926 CSF Rhinorrhoea After Endonasal Intervention to The Skull Base (CRANIAL): Multicentre Pilot Study

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Introduction: CRANIAL (CSF Rhinorrhoea After Endonasal Intervention to the Skull Base) is a prospective, multicentre observational study seeking to determine: the scope of skull base repair methods used, and the corresponding rates of postoperative CSF rhinorrhoea in endonasal transsphenoidal (TSA) expanded endonasal approaches (EEA) for skull base tumours.

Method: A prospective, observational cohort pilot study was carried out at eleven neurosurgical units, via NANSIG and BNTRC collaboratives.

Results: 192 cases were included – 167 TSA (87%), 25 EEA (13%). The most common (MC) pathologies included: pituitary adenomas (n = 150/192), craniopharyngiomas (n = 7/192) and meningiomas (n = 4/192). The MC skull base repair techniques used were tissue glues (n = 135/192, MC Tisseel®), grafts (n = 94/192, MC fat or Spongostan™) and vascularised flap (52/192, MC nasoseptal). These repairs were most frequently supported by nasal packs (n = 127/192) and lumbar drains (n = 23/197). Biochemically confirmed CSF rhinorrhoea occurred in 10/167 (6%) TSA and 4/25 (16%) EEA. 5 cases required operative management for CSF rhinorrhoea (CSF diversion or direct repair). Qualitative feedback was largely positive (e.g., user-friendly data collection), demonstrating acceptability.

Conclusions: Our pilot experience highlights the acceptability and feasibility of CRANIAL. There is clear precedent for multicentre dissemination of this project, in order to establish a benchmark of contemporary skull base neurosurgery practice.