OUTCOME EVALUATION OF THE USAGE OF INTRANASAL SPLINTING VERSUS THE NON-USAGE IN SEPTOTURBINOPLASTY - PROSPECTIVE STUDY

Zeyad Mohamed Mandour, Mostafa Mohamed Abdel-Nabi, Amr Mohamed Kholief, Ahmed Salah El Dein Younis Ahmed Salah

Results

Departments of Otorhinolaryngology, Faculty of Medicine, Alexandria University

Introduction

Nasal septal deformities constitute one of the most prevalent anatomical abnormalities, with reported incidence rates in the adult population exceeding 90%. Nasal obstruction is a commonly reported issue in otolaryngology, with numerous underlying causes. The most frequent cause of unilateral nasal obstruction is a deviated nasal septum. A severely deviated septum is a major contributor to nasal obstruction and may be associated with a range of secondary conditions, including sinusitis, snoring, epistaxis, headache, postnasal discharge, and sleep apnea. Septoplasty is a standard procedure to correct symptomatic septal deviation. Septoplasty may be associated with some complications. One of the most common complications is the formation of intranasal adhesions, particularly when combined with turbinoplasty. The usage of intranasal splints after septoplasty successfully decreases the formation of intranasal adhesions following septoplasty, as they avoid contact between the raw surface of the septum, inferior turbinate, and lateral nasal wall.

Aim of the work

The aim of the study is to evaluate the incidence of complications during the postoperative follow up after septoturbinoplasty in patients using septal splints vs those not using septal splints regarding objective parameters entailed intranasal synechia, crustations, epistaxis, septal hematoma formation & subjective parameters entailed pain or discomfort, and nasal obstruction.

Patients and Methods

This prospective randomized controlled study will be conducted over one year at the Otorhinolaryngology Department, Faculty of Medicine, Alexandria University. It includes adult patients with septal deviation and hypertrophied inferior turbinates, excluding those with prior nasal surgeries, congenital anomalies, or nasal tumors. Fifty patients will be randomly assigned into two groups: Group A (n=25) will receive nasal packing and intranasal silastic splints after undergoing endoscopic septoplasty and inferior turbinoplasty, while Group B (n=25) will receive packing only. All patients will provide informed consent, and ethical approval will be secured. Preoperative assessment includes demographic data, full history, ENT examination, diagnostic nasal endoscopy, CT imaging, and routine labs. Surgery will be followed by standard care and splint removal after 10 days. Monthly follow-ups will be conducted using nasal endoscopy, and nasal obstruction symptoms will be evaluated with the A-NOSE scale to assess the effectiveness of intranasal splints in reducing postoperative complications.

Table (1): Comparison between the two studied groups according to different parameters after ten days

At 10 days	Group A (n = 25)		Group B (n = 25)		c^2	p	
	No.	%	No.	%			
Intranasal Synechiae	0	0.0	1	4.0	1.020	FEp=1.000	
Crustations	4	16.0	16	64.0	12.0*	0.001^{*}	
Epistaxis	1	4.0	2	8.0	0.355	FEp=1.000	
Septal Hematoma Formation	0	0.0	0	0.0	-	-	

Table (2): Comparison between the two studied groups according to Intranasal Synechiae after 6 weeks

	Group A (n = 25)		Group B (n = 25)		c^2	p
	No.	%	No.	%		
Intranasal	0	0.0	7	28.0	8.140*	FEp=0.01 0*
Synechiae after 6	U	0.0	/	28.0	8.140	0*
weeks						J

Table (3): Comparison between the two studied groups according to nasal obstruction

Nasal obstruction	Group A (n = 25)	Group B (n = 25)	U	p
Preoperative				
Min. – Max.	45.0 - 95.0	60.0 - 90.0		0.085
Mean \pm SD.	72.40 ± 14.51	79.40 ± 9.17	225.0	
Median (IQR)	70.0 (60.0 – 85.0)	80.0 (75.0 – 85.0)		
Postoperative				
(Day 10)				
Min. – Max.	0.0 - 15.0	0.0 - 45.0		0.016*
Mean \pm SD.	3.60 ± 4.68	12.40 ± 14.30	193.50*	
Median (IQR)	0.0(0.0-5.0)	5.0 (0.0 – 15.0)		
Postoperative				
(week 6)				
Min. – Max.	0.0 - 5.0	0.0 - 55.0		
Mean \pm SD.	1.60 ± 2.38	10.80 ± 17.18	222.0*	0.047*
Median (IQR)	0.0(0.0-5.0)	5.0 (0.0 –10.0)		

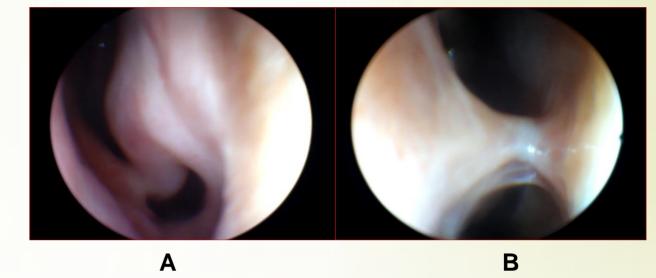


Fig. (1): A, B) Endoscopic view of 2 different cases of group (B) six weeks after septoplasty with intranasal adhesions.

Conclusion

The use of silicone intranasal splints was well tolerated by the patients, with minimal negative impact on postoperative comfort. Additionally, the use of intranasal splints was associated with a reduction in mucosal crusting and synechiae. The use of silicone splints appears to be a reliable, effective, and well-tolerated method, particularly beneficial for patients with extensive mucosal damage or those requiring sustained stabilization of the bony and cartilaginous parts septum.

Adhesion formation was found to be more common when septoplasty was combined with turbinate surgery; thus, the use of intranasal splints is recommended in such cases.



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