

Contact Headache and Its Management: Our Experience

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Abstract Headache and facial pain is very common and distressing complaint. Due to its multifactorial origin often it remains undiagnosed and inadequately treated. In this study strong relationship between nasal mucosal contact point and reason for unresponsive headache is found and various nasal surgeries are found to be quite helpful in treating these conditions.

Keywords Headache · Facial pain · DNS · Spur ·
Septoplasty · Contact headache

Materials and Methods

This is a retrospective and prospective study which had been carried out in the Department of Otorhinolaryngology and Head and Neck Surgery of BSMCH, Bankura, West Bengal from August, 2010 to April, 2011.

Total no. of cases was 40 [retrospective (RR) 15 and prospective study (PR) 25] with clinical evidence of facial pain, chronic headache and who were unresponsive to routine appropriate medical therapy, were included in this study.

Inclusion Criteria

All patients who were clinically diagnosed as having-

1. Facial pain
2. Chronic headache
3. All the patients who were refractory to appropriate medical line of management for more than 6 months duration were included.

Exclusion Criteria

1. Patients with catarrh
2. Postnasal drip
3. Nosebleeds
4. Rhinitis medicamentosa
5. Benign or malignant tumors
6. Valve collapse, olfactory dysfunction without rhinosinusitis
7. Granulomatous disorders, vestibulitis were excluded from the study
8. Psychogenic headache

Selection Method

All the patients who attended the ENT OPD of BSMCH and fulfilled the inclusion/exclusion criteria were included in the study.

Patient Profile

As per the protocol all patients in this study aged between 10 and 80 years of age irrespective of sex were included.

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The patients underwent complete clinical evaluation and routine screening by X-ray PNS (Water’s view and Caldwell’s view) followed by nasal endoscopy, CT scan PNS (coronal and axial section) as part of preoperative evaluation. Postoperatively the patients were followed-up at fortnightly intervals for the first 3 months followed by monthly check-ups up to 6 months and every half yearly thereafter.

Clinical Findings

Within 40 cases, the age ranged from 10 to 40 years in this study group are 30 patients, 40 to 80 years are 10. Maximum percentage of patients i.e. >50 % were found in the

age group of 21–30 years. Male and female ratio was found to be 1.86:1 (Tables 1, 2, 3, 4, 5).

Discussion

In 1948 Wolf [1] Mcauliffe’s co-author described contact headache as being due to pressure point within nose. He said that referred facial pain may be occurring due to contact between a turbinate and other region of the nasal cavity.

In 1954 Williams [2] described nasal contact headache, he felt it was due to contact between the turbinate and the septum and suggested resection of the turbinate.

Table 1 Showing main symptoms during the preoperative evaluation, n (RR) = 15, n (PR) = 25

Symptom	No of cases	Percentage
Facial pain		
RR	6	40
PR	15	60
Total	21	52.50
Headache		
RR	15	100
PR	25	100
Total	40	100
Nasal obstruction		
RR	4	26.66
PR	7	28
Total	11	27.50
Sneezing		
RR	10	66.66
PR	10	40
Total	20	50

Table 3 Nasal mucosal contact point in patients of facial pain during nasal endoscopy [n (RR) = 15, n (PR) = 25]

Contact point	No. of cases	Percentage
Septum touching middle turbinate		
RR	12	79.98
PR	25	88
Total	37	92.50
Inferior turbinate touching septum		
RR	3	20
PR	2	8
Total	5	12.50
Spur touching lateral wall of nose		
RR	6	40
PR	10	40
Total	16	40
Concha bullosa touching lateral wall or septum		
RR	6	40
PR	10	40
Total	16	40

Table 2 Anterior rhinoscopic findings/diagnostic nasal endoscopy [n (RR) = 15, n (PR) = 25]

Finding	No. of case	%	Unilateral case	%	Bilateral case	%	Total no.	Total %
DNS (unilateral is ‘c’ shaped, bilateral is ‘s’ shaped)								
RR	5	33.33	3	20	2	13.33	17	42.50
PR	12	48	9	36	3	12		
ITH								
RR	2	13.33	2	13.33	0	0	7	17.50
PR	5	20	1	4	4	16		
MTH								
RR	9	60	5	33.33	4	26.66	21	52.50
PR	12	48	7	28	5	20		
Spur								
RR	6	40	5	33.33	1	6.66	16	40
PR	10	40	7	28	3	12		

In 1978 Cottle et al. [3] also attributed a cause of unilateral facial pain to middle turbinate compression.

Morgenstein and Krieger [4] in 1980 described 19 patients with headache which he said was due to the middle turbinate touching the septum. In our study all the cases where the middle turbinate is touching the septum are included.

