SPLIT-THICKNESS CALVARIAL CRANIOPLASTY

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Abstract

Twelve patients underwent split-thickness calvarial bone grafting using high-speed drill and osteotomies for bone harvesting from June 1999 to May 2002 in two neurosurgical departments at King Abdulaziz Hospital and Oncology Center in Jeddah, and King Fahd Hospital in Al-Madinah, Saudi Arabia. These patients were reviewed to show the indications and advantages of the procedure. All patients were studied preoperatively with computed tomographic scans and skull plain X-ray films. The follow-up period ranged from 1 to 22 months. All patients had survived functional bone graft. There were no major intra-operative complications, postoperative infection or remarkable sequelae. In 2 patients intraoperative dural tears occurred and were repaired without any postoperative cerebrospinal fluid leak or sequelae. Results showed that patient’s own calvarial bone graft provides an excellent and alternative solutions for skull bone defects with all the immediate and long-term biological advantages that come with using autogenous tissues.

Keywords: Cranioplasty - split-thickness calvarial graft - autogenous bone graft - skull bone defect