

Original Research Article

**TO INTRODUCE A MINIMALLY INVASIVE METHOD TO
ELIMINATE THE SYMPTOMS OF CONTACT POINT
RHINOGENIC CEPHALGIA.**

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Abstract

Background & Methods: The aim of the study is to introduce a minimally invasive method to eliminate the symptoms of contact point rhinogenic cephalgia. CA detailed clinical examination was undertaken in all the patients with emphasis on anterior and posterior rhinoscopy eliciting sinus tenderness along with nasal endoscopy.

Results: Inferior turbinate hypertrophy was seen in (80%) & (80%) patients of whom (60%) & (64%) had unilateral and remaining (20%) & (16%) patients had bilateral findings in RR & PR study respectively. Middle turbinate hypertrophy was seen in (86.66%) & (88%) patients of whom (33.33%) & (28%) patients had unilateral hypertrophy and rest (53.33%) & (60%) patients had bilateral hypertrophy in RR & PR study respectively.

Conclusion: Functional Endoscopic Sinus Surgery and Septoplasty is effective in management of facial pain and headache secondary to contact point, chronic sinusitis and other paranasal disorder and otolaryngologist all over the world are taking a critical look at what this procedure has to offer. Functional Endoscopic Sinus Surgery provides an efficient and safe method for treating sinonasal disease.

Keywords: invasive, rhinogenic & cephalgia.

Study Design: Prospective Retrospective Study.

1. Introduction

For successful performance of functional endoscopic sinus surgery, thorough knowledge of lateral nasal wall, Osteomeatal complex along with pathophysiology and mucociliary system is necessary[1].

The structure of lateral nasal wall and paranasal sinuses falls into two anatomically and physiologically distinct categories - The anterior and posterior ethmoid complexes: with basal lamella of middle turbinate as clear and distinct partition between two complexes[2].

The characteristic of facial pain and pressure, the location, severity, frequency and duration of the pain or pressure, any association with nausea, vomiting or photophobia is important.

The presence or absence of nasal symptom (particularly purulent discharge) and the temporal relationship between headache and nasal symptom are all-important factor that can guide diagnosis and patient management.

It is the most constant and largest cell of the anterior ethmoid complex formed by pneumatization of bulla lamella and appears as a hollow thin walled bony bleb, attached to the lamina papyracea with convexity towards middle meatus[3]. Anteriorly it attaches with medial wall of Agger nasi and uncinat process. Posteriorly it may fuse with ground lamella and middle turbinate. Its superior attachment reaches roof of ethmoid, then it forms posterior wall of frontal recess[4]. This division may be vestigial or completely absent. In this case, there is a direct communication between the frontal recess and a pneumatized space located above and behind the bulla, the sinus lateralis. Incidence of minimal or absent pneumatization of ethmoid bulla was 8%[5].

2. Material and Methods

This study was conducted at Tertiary Health Care Centre at Central India on 80 patients (Retrospective (RR) 30 & Prospective Study (PR) 50). CA detailed clinical examination was undertaken in all the patients with emphasis on anterior and posterior rhinoscopy eliciting sinus tenderness along with nasal endoscopy. On anterior rhinoscopy condition of the nasal mucous membrane. nature quality and quantity of discharge, patency of nasal cavity, position of nasal septum, spur, status of middle and inferior turbinate with regard to hypertrophy, atrophy, paradoxical curvature, or previous surgical resection, the status of the inferior and middle meatus and presence or absence of mucopurulent discharge were recorded.

Inclusion Criteria:

All patients who were clinically and radio logically diagnosed as having facial pain, chronic sinus headache and rhinosinusitis were included. All the patients included in the present study were refractory to appropriate medical line of management for more than 6 months duration. Patients with catarrh or postnasal drip as only symptoms, nosebleeds, rhinitis medicamentosa, benign or malignant tumors, valve collapse olfactory dysfunction without rhinosinusitis, granulomatous, disorders, vestibulitis were occluded from the study.

3. Result

Table 1: Showing main symptoms during the operative evaluation.

| Symptom | | No of cases | Percentage |
|-----------------|-----------------------|-------------|------------|
| Facial pain | RR (Retrospective) | 20 | 66.66 |
| | PR (Prospective) | 55 | 88 |
| Headache | RR | 30 | 100 |
| | PR | 50 | 100 |
| Post Nasal drip | RR | 10 | 33.33 |
| | PR | 16 | 32 |

| | | | |
|-------------------|----|----|-------|
| Nasal discharge | RR | 20 | 66.66 |
| | PR | 40 | 80 |
| Nasal obstruction | RR | 24 | 80 |
| | PR | 40 | 80 |
| sneezing | RR | 20 | 66.66 |
| | PR | 20 | 40 |
| Ear discharge | RR | 08 | 26.66 |
| | PR | 12 | 24 |

The patients were considered to have sinus headache & facial pain when they had nasal congestion, nasal obstruction, and recurrent episodes of nasal secretions, post nasal discharge, facial pain and pressure. The patients having all these symptoms and signs for more than 3 months and all those who were ruled out other causes of headache and treated conservatively for 1 month prior to this study were selected.

