

Fasciotomy Closure

History

This twenty-seven-year-old police officer sustained a gunshot wound to his left elbow with a resulting division of his brachial artery and a compound humeral fracture. He required an extensive fasciotomy to decompress his forearm. This left a defect 42 cm in length, which was retracted 17 cm when first seen at one week.

Treatment

Under local anesthetic, the wound was debrided and all granulation tissue excised. The wound margins were undermined 3 to 4 cm along the entire length. The ABRA Surgical Skin Closure System was applied to control the wound margins and reduce edema. A series of ten pairs of Skin Anchors were applied along the wound margins. DuoDERM® was applied to the open portion of the wound and elastomers were set to establish a wound reducing force.

The patient tolerated the procedure well. Under nursing care the wound was inspected daily, the DuoDERM® was trimmed as the wound area reduced, and the elastomeric tension was maintained within the therapeutic range. By day ten, compartment volumes and skin tensions had been normalized. The system was removed and the wound closed with 3-0 nylon sutures under moderate tension to achieve primary closure. The patient was released.

As indicated by the one year follow-up photo, both the mechanical and cosmetic results are similar to a linear incision without complications.



As presented to Plastics. Seven days post-fasciotomy, defect measuring 42 cm x 17 cm.



ABRA Surgical Skin Closure System - as installed to manage wound margins and inter-compartmental swelling.



End point - 42 cm linear incision closed by primary means.



As seen at one year follow-up.

Note: Product shown is not current.