Assessment of sphenoid sinus related anatomic variations with computed tomography

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Frequent and broad application of endoscopic sinus surgery (ESS) in parallel with experience makes it imperative to know the anatomy and the existing pathology very well before surgery. This study examines the association between anomalies in the sphenoid sinus area in paranasal sinuses computed tomography (PNS-CT) and pathological findings and determines variations of sphenoid sinus. A total of 200 cases (100 women, 100 men), who had PNS-CT in the emergency and radiology polyclinics within the period of one year were included in this study. Bone tissue anomalies and soft tissue pathologies were assessed in the CT. Pterygoid process was found in 36.75% of our cases, anterior clinoid pneumatization was found in 21.25%; vidian canal in 34.25%, foramen rotundum in 17.5% and ICA in 12.75% had protrusion into the sphenoid sinus; 8.25% were found to have onodi cell, 11.25% were found to have multiple septation, 16.75% were found to have mucosal thickening and 2.5% were found to have retention cyst. The importance of PNS-CT in terms of determining anatomic variations before ESC and predicting possible complications during surgery has been emphasized once more. In our study, as sphenoid sinus pneumatization increased, the projection of neighboring vein and nerve structures into the sinus was found to increase as well.

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