Anterolateral Thigh Flap Reconstruction for a Pediatric Trauma Patient in an Active Conflict Zone

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Abstract : Reconstruction of complex traumatic soft tissue injuries involves serial debridements, extensive wound care, and intensive care unit monitoring for flap viability. In an active conflict zone, many vital resources to carry out this level of care are unavailable. The following case describes the surgical management of a nine-year old male patient who sustained a blast injury, leaving a large soft tissue defect extending over his right thigh, hip, and lower back with exposed ilium. The setting of care was a hospital in the South of the Gaza Strip with one sole burn surgeon available, trained in plastic surgery. At the time of care, the hospital was actively under military siege and had critical medical supply shortages, including pain medicine, wound care supplies, and surgical instruments. Additionally, the healthcare system is under extreme stress due to the disappearance, death, and evacuation of many medical staff. During hospitalization, patient underwent three serial procedures: 1) soft tissue and bone debridement, 2) a rotational anterolateral thigh flap using the descending branch of the deep femoral artery, and 3) a split thickness skin graft placement. Ultimately, the procedures provided full soft tissue coverage of previously exposed bone and the patient was stabilized to evacuate to an adjacent country for further medical care. This case demonstrates how the reconstructive ladder may be implemented in austere, resource-limited settings with a large influx of simultaneous mass casualties.

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Keywords : burns, trauma, conflict medicine, reconstructive surgery

Conference Title : ICTTP 2025 : International Conference on Trauma: Theory and Practice

Conference Location : Brussels, Belgium

Conference Dates : March 24-25, 2025