and an annual incidence rate of 6.1% in Nigeria—underscoring the regional impact.^{3,4} In regions like Somalia, the management of maxillofacial injuries is especially challenging due to limited access to specialized surgical care. Contributing factors such as shortages in trained personnel, inadequate infrastructure, the migration of medical professionals to high-income countries, and local conflict and politico-economic instability further exacerbate the disparity in care.^{5,6} Addressing the complexities of managing facial trauma in Somalia requires innovative solutions to overcome these barriers.

Disclosure statements are at the end of this article, following the correspondence information.



Fig. 1. Right forehead degloving injury at initial presentation.

One such initiative is Surgeons in Humanitarian Alliance for Reconstruction, Research, and Education (SHARE), which aims to bridge the gap in surgical expertise in resource-limited settings through education.⁷ SHARE leverages virtual collaborations, in-person courses, and expert consultations to advance microsurgical reconstruction across sub-Saharan Africa.⁷ By fostering international partnerships and global fellowships and empowering local surgeons, SHARE focuses on improving local surgical quality and patient outcomes in LMICs. This case report illustrates a successful instance of facial trauma management in Somalia, showcasing the effectiveness of SHARE's approach in delivering optimal surgical outcomes under challenging circumstances.

CASE REPORT

A 20-year-old healthy female college student presented to Kalkaal Hospital, a speciality hospital in Mogadishu, Somalia, with a right forehead degloving injury sustained as a passenger during a motor vehicle collision (Fig. 1). After medical stabilization, the plastic surgery team was consulted for reconstruction. In preparation for primary surgery, the patient underwent laboratory testing, a skull x-ray, and head and neck computed tomography—all of which were found to be normal. Following surgical clearance, initial treatment involved two debridement sessions, resulting in a $5 \times 4 \times 4$ cm



Fig. 2. Wound at 4 months following a full-thickness skin graft with minimal scarring.

soft-tissue defect and a 3×5 cm exposed frontal bone. Due to injury severity, the patient was counseled for a local flap to cover the exposed bone and full-thickness skin graft for the remaining soft-tissue defect. Although this seemed to be the wisest reconstructive option, the team was hesitant to proceed surgically due to their limited experience with such complex cases and the hospital's resource-limited nature. Additionally, upon discussion with the patient, she expressed high aesthetic concerns which challenged local flap reconstruction, as these lead to donor site distortion or asymmetry and increased scarring.

Given the combination of the patient's preferences and the case complexity, a decision was made to seek expert consultation. Through shared decision-making, the patient granted the first author permission to share her preoperative images with senior SHARE members. These images were posted in an established, data-protected virtual WhatsApp group dedicated to case discussions and problem-solving.

We then received suggestions from faculty members and global fellows, of which the senior author recommended addressing the bone defect with daily dressing changes using Vaseline after rinsing the wound with saline. This technique prevents the bone from drying while promoting neovascularization from the diploe to the cortex, eventually forming a healthy granulation tissue. The expert has had previous success managing their cases using this method, including patients of various profiles, comorbidities, and injury causalities. They also shared an article of their authorship detailing a step-by-step guide for technique and its corresponding outcomes.⁸ Additionally, given the need for patient compliance, the team was also advised on the importance of patient education on the technique and its management, including regular follow-ups.

