ORIGINAL ARTICLE

Role of Septoplasty/SMR in Resolution of Concurrent Chronic Maxillary Sinusitis

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ABSTRACT

Fifty patients are included in the study, to analyze the role of septoplasty/SMR in resolution of concurrent chronic maxillary sinusitis. Patients having DNS with concurrent chronic maxillary sinusitis as evident from x-rays par nasal sinuses were selected randomly from outpatient department of ENT, Services Hospital/Gulab Devi hospital Lahore which were earlier treated with antibiotics, analgesics and decongestants. The mean age of the patients was 36.78 years which was (68%) male patients and (32%) female patients. 30 (60%) patients treated with Submucopericondrial resection and 20 (40%) patients treated with septoplasty. The results were compiled by the statistical method and will be given in statistical terms of significant and non-significant by applying different parametric and non-parametric tests like chi square, linear regression and Pearson's correlation. Significance will be taken if the p value is < 0.5. Septoplasty/SMR done on patients who had chronic maxillary sinusitis with deflected nasal septum and were not responding to medical treatment, gave satisfactory results.

Keywords: SMR, septoplasty, DNS, maxillary sinusitis

INTRODUCTION

The history clarifies the problems encountered in treating septal deviations. During l9fh century surgeons started tackling these problems by a variety of techniques these techniques are only of historic interest that major breakthrough in surgical therapy occurred around the turn of the 19th century with the development of the sub mucous resection operation. Saddling of the nose dorsum was major of SMR which was due to damaged or partly removed the upper strut of septal cartilage. The SMR operation was widely adopted, throughout the world.

Deviation of nasal septum posteriorly can be treated by sub mucous resection, problem occurs due to using these techniques in the anterior part of the septum .The operation was followed by a supratip depression and columellar retraction[1].To minimize these complications, most surgeons, adopted the conservative technique, even retention of caudal struts does not ensure complete immunity[2].

Postoperative examination of the sinonasal cavity provides prognostic information regarding the potential for future episodes of sinusitis and the need for revision surgery[3].To examine the role of septal deviation in adults in the pathogenesis of chronic sinusitis, this allows a better understanding of the contributing factor to this pathology and would improve results in their management[4]. Many investigations on bacteriology of chronic sinusitis have been reported but here is still discussion on the physiological for a of the nose and par nasal sinuses[5]. Septoplasty is helpful in relieving nasal obstruction, facial pain, and inflammation in chronic maxillary sinusitis patients[6].

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MATERIAL AND METHODS

This Prospective observational study was conducted at Department of ENT Gulab Devi Hospital/ Al-Aleem Medical College and Services Hospital /SIMS Lahore. The duration of study was one year i.e. 2017-2018. All the patients included in the study were optimally medically treated with antibiotics, decongestants and analgesics for chronic maxillary sinusitis. Those Patients who had DNS on clinical examination and opacity of one or both maxillary sinuses on X-rays para nasal sinuses were included. Patients associated with malignancy or granulomatous lesion of nose and par nasal sinuses, having any previous nasal or sinuses surgery, diabetes mellitus and other immunocompromised conditions, HIV infection and/or taking anti tuberculosis treatment.

At the end of the study, the results of septoplasty/SMR in terms of resolution of concurrent chronic maxillary sinusitis were evaluated. The evaluations were made taking history and clinical examination and x-rays par nasal sinuses. The subjective and objective parameters like sore throat, postnasal discharge pharyngeal congestion and granular appearance of posterior pharyngeal wall were noted. Post-operative nasal examination done at the end of l week, 2 weeks, 2 months and 6 months x-rays PNS at 45° done. All the collected information was noted on the prescribed perform.

RESULTS

Results were compiled at the end of study were as follows. Nasal obstruction, nasal discharge, sore throat, post nasal discharge, congestion of throat, granular appearance of posterior pharyngeal wall, discharge post pharyngeal wall, X ray PNS for haziness at 45 degree. The postoperative (PO) period was divided as, PO1 means at interval of l week, PO2 means at the interval of 2 weeks, PO3 means at the interval of 2 months and PO4 means at the interval of 6 months.

Nasal obstruction

	frequency	%age	Valid%	Cumulative%
Mild	16	32	32	32
Moderate	29	58	58	90
Severe	5	10	10	100
total	50	100	100	

P04 nasal obstruction

	frequency	%age	Valid%	Cumulative%
normal	30	60	60	60
Mild	11	22	22	82
Moderate	7	14	14	96
Severe	2	4	4	100
total	50	100	100	

Nasal discharge

	frequency	%age	Valid%	Cumulative%
normal	35	70	70	70
Mild	15	30	30	100
total	50	100	100	

P04 nasal discharge

	frequency	%age	Valid%	Cumulative%
normal	36	72	72	72
Mild	9	18	18	90
Moderate	5	10	10	100
total	50	100	100	

Sore throat

	frequency	%age	Valid%	Cumulative%
normal	40	80	80	80
Mild	8	16	16	96
Moderate	2	4	4	100
Total	50	100	100	

P04 sore throat

	frequency	%age	Valid%	Cumulative%
normal	32	64	64	64
Mild	14	28	28	92
Moderate	3	6	6	98
Severe	1	2	2	100
total	50	100	100	

