TITLE: Predicting the Limits of the Endoscopic Endonasal Approach in Children: a Radiographic Anatomic Study

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RESEARCH PROJECT DESCRIPTION

BACKGROUND AND SIGNIFICANCE: Surgical approaches to the lower skull base and upper cervical spine (craniocervical junction or CVJ) have traditionally been through the oropharynx (transoral) or through the facial bones (transfacial). Advances in endoscopic techniques have allowed minimally invasive approaches to the CVJ through the nasopharynx (endonasal approach). Our group has previously described the naso-axial line (NaxL) as a predictor of the inferior limit of the endoscopic endonasal approach (EEA) to the CVJ in anatomic dissections of adult cadaver heads and proposed. These dissections are not possible in children due to lack of availability of specimens. These studies are necessary to assess the applicability of the EEA in children.

SPECIFIC AIMS: To determine the limits of endoscopic endonasal approach to the CVJ in children using radiographic studies.

METHODS AND MATERIALS AND DATA ANALYSIS: Cranial scans (CT or MRI) of patients < 18 y.o. will be reviewed and grouped according to age groups. Anatomic features of the nasopharynx and craniocervical junction that affect the endoscopic endonasal approach will be examined and measured. The NaxL will be plotted and inferior limit of the EEA will be predicted.

ROLE OF MEDICAL STUDENT – The student will be involved in data collection from radiographic studies and analysis. Opportunities to participate in the publication of results will also be available. This research is based out of the Division of Pediatric Neurosurgery, University of Florida HSC – Jacksonville and students should be willing to conduct a portion of the research in Jacksonville.

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RELEVANT PUBLICATIONS