

Iliac Crest Bone Graft in Maxillofacial Bony Defects

Ayad A. Hasan *FICMS*, Ammar Y. Khudhir *FICMS*

Section of Maxillofacial Surgery, Dept. of Surgery, Al-Imamian Al-Kadhymain Medical City, Baghdad, Iraq.

Abstract

- Background** The reconstruction of facial deformity has been of paramount clinical concern for many years and one of the most difficult and challenging tasks facing the maxillofacial surgeon. The ultimate goal in the treatment is the relief of suffering, restoration of function of jaw, restoration of speech, regain of the normal looking contour and improvement in the quality of life.
- Objective** To obtain more knowledge on autogenous on lay bone graft behavior in different facial defects and to evaluate the lateral and medial surgical approaches to the iliac crest.
- Methods** A prospective study was conducted during the period from January 2009 to January 2012 on 20 patients with facial defects, in the orbit, zygoma, maxilla and mandible. The causes of defects were trauma, odontogenic tumors and alveolar cleft. Types of bone graft used were either block cortico-cancellous or chips cancellous bone, the block was either monocortical or bicortical bone graft.
- Results** Complications associated with donor site harvesting procedure included pain 5% and gait disturbance 5%. Failure of bone graft was observed in 3 patients (15%) while the rest, 17 patients, (85%) ended with functional and esthetic successful graft. Causes of failure were due to sequestration (5%), inflammation due to osteomesh (5%) and soft tissue breakdown (5%).
- Conclusion** Iliac crest graft has evolved as a safe, well accepted procedure, with relatively low morbidity that can be used for a wide variety of maxillofacial procedures.
- Keywords** Iliac crest, bone graft, facial defects

Introduction

The reconstruction of facial deformity has been of paramount clinical concern for many years and one of the most difficult and challenging tasks facing the maxillofacial surgeon. Bone graft represents one of the earliest devised reconstruction approaches to the musculoskeletal system. In addition, autogenous bone is available in many forms and unlimited quantity^(1,2).

The ultimate goal in the treatment is the relief of suffering, restoration of function of jaw, restoration of speech, reprint of the most normal

looking contour, and improvement in the quality of life⁽³⁻⁵⁾.

In osseous restoration of full bone thickness for the face, many factors render the usual bone grafting procedures difficult and their prognosis uncertain including contour, morphology, nature of the muscular attachments and the effects of continuing trauma associated with mastication, phonation, swallowing and other mandibular movements^(6,7).

The use of cortical and cancellous bone graft is common in many craniofacial deformities, because of its accessibility and the quantity of bone available. The ilium has become a