

CASE REPORT

Medical Education Series

Open Fracture from Gun Shot Wound to Elbow

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OPEN FRACTURE FROM GUN SHOT WOUND TO ELBOW

PATIENT HISTORY

An 18 year old male presented with a gun shot wound to the elbow, resulting in an open left distal humerus, left radial neck and left proximal ulna fractures.

DIAGNOSIS

Open left distal humerus, left proximal radius and left proximal ulna fractures.

TREATMENT

Patient underwent irrigation and debridement followed by open reduction and internal fixation of the left distal radius, left radial neck and proximal ulna with open posterior interosseous nerve neuroplasty. CERAMENT® G with Gentamicin was injected to fill the void in the left distal humerus lateral column metaphyseal void.

HARDWARE

Skeletal Dynamics Bridge Plates.

SYSTEMIC ANTIBIOTICS

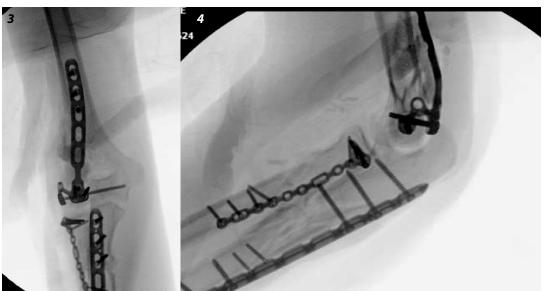
Ancef for 24 hours perioperative prophylaxis.

OUTCOME

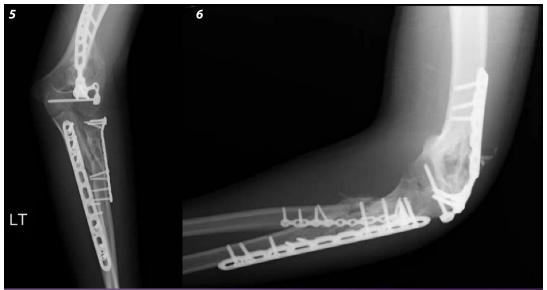
Osseous union. Followed up for 4 months; patient has returned to all hobbies and sporting activities.



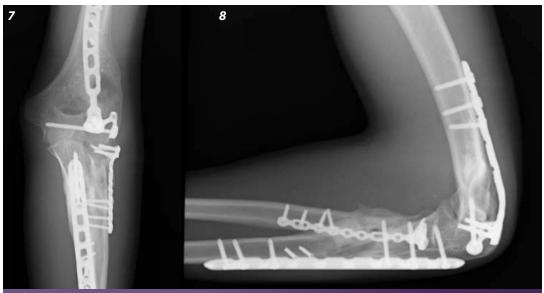
Pre-op images: 1. Lateral attempt, showing comminution in radial neck and ulnar diaphysis. Bullet entry path near humeralmetaphysis marked by soft tissue fragments. 2. CT scan of the elbow.



Intra-op images: 3. Intraoperative AP, demonstrating CERAMENT G use in humeral metaphyseal lateral column defect. 4. Intraoperative lateral showing broad zone within humeral metaphyseal lateral column defect filled with Cerament G. Radial and ulnar bridge plates visualized.



Post-op images: 5. 6 week post-op AP:Metaphyseal lateral column showing osseous union. 6. 6 week post-op oblique: early humeral metaphyseal bridging is visualized.



Post-op images: 7. 4 months: AP image showing mature osseous bridging of lateral metaphyseal. 8. 4 month post-op lateral: mature humeral metaphyseal bridging is seen with osseous union of radius and ulna.

Advancing Osteomyelitis Management

- Bone remodeling to promote and protect bone healing¹
- Local antibiotic elution that is safe, consistent and clinically significant²

CAN HALL



 Ferguson et al. 'Radiographic and Histological Analysis of a Synthetic Bone Graft Substitute Eluting Gentamicin in the Treatment of Chronic Osteomyelitis'. J. Bone Joint Infect. 2019; 4(2): 76-84.

2. Stravinskas et al. 'Pharmacokinetics of gentamicin eluted from a regenerating bone graft substitute - In vitro and clinical release studies'. Bone Joint Res. 2016; 5:427–435

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