Autologous fibrin adhesive in mandibular reconstruction with particulate cancellous bone and marrow.

Authors: Tayapongsak P., O'Brien D.A., Monteiro C.B., Arceo-Diaz L.Y., Carlson E.R.

Publication Date: 1994

Abstract:

Displacement of bone graft particles during their placement, neck flap closure, and insertion of the freeze-dried mandibular crib housing the graft to the glenoid fossa is a commonly encountered problem during major mandibular reconstruction with autogenous particulate cancellous bone and marrow. Autologous fibrin adhesive proved to be a solution as demonstrated in a series of 33 cases. In addition to adhesive and hemostatic properties, it helped the remodeling process begin about 50% earlier by providing the substratum for migration of mesenchymal cells, accelerating revascularization and migration of fibroblasts, stimulating the growth of both fibroblasts and osteoblasts, and slowing the multiplication of microorganisms. Bony incorporation and remodeling were detected radiographically at the fourth postoperative week compared with the eighth week in bone grafts without autologous fibrin adhesive.