

Antibiotic Impregnated Autogenous Bone Grafts For Treatment Of Infected Non Union Of Long Bones

INTRODUCTION:

Non union is a devastating complication following fracture of a bone as they are still challenging to orthopaedic surgeons because of their associated complications like bone loss, infection, osteomyelitis and poor bone quality. Non union treatment requires freshening of bone ends, stable fixation and change in biological environment around fracture site. Biological repair requires removal of dead, necrotic tissue along with bone graft to facilitate union. We want to evaluate the efficacy of Antibiotic incorporated autogenous bone graft (AIABG) in cases non union.

METHODS & MATERIAL:

41 patients with infected non union of long bones were recruited in our study and divided into two groups, Group A (n=22) with active infection (discharging sinus) while in group B (n=19) with quiescent infection. All patients were managed by debridement, fracture stabilization with or without distraction osteogenesis along with autogenous bone grafting. In group A, AIABG was used in second stage surgery after control of infection. All patients were followed up clinically as well as radiologically till the union of fracture.

RESULTS:

In group A all patient except two showed union at an average 21.2 weeks while in group B all patients showed union at an average 16.8 weeks. Complication included recurrence of infection in three patients in group B while none in group A.

DISCUSSION:

Autogenous bone graft has been considered as gold standard for the treatment of non union because of osteo-inductive properties, it improves biology at fracture site and enhance union rate. In literature there are very few reports regarding use of AIABG in the treatment of bone and joint infections, to use cancellous graft as a carrier of antibiotic (1,2), major advantage for AIABG is to prevent further surgery.

CONCLUSION:

AIABG has no effect on rate of healing as compared to normal autogenous bone graft but it has effective role in prophylaxis and treatment of infection in cases of non union of long bones.

KEY-WORDS:

Infected non union, Antibiotic incorporated autogenous bone graft (AIABG)

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