

**USE OF LOCAL TEMPORALIS FASCIA GRAFT FOR THE REPAIR OF
CEREBROSPINAL FLUID LEAK IN PATIENTS WITH SKULL BASE SURGERY
INVOLVING THE CAVERNOUS SINUS**

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OBJECTIVES: Cerebrospinal fluid (CSF) leaks are common after extensive skull base surgery. We aim to provide a novel method for reconstruction of the skull base for repair of CSF fistula in this study.

METHODS: Clinical data was reviewed from Apr 2004- July 2015 in a regional neurosurgery center in Hong Kong. Those with extensive skull base surgery involving the cavernous sinus and complicated by cerebrospinal fluid leak were included. All pathologies were included, but posterior fossa and endoscopic surgeries were excluded in our study.

RESULTS: 16 patients met our inclusion criteria for cerebrospinal fluid leaks after extensive skull base surgery. The mean age was 52yo with a mean follow-up time of 36.1 months. Surgeries were done via different skull base approaches, and most of the dura defects were located at the lateral sphenoid sinus wall. 12 patients (75%) eventually required surgical repair. 7 of which (43.8%) required ≥ 2 surgeries for repair, all of these patients had >1 surgeries done before and 5 (71.4%) had previous radiotherapy done. 4 patients had local temporalis fascia flap done for their initial surgery and only 1 had immediate CSF leak. Of the patients with multiple repairs done, 2 were finally repaired by local temporalis fascia flap.

CONCLUSION: Local temporalis fascia flap at the anteromedial triangle of the middle cranial fossa is an effective method for dural repair after extensive skull base surgery.