

favorable donor site for cortico-cancellous and marrow grafting material ⁽⁸⁻¹⁰⁾. Cortical bone, also known as compact bone, is one of two main types of osseous tissue. Cortical bone is dense, and forms the surface of bones. It is solid in appearance, and constitutes 80% of total bone mass. Compact bone is composed of many cylinder shaped units called osteons, or Haversian Systems, and transverse channels between them called Volkmann's Canal.

Cancellous bone, synonymous with trabecular bone or spongy bone, is one of two types of osseous tissue that forms bones. Compared to compact bone, which is the other type of osseous tissue, it has a higher surface area but is less dense, softer, weaker, and less stiff. It typically occurs at the ends of long bones, proximal to joints and within the interior of vertebrae. Cancellous bone is highly vascular and frequently contains red bone marrow where hematopoiesis, the production of blood cells, occurs. The primary anatomical and functional unit of cancellous bone is the trabecula. The bone usually forms initially as cancellous bone and then forms the compact bone ⁽¹¹⁾.

The objectives of this study was 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

Data were obtained in this study by reviewing prospectively the results of 20 patients with facial bone defects, 13 patients were males, and 7 were females with an age ranged from 12 to 59 years. All of the patients were subjected to autogenous bone graft taken from the anterior iliac crest to reconstitute facial defects. Those patients were admitted to the Department of Maxillofacial Surgery in Al-Imamain Al-Kadhymain Medical City during the period from January 2009 to January 2012.

The causes of defects were trauma, odontogenic tumors and alveolar clefts. The bone graft was used either immediately or after a while. The types of bone grafts used were either block

corticocancellous or chips cancellous bone. The blocks were either monocortical or bicortical bone graft. The bone grafts were fixed by wires, bone plates, and screw by the use of osteomesh in case of chips bone graft; and for the mandible, intermaxillary fixation was used for immobilization for six weeks duration. Follow up period ranged from 3 months to 2 years after operation.

The indications for the orbital defects were cosmetic, and elimination of diplopia due to blow-out fracture. For the zygoma, the indication was cosmetic. For the maxillary and mandibular defects, the indications were closure of alveolar clefts, preparing a good bone quality for the placement of dental implant, severe trauma with loss of major part from the mandible and correction of the contour of the mandible after excision of a tumor. Table (1) shows the location of the defects.

Table 1. The different locations of the bone defects

Location	No.	%
Orbit	4	20
Zygoma	4	15
Maxilla	3	15
Mandible	9	45
Total	20	100

In regard to the type of treatment, the patients were treated as follows: for orbital defects, 4 patients with defective floor, 3 on the right side and one on the left side, 2 due to missile injury and 2 due to Rather infra-orbital approach was used within skin creases; and all of the bone grafts used were corticocancellous monocortical bone graft. Size of the defect was about 3 cm. The extensions of defect for grafting are shown in (Table 2).

Four patients had zygomatic bone defects, 3 on the left side, one on the right side. The treatment was done by extra-oral approach, infra-orbital approach, and cortico-cancellous monocortical bone graft was used. Size of the defect ranged from 3-5 cm.