Volume 30 Supplement 1 Pages 1–338 September 2002 ISSN 1010-5182

Journal of Cranio-Maxillofacial Surgery

OFFICIAL PUBLICATION OF THE EUROPEAN ASSOCIATION FOR CRANIO-MAXILLOFACIAL SURGERY

XVIth Congress of the European Association for Cranio-Maxillofacial Surgery
3–7 September 2002
Münster, Germany

CHURCHILL LIVINGSTONE

718 25

COMBINED SURGICAL AND ENDOSCOPIC MANAGEMENT OF FACIAL TRAUMA

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Aims: The purpose of our study was to evaluate the ability to obtain a better diagnosis and easier treatment of orbital fractures and subcondylar fractures by means of a combined endoscopic and open approaches.
Subjects: Patients were randomly selected among facial trauma patients treated at the University of Padova Medical Center between January 2001 and December 2001. 6 patients with orbital floor and 2 with subcondylar fractures were selected. Endoscopy was performed with a 30 and a 70 degrees endoscopes through a trocar inserted in the maxillary sinus for orbital fractures and intraorally and transbuccally for condylar fractures. We compared panoramic radiographs and CT scans with clinical findings, endoscopy and intraoperative findings. Treatment was based on standard open and endoscopic approaches. Mean follow-up was 3 months.
Results: Endoscopy was able to be completed in all patients. In some patients with orbital fractures it was difficult to perform due to bleeding and comminution. No complications occurred due to the endoscopy. The comparison between the two techniques showed that endoscopy is better than the reconstructed coronal CT scans, but real coronal views are still the gold standard to diagnosis orbital floor blowouts.
Conclusion: Endoscpopy allowed for better visualization of the floor, more precise and faster placement of the alloplastic material in the orbital floor. It did not eliminate the need for an open approach. The endoscope allowed for better visualization and eliminated the need for open approaches in cases of subcondylar fractures. It also proved to be an excellent teaching device.

1055 26

TREATMENT OF ORBITAL FLOOR BLOW-OUT FRACTURES WITH CONCHAL AURICOLAR CARTILAGE GRAFT

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Aims: To present follow-up on 14 cases in which conchal cartilage graft was used to span small orbital floor defects (up to 2 cm × 2 cm).
Methods: Fourteen patients suffering from orbital floor blow-out fractures were included in the study; in eight cases it was associated with fracture of the inferior orbital rim. The decision to proceed surgically was based on the presence of at least one of the following conditions: diplopia, enophthalmos, herniation of orbital tissues through gaps in the orbital floor bone, concomitant displacement of bone fragments of the inferior orbital rim. The auricular cartilage is used in all cases. All patients were treated under general anaesthesia. Access to the orbital floor was via subtarsal incision unless a laceration was present and usable.
Results: The incidence of clinical signs during follow-up and the surgical complications found (one entropion, one palpebral oedema), are fully comparable with those reported in the literature; they do not appear to be correlated to the use of a cartilage graft.
Conclusions: The use of auricular cartilage has a wide application in small orbital floor defects. The conchal graft is easy to harvest; it provides an optimal support function for the globe with minimum donor-site morbidity. A graft of adequate size ensure adequate stability; to fix it is not necessary.

680 27

RECONSTRUCTION OF ORBITAL FLOOR FRACTURES WITH BIOACTIVE GLASS IMPLANT

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Aims: Both autogenous and alloplastic implants have been used to span the defects of the orbital floor caused by trauma. In this study, we evaluated the use of bioactive glass implants (BAG-implant, S53P4; Abmin Technologies Ltd, Turku, Finland) for the repair of orbital floor defect.
Methods: The retrospective review of 41 patients having complex maxillary fracture with an associated orbital floor fracture or a large blowout fracture was carried out from 1995 to 2000. The BAG-implant was placed over the defect of orbital floor, using subciliary or transconjunctival approach. Follow-up examination was done at 1 month, 3 months, and 1 year.
Results: There was no sign of infection, nor postoperative extrusion or displacement of the implant. The implants did not cause a foreign body reaction. Diplopia was seen preoperatively in 24 (58%) cases and postoperatively in 5 (12%) cases. Infraorbital nerve paresthesia was seen preoperatively in 12 (29%) patients, whereas 6 (15%) patients had infraorbital nerve paresthesia postoperatively.
Conclusion: The BAG-implant is a well-tolerated, bioactive, and biocompatible material in orbital floor reconstruction.

506 28

OWN EXPERIENCE OF POLYPROPYLENE TEXTURE APPLICATION FOR RECONSTRUCTION OF BONE POSTTRAUMATIC DEFECTS IN ORBITAL WALL

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Aim: To evaluate the application of polypropylene texture in surgical treatment of orbital wall bone defects, which was produced as consequence of middle part of facial skeleton fractures.
Material and method: At the Department of Maxillofacial Surgery, Institute of Surgery Medical University of Lodz 55 patients were treated from 2000 to 2002. In these cases zygomatico-maxillo-orbital fractures and isolated orbital floor fractures were diagnosed. Bone fragments were repositioned in typical way, stabilized with titanic microplates and orbital wall defects were covered with polypropylene texture [Tricomed] and normal anatomic shape of bony walls were reached. Follow-up were carried out through 12 months and included maxillofacial, ophthalmologic and CT examination.