

Bone Grafting : An Overview

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Abstract

Bone grafting is the process by which bone is transferred from a source (donor) to site (recipient). Due to trauma from accidents by speedy vehicles, falling down from height or gunshot injury particularly in human being, acquired or developmental diseases like rickets, congenital defects like abnormal bone development, wearing out because of age and overuse; lead to bone loss and to replace the loss we need the bone grafting. Osteogenesis, osteoinduction, osteoconduction, mechanical supports are the four basic mechanisms of bone graft. Bone graft can be harvested from the iliac crest, proximal tibia, proximal humerus, proximal femur, ribs and sternum. An ideal bone graft material is biologically inert, source of osteogenic, act as a mechanical support, readily available, easily adaptable in terms of size, shape, length and replaced by the host bone. Except blood, bone is grafted with greater frequency. Bone graft indicated for variety of orthopedic abnormalities, comminuted fractures, delayed unions, non-unions, arthrodesis and osteomyelitis. Bone graft can be harvested from the iliac crest, proximal tibia, proximal humerus, proximal femur, ribs and sternum. By adopting different procedure of graft preservation its antigenicity can be minimized. The concept of bone banking for obtaining bone grafts and implants is very useful for clinical application. Absolute stability require for successful incorporation. Ideal bone graft must possess osteogenic, osteoinductive and osteocon-ductive properties. Cancellous bone graft is superior to cortical bone graft. Usually autologous cancellous bone graft are used as fresh grafts where as allografts are employed as an alloimplant. None of the available type of bone grafts possesses all these properties therefore, a single type of graft cannot be recomm-ended for all types of orthopedic abnormalities. Bone grafts and implants can be selected as per clinical problems, the equipments available and preference of the surgeon. A search for ideal bone graft is on and may continue till time to time.

Keywords: Bone, Bone graft, Trauma.