

Pneumatization Patterns of the Sphenoid Sinus and its Clinical Application

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Abstract—INTRODUCTION: *Pneumatization of the sphenoid sinus is highly variable and it depends on the position of the sinus in relation to the sella turcica. The pattern of pneumatization of sphenoid sinus significantly affects safe access to the sella. Pneumatized sphenoid sinus may distort the anatomical configuration so if unaware, accidental injury can occur during invasive surgical technique.*

MATERIAL AND METHOD: *This cross sectional observational was conducted by Postgraduate Department of Anatomy in collaboration with Department of Radiodiagnosis and Imaging, Government Medical College, Srinagar. This study was done on CT scan of 200 cases (120 males and 80 females). Since the aim of our study was to evaluate normal variation in pneumatization of sphenoid sinus, cases found to harbor pathology or disease enough to distort the regional anatomy were excluded from the study. Extent of sphenoid pneumatization in relation to pituitary fossa was studied in sagittal plane and categorized as sellar, presellar and conchal.*

RESULTS: *In our study of 200 cases, sellar type of sphenoid sinus pneumatization was majority accounting 180 (90%) while 18 (9%) were presellar and 2 (1%) were of chonchal type.*

CONCLUSION: *The study was performed to demonstrate surgically dangerous variations of sphenoid sinus pneumatization for the safe removal of the intrasphenoid and pituitary lesions, with the goal of preventing complications and achieving the best possible results.*

KEYWORDS: *Pneumatization, sphenoid sinus, CT scan.*