Post nasal discharge

	frequency	%age	Valid%	Cumulative%
normal	7	14	14	14
Mild	38	76	76	90
Moderate	5	10	10	100
total	50	100	100	

P04 post nasal discharge

	frequency	%age	Valid%	Cumulative%
normal	34	68	68	68
Mild	11	22	22	90
Moderate	4	8	8	98
Severe	1	2	2	100
total	50	100	100	

Congestion of throat

	frequency	%age	Valid%	Cumulative%
normal	3	6	6	6
Mild	39	78	78	84
Moderate	8	16	16	100
total	50	100	100	

P04 congestion of throat

	frequency	%age	Valid%	Cumulative%
Normal	1	2	2	2
Mild	23	46	46	48
Moderate	22	44	44	92
Severe	4	8	8	100
total	50	100	100	

GR APP OF POST PH WALL

	frequency	%age	Valid%	Cumulative%
Normal	1	2	2	62
Mild	23	46	48	94
Moderate	22	44	44	98
Severe	4	8	8	100
total	50	100	100	

P04 GR AP POST PH WALL

	frequency	%age	Valid%	Cumulative%
Normal	31	62	62	62
Mild	16	32	32	94
Moderate	2	4	4	98
Severe	1	2	2	100
total	50	100	100	

Discharge post ph wall

	frequency	%age	Valid%	Cumulative%
Mild	38	76	76	76
Moderate	11	22	22	98
Severe	1	2	2	100
total	50	100	100	

P04 discharg post ph wall

	frequency	%age	Valid%	Cumulative%
Normal	32	64	64	64
Mild	14	28	28	92
Moderate	4	8	8	100
total	50	100	100	

X ray pns for haziness

	frequency	%age	Valid%	Cumulative%
Mild	4	8	8	8
Moderate	30	60	60	68
Severe	16	32	32	100
total	50	100	100	

P04 X ray pns for haziness

	frequency	%age	Valid %	Cumulative %
Normal	25	50	50	50
Mild	11	22	22	72
Moderate	9	18	18	90
Severe	5	10	10	100
Total	50	100	100	

DISCUSSION

Defected nasal septum with chronic maxillary sinusitis is a chronic problem. Patients are referred for different surgical procedures after not being satisfactorily treated medically. In our study the mean age of the patients was 35.78±10.87 years As compared with the study of Ediger etc[7.] The mean age of the patients was 38.29±13.27 years, which is comparable with our study. In our study there were 68% male patients while 32% female patients. As compared with the study of Muluk etal[8] there were 63% male and 37% female patients, which is comparable with our study. In another study carried out in 100 patients by Makitie etal[9]

septoplosty has 88% successful results in nasal obstruction, improvement in nasal discharge sneezing, recurrent headache and chronic rhino sinusitis. In our study at 6 month postoperative the relief in the nasal obstruction was observed to be 60%, the patients with sore throat decreased from 80% to 64 % showing constant decline
Post nasal discharge patient were l4 % in the preoperative period which increased to 68 % in the post opt group. These results were consistent with studies conducted worldwide. Sinusitis or chronic rhinitis plus post-nasal drip in 56% of patients.[10] Patients with Congestion of throat in the beginning of our study were only 6%, which improved, in the postoperative period to 68 %. Nasal Septal deviation produces nasal airway obstruction symptom including its associated problems such as congestion, crusting, epistaxis, sinus and nasal respiratory infections.[11] Granular appearance of posterior pharyngeal wall patient in the pre operative period were only 2% which improved to 62% indicating significant improvement which was also observed in the subgroups. These results were comparable to those of studies conducted worldwide.

Four most common clinical manifestations were rhinorrhea (95%), nocturnal and productive cough (91%). nasal congestion (74%) and posterior nasal dripping (66%). The three most common signs were obstruction of middle meatus (100%), swelling of turbinates (92%) and granular pharynx (48%). All Para nasal sinuses X-rays were abnormal with maxillary sinus being the most commonly involved sinus (99%) followed by ethmoid sinus 91%[12.] As regarding discharge post pharyngeal wall the patient improved to 64% from O % meaning that there were no patients without this sign in the pre operative cohort. Haziness of the Para nasal sinuses was the main theme of our study as it indicated the level of involvement of Para nasal sinuses and to study the clearance of these or otherwise was the main target of this study, as it was conducted in patients who were optimally treated medically.

At the end of six months and during this period at different times they showed constant improvement as there was no normal patient at the beginning but at the end they increased to 50 .In a study conducted In combined military hospital Quetta Pakistan showed, X-ray PNS (water's view) had a sensitivity of 77% and specificity of 37% in chronic maxillary sinusitis when compared with the findings of lavage of the maxillary sinuses[13].

CONCLUSIONS

Our prospective study shows that the patients of chronic maxillary sinusitis also having DNS are subjected to SMR/septoplasty; about 50% of these gets resolved their chronic maxillary sinusitis postoperatively with appropriate medical treatment so it is worthwhile to wait for passive resolution of chronic maxillary sinusitis SMR/septoplasty for at least 6 months.

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