

Introduction

Paranasal sinus CT scan is crucial before functional endoscopic sinus surgery (FESS) to assist the surgeon in pre operative planning. We aim to describe the results of CT scan in order to evaluate the anatomical variations of sinus and paranasal structures and the extent of disease for the management of chronic rhinosinusitis with nasal polyps (CRSwNP).

Objective

We aim to describe the results of CT scan in order to evaluate the anatomical variations of sinus and paranasal structures and the extent of disease for the management of chronic rhinosinusitis with nasal polyps (CRSwNP).

Methods and materials

A retrospective study including 280 patients with CRSwNP who underwent FESS during the period from January 2002 to December 2021

Results

The mean age: 41,44 years [13-80]

Sex ratio : 1,11 .

The main complaints : nasal obstruction (100%) and anosmia (74,9%).

The average score of Lund Mackay classification: 19,85 [7-24]

The most common sinus involved : the anterior ethmoid sinus (100%) ; the posterior ethmoid (96,8%), maxillary sinus (97,5%), sphenoid sinus (87,7%) and frontal sinus (85,4%) (**figure 1**)

The most common anatomic variation: the protrusion of the carotid canal in the sphenoid sinus (15,7%) (**figure 2**), ethmoid roof asymmetry (15%), intrasphenoidal protrusion of the optic nerve (8,9%) (**figure 3**) and lamina papyracea dehiscence (5,7%).

Associated pathologies revealed by the CT scan : nasal septal deviation (32,5%), ethmoidal and frontal osteoma (5%), concha bullosa (6,9%), Killian's polyp (3,2%), mucocele (1,4%) and inverted papilloma (1,1%).

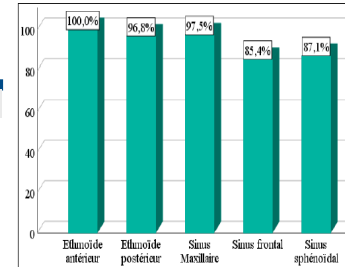


Figure 1: the percentage of sinus involved in sinonasal polyposis

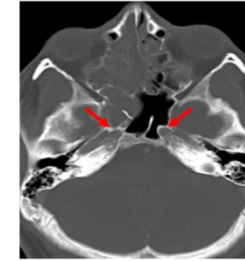


Figure 2: protrusion of the carotid canal in the sphenoid sinus

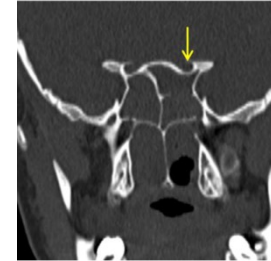


Figure 3: Intrasphenoidal protrusion of the optic nerve

Conclusion

CT scan has a crucial role in the diagnosis of anatomical variants in order to help surgeon in making decision about surgical approach : FESS ? mini invasive FESS ? polypectomy ?

References

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- 2) Akpınar M, Mahmutoglu AS, Uçak I, Coskun BU. Anatomic variations in paranasal sinuses of patients with sinonasal polyposis: radiological evaluation. J Craniofac Surg. 2016;27(5):1336-9.