Table 2: Anterior Rhinoscopic findings

| Finding | | Total no. of case | % | Unilateral case | % | Bilateral case | % |
|---------------------|----|-------------------|-------|-----------------|-------|----------------|-------|
| DNS | RR | 28 | 93.33 | 24 | 80 | 04 | 13.33 |
| | PR | 50 | 100 | 44 | 88 | 06 | 12 |
| ITH | RR | 24 | 80 | 18 | 60 | 06 | 20 |
| | PR | 40 | 80 | 32 | 64 | 08 | 16 |
| MTH | RR | 26 | 86.66 | 10 | 33.33 | 16 | 53.33 |
| | PR | 40 | 88 | 14 | 28 | 30 | 60 |
| MPD in nasal cavity | RR | 20 | 66.66 | 16 | 53.33 | 04 | 13.33 |
| | PR | 20 | 80 | 30 | 60 | 10 | 20 |
| Spur | RR | 12 | 40 | 10 | 33.33 | 02 | 6.66 |
| | PR | 20 | 40 | 14 | 28 | 06 | 12 |

Inferior turbinate hypertrophy was seen in (80%) & (80%) patients of whom (60%) & (64%) had unilateral and remaining (20%) & (16%) patients had bilateral findings in RR & PR study respectively. Middle turbinate hypertrophy was seen in (86.66%) & (88%) patients of whom (33.33%) & (28%) patients had unilateral hypertrophy and rest (53.33%) & (60%) patients had bilateral hypertrophy in RR & PR study respectively.

Table 3: Surgical technique used in present study

| Surgery | | No of cases | Percentage (%) |
|---|----|--------------------|-----------------------|
| Concha bullosa exteriorization | RR | 12 | 40 |
| | PR | 30 | 60 |
| Anterior ethmoidectomy | RR | 20 | 66.66 |
| | PR | 36 | 72 |
| Post ethmoidectomy /sphenoidectomy | RR | 04 | 13.33 |
| | PR | 04 | 8 |
| Cauterization of ITH | RR | 06 | 20 |
| | PR | 08 | 16 |

After complete pre-operative evaluation Middle turbinate lateralization was done. Functional Endoscopic Sinus Surgery (FESS) was performed using Messerklinger technique. Septoplasty was also done in association with FESS in order to get wide access for nasal endoscope where needed.

4. Discussion

ET al differentiated true concha bullosa from simple pneumatization of middle turbinate[6]. True concha bullosa is extensive pneumatization of middle turbinate in both the lamellar and inferior bulbar portions and in his series in 15.7% cases. In the present study concha bullosa were noted in 14(50%) & 15(75%) patients in RR & PR study respectively. Such a wide discrepancy in the reported prevalence of middle turbinate pneumatization may be due to factors such as inherent difference in studied populations, difference in criteria for pneumatization and the sensitivity of the method used for analysis[7].

Another variation is a paradoxically bent middle turbinate with the convexity of middle turbinate laterally. Depending on the degree of paradoxical curvature narrowing of middle meatus may result. S. K. Kaluskar (1990) encountered paradoxical turbinate in 14% of cases in his study of 100 cases of chronic maxillary sinusitis. Only 1.89% cases in a series of 158 cases of chronic maxillary sinusitis. In our study we encountered. 6(21.43%) & 4(20%) case in RR & PR study respectively of paradoxical middle turbinates[8].

The Uncinate process, which is a bony wall of the medial wall of the ethmoid: infundibulum, may be bent medially to a varying degree. It may come in contact with middle turbinate and produce stenosis of the middle meatus[9].

Goldsmith in 1993 presented eight patients described as having nasal-contact facial pain. 2 were better after medical treatment for rhinusinusitis. 6 had surgery for their contact points. 5 were asymptomatic post-operatively, while 1 patient continued to have occasional headaches at 3 months[10].

5. Conclusion

Functional Endoscopic Sinus Surgery and Septoplasty is effective in management of facial pain and headache secondary to contact point, chronic sinusitis and other paranasal disorder and otolaryngologist all over the world are taking a critical look at what this procedure has to offer. Functional Endoscopic Sinus Surgery provides an efficient and safe method for treating sinonasal disease.

6. References

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