

Hyperbaric oxygen therapy facilitates surgery on complex open elbow injuries: Preliminary results.

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Complex open elbow injuries present a significant challenge to orthopaedic surgeons because of the poor potential for achieving a good functional level, even given good anatomic realignment. Associated massive soft-tissue damage impedes surgical fixation, delays rehabilitation, and therefore, further deteriorates the functional outcome. We studied a prospective, consecutive series of 16 patients with complex open elbow injuries who were treated with a combination of treatment modalities including early bony stabilization, debridement of soft tissue, and early coverage. The treatment protocol also used hyperbaric oxygen therapy to facilitate immediate internal fixation. The median value of the Mangled Extremity Severity Score was 5.5 (range, 3-10). Successful reconstruction was achieved in all 16 patients. No deep infection occurred, but there were 3 self-limited superficial infections. The average elbow functional result at 12 months after surgery, based on the Mayo score system, was good (mean value, 80.9; range, 55-100). Of the patients, 75% achieved satisfactory functional results for the elbow. The results of this study demonstrate that the studied treatment protocol provides a promising alternative for managing these complex open elbow injuries.

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