IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 18, Issue 9 Ser.9 (September. 2019), PP 38-42
www.iosrjournals.org

"Role of Diagnostic Nasal Endoscopy in Evaluation of Patients with Bilateral CSOM in Patients Attending ENT OPD GGH Kakinada"

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Abstract

Background

Chronic suppurative otitis media (CSOM) is a chronic inflammatoryprocess of the muco-periosteal lining of the middle ear cleft and often occurs as a sequel of untreated acute otitis media.Chronic Suppurative Otitis Media is a disease caused by various factors, But main etiological factor causing chronic ear disease lies in nose and the nasopharynx[(2,3)].World Health Organization (WHO) has estimated the global burden of illness from CSOM involves 65–330 million individuals with draining ears, 60% of whom (39–200 million) suffer from significant hearing impairment.It is one the commonest causes ofconductive deafness[(5)].The present study is an attempt to identify the abnormalities in nose and nasopharynx through diagnostic nasal endoscopy in cases of bilateral CSOM.

Materials And Methods

The present cross sectional study " Role of Diagnostic Nasal Endoscopy in Evaluation of Patients with Bilateral CSOM in patients attending ENT OPD ggh, Kakinada was conducted in department of Otorhinolaryngology & Head & NeckSurgery, Rangaraya Medical College, KAKINADA between November 2016 to November 2017. The study was approved by the ethics committee of the institution.

Results

In our study of 100 cases of CSOM, on diagnostic endoscopy we found deviated nasal septum in 70% cases, Eustachian tube abnormality in 68% cases, medialized uncinate in 36% cases, enlarged middle turbinate in 34% cases, large ethmoidal bulla in 30% cases% cases. In our study, Out of the 100 patients 58 were of tubotympanic type and 42 were of atticoantral type. Out of the 100 patients 56 were males and 44 were females:Out of the 58 patients of tubotympanic type in 50 patients(86.2%) abnormality was noted and in 8 patients no abnormality was noted. Out of the 42 patients of atticoantral type in 28 patients (66.6%) abnormality was noted and in 14 patients no abnormality was noted.

Conclusion

From our study of 100 cases of bilateral chronic suppurative otitis media, we have drawn following Conclusions: Among CSOM cases age group most commonly affected between 10-60 years is 10-20 years age group.Among CSOM cases sex more commonly affected is MALES.Among CSOM cases more common type is TUBOTYMPANIC TYPE.Most common pathological abnormalities noted on diagnostic nasal endoscopy were DEVIATED NASAL SEPTUM and EUSTACHIAN TUBE DYSFUNCTION and MEDIALIZED UNCINATE PROCESS.Pathological abnormalities on diagnostic nasal endoscopy were more commonTUBOTYMPANIC TYPE of CSOM.Pathological abnormalities like Deviated nasal septum, Eustachian dysfunction Medialized Uncinate process and paradoxical middle turbinate found to be more common in MALES.Pathological abnormality like enlarged middle turbinate, atrophy of turbinates were more common in females.Large ethmoidal bulla was found almost EQUAL number of cases of both sexes.

Keywords: *Deviated nasal septum, Eustachian tube dysfunction, Medialized uncinate process*

Date of Submission: 06-09-2019 Date of Acceptance: 21-09-2019

I. Background

Chronic suppurative otitis media (CSOM) is a chronic inflammatory process of the muco-periosteal lining of the middle ear cleft and often occurs as a sequel of untreated acute otitis media. Chronic Suppurative Otitis Media is a disease caused by various factors, But main etiological factor causing chronic ear disease lies in nose and the nasopharynx(2,3).

World Health Organization (WHO) has estimated the global burden of illness from CSOM involves 65–330 million individuals with draining ears, 60% of whom (39–200 million) suffer from significant hearing impairment. It is one the commonest causes of conductive deafness(5). The present study is an attempt to identify the abnormalities in nose and nasopharynx through diagnostic nasal endoscopy in cases of bilateral CSOM.

II. Aims and Objectives

To evaluate the patients of bilateral Chronic suppurative otitis media by Diagnostic Nasal Endoscopy.To determine the frequency of nasal pathology in causation of bilateral chronic suppurative otitis media.

III. Materials And Methods

Inclusion Criteria

In the study 100 patients attending the ENT Department of Government General Hospital, Rangaraya Medical College, Kakinada between January 2016 and November 2017, withPatients of both sexes between the age group of 10-60 years presenting with bilateral CSOM of both tubotympanic and atticoantraltypes .Patients who gave consent for the above study.havebeen included.

