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Correlaton Between the Endoscopic, Radiological and Operative Findings in Sino-nasal Polyposis

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Introduction

The history of nasal polyps goes back over 4000 years to Ancient Egypt ***(Brain et al., 1997).*** According to ***EPOS :*** **CRS (with or without NP)** it is defined as presence of two or more symptoms one of which should be nasal blockage/obstruction/ congestion or nasal discharge (anterior/posterior nasal drip), and maybe facial pain/pressure, and may be reduction or loss of smell for a period ≥12 weeks. Allergic symptoms (i.e. sneezing, watery rhinorrhea, nasal itching, and itchy watery eyes) are to be considered. CRS with NP (CRSwNP) is defined as above with bilateral, endoscopically visualised polyps in middle meatus. CRS without NP (CRSsNP) is defined as above with no visible polyps in middle meatus, if necessary following decongestant ***(Chan et al., 2006) .***

Materials and Methods

Thirty Patients with sinonasal polyposis not responding to a full course of medical treatment**.**

Inclusion criteria

1. CRS with Sinonasal polyposis.
2. Allergic fungal sinusitis.

Exclusion criteria

1. Simple chronic sinusitis (without NP).
2. Antrochoanal polyp.
3. Previous FESS.
4. Complicated sinusitis.

All thirty Patients underwent:

1-Endoscopic evaluation using grading of polyp system proposed by Meltzer (*Meltzer et al., 2006).*

Table 1: Grading of polyps system proposed by *(Meltzer et al., 2006).*

0	**Fig**. **1**: Right nasal cavity with a small polyp extending from the middle meatus (Meltzer 1)
1	**Fig**. **1**: Right nasal cavity with a small polyp extending from the middle meatus (Meltzer 1)
2	**Fig**. **1**: Right nasal cavity with a small polyp extending from the middle meatus (Meltzer 1)
3	**Fig**. **1**: Right nasal cavity with a small polyp extending from the middle meatus (Meltzer 1)
4	**Fig**. **1**: Right nasal cavity with a small polyp extending from the middle meatus (Meltzer 1)

Fig. **1**: Right nasal cavity with a small polyp extending from the middle meatus (Meltzer 1)

2. *Radiological evaluation using Lund- Mackay scoring system Table2*

Sinus	Left	Right
Maxillary (0,1,2)	(0,1,2)	(0,1,2)
Anterior ethmoid (0,1,2)	(0,1,2)	(0,1,2)
Posterior ethmoid (0,1,2)	(0,1,2)	(0,1,2)
Sphenoid (0,1,2)	(0,1,2)	(0,1,2)
Frontal (0,1,2)	(0,1,2)	(0,1,2)
Osteomeatal complex (0 or 2)	(0 or 2)	(0 or 2)
Total (0-24)	(0-12)	(0-12)

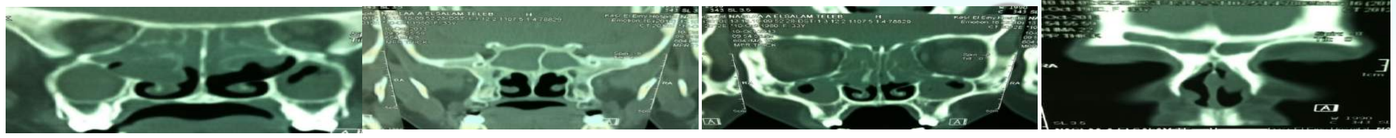


Fig.2: CT Nose, Paranasal Sinuses, coronal cut, bone window of sinonasal polyposis. Lund- Mackay score (22).

3. Functional Endoscopic Sinus Surgery (FESS):

All patients underwent **Functional Endoscopic sinus surgery.**

And we correlate in this thesis from 2 points:

A-Endoscopic assessment using Meltzer staging system during operation.

B-Specific correlation with finding of each sinus alone (polyp, fungal mud, mucous and normal).

3: Endoscopic view of right nasal cavity with a polyp extending from the middle meatus (Meltzer 2) but, during operative examination, polyps from sphenoethmoidal recess found (Meltzer 3).

Results

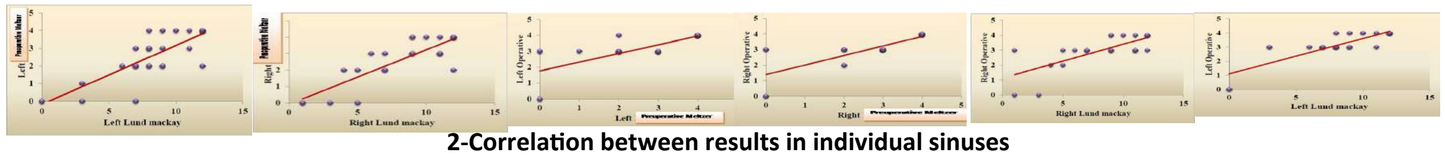
A-Demographic data:

There were 14 males (46.7%) and 16 females (53.3%) ranging in age between 14 and 51 years with a mean age of 29.3±9.8 years.

B-Correlation between results:

1-General correlation:

There was a highly significant correlation between the CT and the preoperative endoscopic findings with the operative findings.Also, there was a highly significant correlation between the CT findings and the pre operative endoscopic findings.



2-Correlation between results in individual sinuses

The most common pathology found within the maxillary sinus was the polyps (45%), followed by the discharge (25%), fungal mud (15%) and 15% was found to have a normal sinus.

Table 4: Correlation between CT staging score and operative findings in maxillary sinus.

CT	FESS				
Lund-Mackay score	Normal	Discharge	Polyps	Fungal mud	Total
0	15%	0%	0%	0%	15%
1	0%	10%	10%	5%	25%
2	0%	15%	35%	10%	60%
Total	15%	25%	45%	15%	100%

The most common pathology found within **the anterior ethmoid sinus** was the polyps (50%), followed by the fungal mud (30%), (5%) of the cases had discharge and 15% was found to have a normal sinus.

The most common pathology found within **the posterior ethmoid sinus** was the polyps (65%), fungal mud (20%) then (15%) of was found to have a normal sinus. **The frontal sinus** was found normal in (40%), with (30%) of the cases showed polyps, 15% showed discharge followed by 15% fungal mud. **The sphenoid sinus** was found normal in 35%, with 30% of the cases contained polyps, 15% showed discharge followed by fungal mud in 20%.

Conclusion

There was a highly significant correlation between the CT and the preoperative endoscopic findings with the operative findings.Also, there was a highly significant correlation between the CT findings and the pre operative endoscopic findings. However, the degree of correlation between the preoperative endoscopic and operative findings was slightly higher than that between the CT findings and the operative findings. In this study, it was found that no single procedure can be sufficient in accurately diagnosing NP, and both the preoperative CT and the preoperative endoscopic examination are complementary to each other.