Utility of sphenoid ostium in relation to posterior wall of maxillary sinus in CT scan as a landmark for endoscopic surgical position: An experience at KAMC in Riyadh

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Introduction: Functional endoscopic sinus surgery (FESS) is most commonly performed procedure for inflammatory and infectious sinus diseases including those of sphenoid. A rough guide to enter sphenoid ostium is that the face of the sphenoid is approximately 7 cm from the nasal spine at a 30° angle from the horizontal and the superior turbinate aids in the confirmation of the sphenoid position in difficult cases.

Aim: This study was conducted to find out the easiest fixed bony landmark for localizing the sphenoid sinus ostium for FESS and pituitary surgery so as to avoid injury to the internal carotid artery and the optic nerve which are the anatomically close to sphenoid sinus and are at risk during these surgical procedures.

Methods: It was a retrospective study in which computerized tomographic (CT) scan axial cut of sinuses from 166 patients were reviewed to determine average distance between posterior maxillary wall (PMW) and the front of sphenoid (FOS) in both right and left sides.

Results: Mean age of the patients was 41.18±14.75 (95% CI=38.92–43.44) years. Males (n=88, 53.01%) and females (n=78, 46.99%) were almost equally participated in the study. The average anterior-posterior distance from the PMW to the FOS was on the right side 7.1 mm and on the left side 7.9 mm, the average in both right and left respectively was 7.5 mm in the CT scans.

Conclusions: The posterior maxillary sinus wall may act as a concrete and unmistakable bony landmark on CT scan to localize the face of sphenoid sinus for the sinus surgeons performing FESS and pituitary surgery.

Biography
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