Reconstruction of Inferior Orbital Wall Fractures Using Bone Fragments.

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Abstract:

INTRODUCTION: Various materials have been used as implants in orbital floor fractures. The fractured bone fragments, however, are not usually used because of their small size and delicate characteristics. To overcome this limitation, the authors used autologous bone fragments combined with fibrin glue and an absorbable plate to repair inferior orbital wall fractures.

METHODS: Thirty-four patients with orbital floor fractures treated in a single center from January 2013 to September 2014 were prospectively evaluated. Patients' demographic characteristics, clinical signs and symptoms, physical examination findings, postoperative complications, and preoperative and postoperative computed tomography findings were assessed. Fracture repair by a transconjunctival approach in which bone fragments were merged with fibrin glue and an absorbable plate was performed in all the patients.

RESULTS: Postoperative computed tomography showed good orbital fracture reduction and soft tissue restoration in all the patients. Five patients developed postoperative diplopia; however, this symptom resolved spontaneously. Exophthalmometry showed that the degree of enophthalmos had improved significantly.

CONCLUSION: Based on the results of this study, the combination of autologous bone fragments and absorbable mesh appears to be a safe and feasible option for the reconstruction of orbital floor

fractures.