

EXPOSED TRUTHS: MANAGING MRSA SURGICAL SITE INFECTION WOUND WITH EXPOSED IMPLANT USING ANTIBIOTIC CEMENT POUCH AND NPWT

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Introduction: Management of surgical site infections is challenging, especially when involving exposed hardware. Consensus advocates removal of implants, yet this might not be feasible if union is still not achieved. Our case details the management of surgical site infection over the right olecranon after internal fixation, which preserved the implant until the fracture united.

Discussion: A 46-year-old gentleman sustained open comminuted fracture of the right olecranon and distal humerus from high-energy trauma. Occurrence of secondary infection delayed definitive fixation for 3 months. The fractures were fixed with locking plates plus synthetic bone graft as soon as the wound condition & infective markers permitted. Unfortunately, the fixation was complicated with surgical site infection, exposing the olecranon locking plate. Intraoperative cultures were positive for MRSA. Despite treatment for 3 weeks with IV Vancomycin and conventional dressing daily, the wound did not improve, prompting us to devise a novel wound management regime, allowing outpatient treatment, involving Gentamicin-impregnated cement beads in a pouch over the wound bed every 4 days for 1 month, followed by portable negative pressure wound therapy (NPWT) for another month. Subsequently, silver foam dressing was done for another 1 month, after which we noted union of the olecranon fracture notwithstanding the partially-exposed plate.

Conclusion: A combination of antibiotic cement pouch (ABCP) and NPWT is a promising solution for SSI with MRSA. However, some studies reported that NPWT may reduce the effectiveness of antibiotic beads against *S aureus*, influencing our decision to apply each modality consecutively instead of concurrently. Our experience suggests implant preservation may be acceptable in treating surgical site infections with exposed implants.