Method of Collection of Data

This is a case series carried out in the Dept. of ENT, Govt. General Hospital, Rangaraya Medical College, Kakinada between January 2016 and November 2017. The study was approved by the ethics committee of the institution.100 patients fulfilling the above criteria were selected for the study.Complete clinical history, thorough ENT examination & Tuning fork tests, microscopic ear examination was done.

IV. Results

In the present study, 100 cases of CSOM were studied during the period from January 2016 to November 2017 at the ENT Department of Rangaraya Medical College, Government General Hospital, Kakinada. This study shows the following observations:

Table 1: Age Distribution

Age group	No. of patients	Percentage
10-20	39	39%
21-30	37	37%
31-40	13	13%
41-50	8	8%
51-60	3	3%

Table 2: Sex Distribution.

Sex	No.of patients	Percentage
Male	56	56 %
Female	44	44 %

Table 3: Type of CSOM

Type	No. of patients	Percentage
Tubotympanic	58	58
Atticoantral	42	42

Table 4: Pathological Findings In DNE

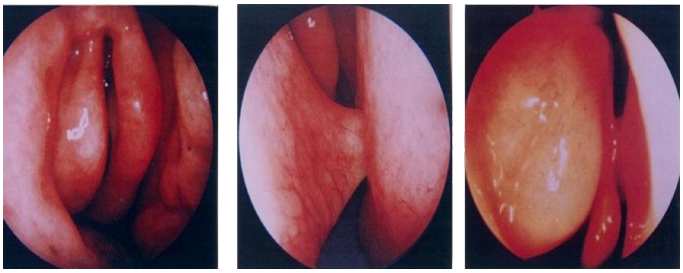
S.NO	PATHOLOGICAL FINDINGS	NO.OF PATIENTS	%
1.	Eustachian tube (ET) Dysfunction	68	68
	a)Edema around the ET orifice	29	29
	Right	13	13
	Left	11	11
	Both	5	5
	b)Mucopurulent discharge over ET orifice	9	9
	Right	3	3
	Left	1	1
	Both	5	5

	c)Atrophy of ET orifice Right Left Both d)Patulous Eustachian tube e)Compression of ET orifice	13 3 3 7 3 14	13 3 3 7 3 14
2.	Deviated nasal septum a)Right side Posterior to middle turbinate Anterior to middle turbinate Spur b)Left side Posterior to middle Turbinate Anterior to middle turbinate Spur	70 33 17 11 5 37 13 14 10	70 33 17 11 5 37 13 14 10
3	Adenoids	14	14
4	Pale boggy inferior turbinate	8	8
5	Inferior turbinate hypertrophy Right side Left side	20 13 7	20 13 7
6	Atrophy of turbinates	4	4
7	Enlarged Middle turbinate a)Right side b)Left side	34 11 23	34 11 23
8	Paradoxical middle turbinate Right side Left side	20 13 7	20 13 7
9	Double or second middle turbinate a)Right side b)Left side	4 1 3	4 1 3
10	Discharge from ostium of maxillary sinus a)Right side b)Left side c)Both	10 3 3 4	10 3 3 4
11	Discharge from sphenoethmoidal recess a)Right side b)Left side	5 3 2	5 3 2
12	Large ethmoidal bulla Right side Left side	30 14 16	30 14 16
13	Bilateral ethmoidal polypi	3	3
14	Large Agger nasi cell	3	3
15	Medialized Uncinate process	36	36

Table 5: Correlation Between Pathological Findings And Type Of CSOM

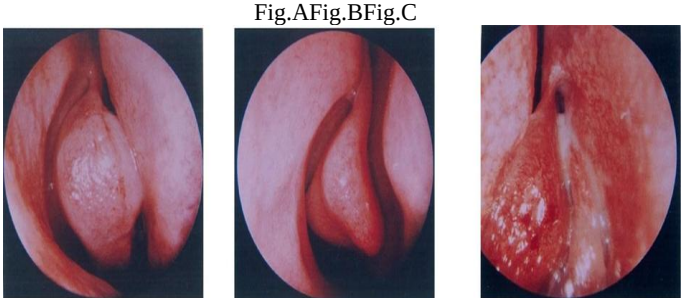
S.NO	PATHOLOGICAL FINDING	TUBOTYMPANIC	ATTICOANTRAL
1.	EUSTACHIANTUBE DYSFUNCTION a)edema around the ET orifice b) discharge over the orifice of ET. c) atrophy of orifice of ET	44 16 5 8	24 13 4 5
	d)patulous ET e)compression of ET orifice	3 12	0 2
2.	Deviated nasal septum	48	22
3.	Adenoids	12	2
4.	Pale boggy inferior turbinate	6	2
5.	Inferior turbinate hypertrophy	14	6
6.	Atrophy of turbinates	3	1
7.	Enlarged middle turbinate	20	14
8.	Paradoxical middle turbinate	13	7
9.	Double or second middle turbinate	4	-
10.	Discharge from ostium of maxillary sinus	7	3
11.	Discharge from sphenoethmoidal recess	4	1
12.	Large ethmoidal bulla	22	8

