



## ▼ POST GRADUATES ABSTRACTS

### PG - 51 : STUDY OF ANATOMICAL VARIATIONS IN CT OF NOSE AND PARA NASAL SINUS WHICH PREDISPOSE TO SINONASAL DISEASE

Naveen.N, Final year postgraduate,  
B.R.Nagaraj, Professor & Head, Department of Radiodiagnosis  
P. Karthikeyan, Professor & Head, Department of ENT,  
*Department of Radiodiagnosis,*

Mahatma Gandhi Medical College & Research Institute, SBV, Pondicherry

**Introduction:** Anatomical variations of nose and paranasal sinuses is important in patients who are undergoing CT for various rhinological reasons. CT PNS provides us excellent anatomical soft tissue and bony details. Surgical complications like damage to vital structures could be reduced and helps to determine the predisposing variants to the diseases.

**Aims and Objective:** To study the prevalence of anatomical variations in computed tomography of nose and paranasal sinuses in patients with symptoms of sinonasal diseases. To study the anatomical variations that are present and their association with sinonasal disease.

**Materials and methods:** This prospective observational study was conducted in Department of Radiodiagnosis, MGMC &RI, Pondicherry over a period of two years from December 2015 to September 2017 in 100 patients with complaints of sinonasal diseases, who needed further CT evaluation was included in this study. All patients were subjected to CT (GE 660 optima 128 slice CT machine) followed by reconstruction done using the same machine.

**Results:** Out of the 100-sample size, 58 were male and 42 females. The variants noted were nasal septal deviation in

68%, 50% had agger nasi cells, 45% had concha bullosa, onodi cells and haller cells were noted in 21% of patients, large ethmoid bullae was seen in 13% of patients, frontal sinus hypoplasia in 16% and hyperplasia in 4%, maxillary sinus hypoplasia was noted in 5% and hyperplasia in 4%, superior turbinate pneumatization was noted in 5%, paradoxical middle turbinate was noted in 14%, pneumatized crista galli was seen in 1%, pneumatized uncinata process was seen in 5% patients, pneumatization of pterygoid process in 3% and anterior clinoid process in 5%. Out of these 100 clinically significant patients with anatomical variants, the most common pathology seen is sinusitis which was noted in 66% of patients and the commonly involved sinus is maxillary sinus.

**Conclusion:** Based on the results and methodology employed, we have concluded that: Deviation of nasal septum is the most common anatomical variation seen in clinically significant patients with nose and PNS pathology and few uncommon variations were also seen which are paradoxical middle turbinates, pneumatization of crista galli, uncinata process pneumatization, superior turbinate pneumatization and pneumatized pterygoid and anterior clinoid process. Sinusitis is the most common pathology noted in patients with anatomical variants and maxillary sinus is the most common sinus which is involved predominantly.