BACKGROUND

The anterior cranial fossa floor is formed by three bones - frontal, ethmoid and sphenoid. Knowing the different anatomical variations, in particular, from the ethmoidal portion of the anterior fossa, is of the utmost importance for performing a safe Functional Endoscopic Sinus Surgery (FESS). The pneumatized Crista Galli \(^{1}\) and specially the different kind of variations of the lamina cribrosa, the intracranial violation risk is higher in this area during endoscopic surgery.

**RESULTS**

Keros type II was the most common finding in the reviewed CTs (approximately 48%). Keros type I represent 41% and Keros type III the last 11%. The maximum olfactory fossa depth was 8mm. The length of the middle turbinate was negatively associated with the Keros type. The distance between the ethmoid roof and the nasal floor was positively correlated with the olfactory fossa depth. The cribriform process was pneumatized in approximately 7% of the patients.

**DISCUSSION**

In 1929 Dr. Harris Peyton Mosher, one of the pioneers in otolaryngology endoscopy, regarded his own surgery of intranasal ethmoidectomy as the easiest procedure. When doing this "closed" interventions, without direct visualisation of the bony reference points, become of the uttermost importance the perfect knowledge of the structural other constant structures, and our results are in accordance with them.

When analysing statistically the images obtained of our particular group of CTs several conclusions arise supported by the otolaryngology community in general: Concordantly with other references, we found that type II Keros is the most frequent observation. Greater depths are constantly associated with greater risk of intracranial penetration when performing endoscopic surgery, so the ENT surgeon must know the kind of relationship between the cribriform region and medial ethmoid roof. It’s also important to correctly identify the aeration of the cribriform process, from left to right - bilateral Keros I, Keros II, and Keros III.

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**CONCLUSION**

As mentioned previously, imaging got a very important role not only in diagnosis, but also in the FESS surgical planning, integrating in this modality the CTs native images with the endoscopy, allowing the tridimensional navigation of the nasal cavity and the PNS. When doing this, "closed" interventions, without direct visualisation of the bony reference points, become of the uttermost importance the perfect knowledge of the structural variations of the PNS, thereby avoiding accidents with potentially serious consequences.

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**REFERENCES**

1. Keros classification used in this work. A: Type 1 (lateral cribiform: width of 1-3 mm, the cribiform plate and the ethmoid cell roof are practically parallel to each other). B: Type 2 (lateral cribiform: 4-6 mm, cribiform plate is much closer to the nasal cavity, as compared with the ethmoid roof. C: Type 3 (lateral cribiform: of 6-18 mm, ethmoid cell roof is located much above the plate).

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