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A review of clinical and surgical outcomes of endoscopic endonasal skull base surgery in a Tertiary Center in Sarawak

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Summary

Background: Endoscopic endonasal approach (EEA) for skull base tumor has been extensively developed in recent years.

Objectives: To review the demographic data, indications, clinical presentations and surgical outcomes of endoscopic endonasal skull base surgeries performed.

Methods: A retrospective analysis on all patients who had undergone endoscopic endonasal skull base surgery at the Skull Base Unit (ENT & Neurosurgery) from December 2013 to December 2015.

Results: A total 34 cases were operated on during the study period. Female patients account for 44% of patients while 56% were male patients, with ages ranging from 8 to 77 years, with the mean age of 51.88 years. Majority of the cases were pituitary tumors (41%), followed by sinonasal tumors (15%), meningioma (12%), clival tumor (8%), cerebrospinal fluid (CSF) leak repair (8%) and frontal mucocoele (6%). Transsellar approach was the commonest approach (41%) followed by the transclival, transplanum, transfrontal approaches. In about 80% of cases, CSF leak was encountered intraoperatively and was successfully repaired endoscopically with the Hadad-Bassagasteguy flap and with the insertion of a lumbar drain. Only one case (3%) of CSF leak was noted postoperatively which was then successful repaired endoscopically with a nasoseptal flap. Systemic complications and intracranial infections were seen in 3 cases (8%) and were managed accordingly. No cases of epitaxis requiring surgical intervention were noted post operatively.

Conclusions: Skull base surgery via EEA is an expanding field requiring a specialized set of skills which if acquired can be a mainstay of treatment for skull base tumors.

Key words: endoscopic surgery, endonasal approach, skull base tumor.

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Introduction

Surgeries for skull base tumors have undergone numerous improvements and advancements in recent years. It has evolved, like other specialties, along the path of minimally invasive surgery to include endoscopic endonasal approaches (EEA). The endoscopic approach offers a wider working angle and an enhanced visualization of the surgical field. The development in this approach requires the combined efforts of the otolaryngologist- head and neck surgeon and the neurosurgeon. This technique while initially being confined to the sella, has been expanded to include more complex lesions extending from the crista galli to the odontoid. The efficacy and outcome of endoscopic skull base surgeries has been documented in several studies. In this study, we review our experience in endoscopic endonasal skull base surgeries and its outcome.

Methods

Clinical data of patients who had undergone endoscopic endonasal skull base surgery in Sarawak General Hospital from December 2013 to December 2015 were retrospectively reviewed. Case notes and clinic cards were reviewed for the demographic data, clinical presentations, surgical approaches, complications and the outcome of cases during the study period.