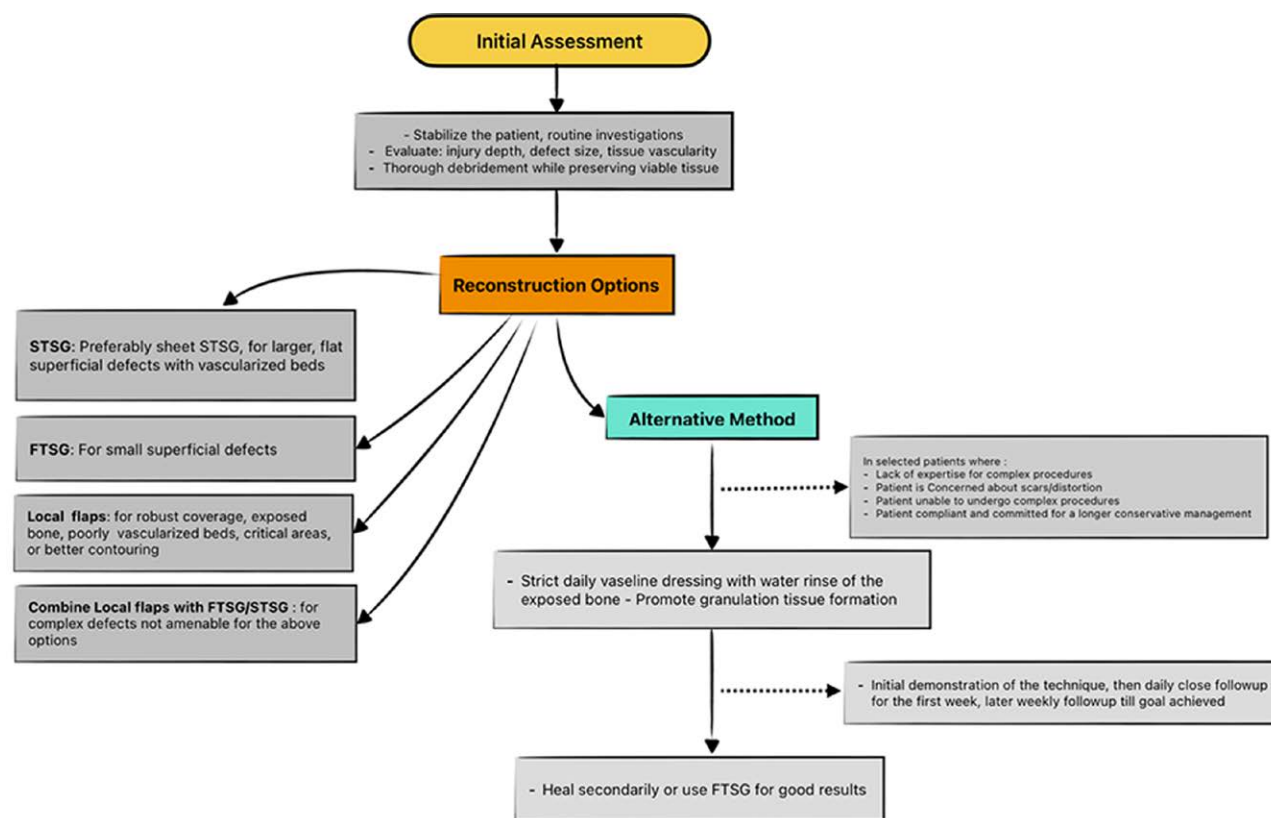


Fig. 3. Algorithm for managing forehead degloving injuries in LMICs. FTSG, full-thickness skin graft; STSG, split-thickness skin graft.

We explained the specific technique, expected treatment duration, and anticipated outcome to the patient. She was admitted for 4 days, during which we demonstrated the technique and supervised her as she performed it correctly. The patient was discharged with instructions to send daily pictures and attend regular weekly appointments. Over the next few days, granulation tissue began to appear over the exposed bone. After 2 weeks, approximately half of the exposed bone was covered with granulation tissue. By the sixth week, the exposed bone was completely covered (Fig. 2). We decided to wait another four weeks for the wound to contract before performing a full-thickness skin graft, taken from the inner arm of the nondominant upper extremity, which healed with minimal scarring and an acceptable aesthetic outcome (Fig. 3). The patient expressed her satisfaction with the treatment plan utilized.

DISCUSSION

Complex facial trauma management in LMICs is fraught with challenges such as limited resources, insufficient training, and lack of specialized expertise.^{9,10} In this case, the initial inclination was to use a local flap combined with a full-thickness skin graft, which is a well-established reconstructive approach for similar injuries. However, the decision to seek expert consultation through SHARE and adopt a more conservative method proved highly effective.

Through SHARE's secure virtual platform, the team was able to consult with global experts who recommended

a conservative, yet effective, approach using daily dressing changes with Vaseline and saline rinses. This method was not only more appropriate for the resource-limited environment but also addressed the patient's aesthetic concerns by minimizing the risk of visible scarring. The use of this technique and its successful outcomes demonstrates the importance of international collaboration in overcoming barriers to specialized care in LMICs. Through remote expertise, the team was able to provide advanced care tailored to the constrained contexts, without compromising on patient safety or outcomes.

Although the short-term results of this approach were excellent, this technique's long-term outcomes for this given disenfranchised populations require further evaluation. Future follow-ups should assess any potential functional deficits, including skin sensation and graft durability. A more in-depth analysis of these outcomes would provide valuable insights into the sustainability and effectiveness of this technique in similar cases in LMICs.

CONCLUSIONS

The success of this case underscores the critical role that SHARE plays in empowering local surgical teams by offering real-time, expert guidance and fostering knowledge-sharing across borders. In environments like Somalia, where access to highly specialized care is limited, such initiatives are essential in bridging gaps in expertise, improving patient outcomes, and promoting sustainable, high-quality surgical care.

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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