Gerbe et al. [5] sited 20 patients with recurrent unilateral headache, nasal spur and no sinus disease that had surgery

Table 4 Management: surgical technique used in present study [*n* (RR) = 15, *n* (PR) = 25]

Surgery	No of cases	Percentage
Middle turbinate lateralization		
RR	10	66.66
PR	22	88
Total	32	80
Septoplasty		
RR	6	40
PR	8	32
Total	14	35
Spurectomy		
RR	6	40
PR	10	40
Total	16	40
Concha bullosa reduction		
RR	6	40
PR	10	40
Total	16	40
Cauterization of ITH		
RR	2	13.33
PR	5	20
Total	7	17.50

There are overlapping of surgical techniques in many cases

on their contact point. In our study total 16 (40 %) patients (40 %) cases had the same findings.

Greenfield [6] theorized that trigeminal nerve afferent fibers from nasal mucosa enter into the cortex together with afferent fibers of the cutaneous division of the nerve thus suggesting an explanation for the sensation of the facial pain due to nasal stimulation.

Stammberger and Wolf [7] postulated that the role of endoscopist in association with study of CT scan would be to locate the possible trigger area in sinonasal area which initiates the pain reflex.

Zinreich et al. [8] found that coronal CT scan of paranasal sinuses significantly improves surgeon's ability to diagnose disease in the anterior ethmoid region.

Kamel [9] noted concha bullosa in 5.69 % in diseased sinus and 4.76 % in disease free sinus. Zinreich et al. [8] encountered concha bullosa in 34 % of cases on CT imaging. In this study concha bullosa found 40 and 40 % cases in RR and PR study respectively.

Morgenstein and Krieger [4] described 19 patients with headache which he said was due to the middle turbinate touching the septum. Blaugrund [10] reported a series of 09 patients with impacted middle turbinate. Clerico and Fieldman [11] presented a series of 3 patients in 1996 with common migraine whose superior turbinate touched the septum. Chow [12] described 18 patients with a rhinogenic headache in whom a variety of causes including 12 patients with septal spurs, 3 had retention cysts, 3 with mucosal contact points and 1 patient had a dehiscence infraorbital nerve. Abu Bakra and Jones [13] studied the Prevalence of nasal mucosal contact points in patients with facial pain compared with patients without facial pain, of the 18 patients with facial pain 9 had a spur contacting the lateral nasal wall and 9 had a middle turbinate contacting the septum.

Table 5 Result analysis: showing post-operative subjective improvement

Symptoms	Total no.	Completely satisfied		Improved		No change		Total improvement %	Final results (RR + PR)
		No	%	No	%	No	%		
Headache									
RR	15	10	66.66	3	20	2	13.33	86.66	89.33
PR	25	18	72	5	20	2	8	92	
Facial pain									
RR	6	4	66.66	2	33.33	0	0	99.99	96.66
PR	15	12	80	2	13.33	1	6.66	93.33	
Nasal obstruction									
RR	4	2	50	1	25	1	25	75	82.50
PR	7	4	57.14	2	28.57	1	14.27	90	

Headache total improvement RR—86.66 %, PR—92 %. Final improvement—89.33 %. Facial pain total improvement RR—99.99 %, PR—93.33 %. Final improvement—96.66 %. Nasal obstruction total improvement RR—75 %, PR—90 %. Final improvement—82.50 %

Nasal mucosal contact points detected in this study by nasal endoscopy were 100 % cases in this study. Inferior turbinate touching to septum in 3 (20 %) and 2 (8 %) cases in RR and PR study respectively. Spur touching to lateral wall of nose 6 (40 %) and 10 (40 %) cases in RR and PR study respectively.

Morgenstein and Krieger [4] in 1980 described 19 patients with headache which he said was due to the middle turbinate touching the septum. They underwent middle turbinate resection and 15 were better after surgery, two had partial relief and two were no better.

In 1984, Gerbe et al. [14] sited 20 patients with recurrent unilateral headaches, nasal spurs and no sinus disease that had surgery no their contact point. 19 were followed up post-operatively. 13 had complete relief, while the remaining six had only partial relief after a medium follow-up period of 18 months. Hoover [15] reported in 1987 on a mixed group of 80 patients with headache due to various rhinological causes and 39 attributed to allergy induced headaches, with 51 percent having an occipital component which is characteristic of tension-type headache. The headache of 33 patients was attributed to an impacted septum or turbinate and 23 of these had surgery. All patients had relief post surgery but again follow-up was limited, in 1989. Goldsmith et al. [16] in 1993 presented eight patients described as having nasal-contact facial pain. Two were better after medical treatment for rhinusinusitis. Six had surgery for their contact points. Five were asymptomatic post-operatively, while one patient continued to have occasional headaches at 3 months.

Parsons et al. [17] retrospectively described 34 patients who had headache and who had contact points removed and found that 3 was 91 % decrease in intensity and 84 % decrease in frequency. In this study facial pain relieved in 96.66 % and headache 89.33 %. In 2002 Kunachak et al. [18] presented a study of 55 patients who had contact point between the middle turbinate and the nasal septum. They treated the patients by fracturing the middle turbinate lateral wall using a small metal tongue depressor under 10 % Lidocaine HCL topical anesthesia. 87 % of patients had complete resolution after one treatment and all had resolution after 2 months.

In our study headache improved in 89.33 %, facial pain improved in 96.66 %, nasal obstruction improved in 82.50 % cases.

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