13.	Bilateral ethmoidal polypi	3	-
14.	Large aggernasi cell	3	-
15.	Medialized Uncinate process	22	14



MEDIALIZEDSEPTAL SPUR LARGE AGGER
UNCINATE NASI CELL

Fig.AFig.BFig.C



ENLARGED PARADOXICAL ETHMOIDAL
MIDDLE MIDDLE POLYP
TURBINATE TURBINATE
Fig.DFig.EFig.F

Fig.A-F Various Anatomical Abnormalities Seen On Diagnostic Nasal Endoscopy

V. Discussion

It is a fact that the diseases of the middle ear cleft of both varieties take its origin from the pathology of the eustachian tube.On the advent of nasal endoscope new horizons have been explored, inaccessible sites have become accessible and accessible sites have become more accessible. Detailed examination of the nasal cavities including the turbinates, meati and openings of various sinuses and the nasopharynx including the openings of the eustachian tube etc. has become possible by means of nasal endoscopy.The major abnormalitydetected was Deviated nasal septum.The second commonest abnormality detected is Eustachian tube dysfunction. Of these edema around the orifice of eustachian tube , mucopurulent discharge over the orifice of eustachian tube , atrophy of the orifice of eustachian tube, patulous eustachian tube and compression of eustachian tube orifice by adenoids weremore common.The third most common abnormality is medialized uncinate.The next commonest are enlarged middle turbinate , large ethmoidal bulla and paradoxical middle turbinate.Other less common abnormalities are pale boggy turbinates, adenoids , discharge at maxillary ostium , discharge at spheno-ethmoidal recess , double middle turbinate, atrophy of turbinates , bilateral ethmoidal polyposis and large agger nasi.

VI. Conclusion

From our study of 100 cases of bilateral chronic suppurative otitis media, we have drawn following Conclusions: Among CSOM cases age group most commonly affected between 10-60 years is 10-20 years age group.Among CSOM cases sex more commonly affected is MALES.Among CSOM cases more common type is TUBOTYMPANIC TYPE.Most common pathological abnormalities noted on diagnostic nasal endoscopy were DEVIATED NASAL SEPTUM and EUSTACHIAN TUBE DYSFUNCTION and MEDIALIZED UNCINATE PROCESS.Pathological abnormalities on diagnostic nasal endoscopy were more common

TUBOTYMPANIC TYPE of CSOM :

Pathological abnormalities like Deviated nasal septum, Eustachian dysfunction Medialized Uncinate process and paradoxical middle turbinate found to be more common in MALES.Pathological abnormality like enlarged middle turbinate, atrophy of turbinates were more common in females.Large ethmoidal bulla was found almost EQUALnumber of cases of both sexes.

On the basis of findings of our current study it can be concluded that a thorough diagnostic nasal endoscopic evaluation of all bilateral Chronic suppurative otitis media patients essential in comprehensive management of disease.

References

[1]. SmythGD. Tympanic reconstruction.Fifteen year report on tympanoplasty.Part II. *J Laryngol Otol*. 1976;90(8):713–741.
[2]. Lindeman P, Holmquist J. Mastoid volume and eustachian tube function in ears with cholesteatoma. Am J Otol1987;8:5 7.
[3]. Poe DS, Gopen Q. Endoscopic diagnosis and surgery of eustachian tube dysfunction. Ch. 12. Middle ear. Ch. 25. Glasscock Shambaugh Surgery ofthe 6th ed.
[4]. Chronic Suppurative Otitis Media burden of illness and management options.World Health Organization Geneva Switzerland 2004.
[5]. Ogisi FO. Impedance screening for Otitis media with effusion in Nigerian children J.L.O. 1988 ; 102:986-88.
[6]. Draf W. *Endoscopy*of *the paranasal sinuses*, New York: Springer- VerlagInc,983.
[7]. Maltz M. New instrument: the sinuscope. *Laryngoscope.* 1925; -35: 805-11.
[8]. Messerklinger W. *Endoscopy* of *the nose*. Baltimore: Urban Et Schwa rzenerg, 1978.
[9]. Kennedy DW. Prognostic factors, outcomes and staging in ethmoid sinus surgery. *Laryngoscope.* 1992; 102: 1-18.
[10]. Stammberger H, Kennedy DW. Paranasal sinuses: anatomic terminology and nomenclature. Annals of Otology, Rhinology, and Laryngology.1995; 1047- 16.

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