

***Postoperative Morbidity after Anterior  
Septoplasty with versus without Nasal  
Packing;***  
Comparative randomized trial

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## *Postoperative Morbidity after Anterior Septoplasty with versus without Nasal Packing ; Comparative randomized trial*

### **Abstract:**

**Objective:** To compare the postoperative morbidity and duration of hospital stay among patients after anterior septoplasty with vs. without nasal packing in Ibn Sina Teaching Hospital and two private polyclinics (Hadhramout Hospital and Al-Madinah Polyclinic) in Mukalla city, Hadhramout, Yemen. **Methods:** A comparative, prospective clinical trial was carried out among patients with anterior deviated nasal septum who had anterior septoplasty performed. One hundred surgically treated patients were randomly divided into two equal groups according to the management protocol and evaluated by a surgeon after the procedures. Studied complications after septoplasty included; septal hematoma, septal perforation, postoperative adhesions, endonasal bleeding, nasal pain and headache, and respiratory discomfort. Data was collected and analyzed using SPSS statistical software version 16. **Results:** One hundred patients, males were 55 females were 45, the youngest patient was 20 years, the oldest patient was 50 years, the majority of patients were between 31-40 years. The highest incidence of postoperative bleeding was in the 3rd postoperative day in patients with nasal packing while it was minimal on the 3rd day in patients without nasal packing. Septal perforation was found in two patients with packing while perforation was seen in one patient without packing. Fifty patients who had nasal packing were found to have more postoperative morbidity like pain, headache, breathing discomfort. There was no postoperative haematoma and postoperative adhesions in both groups. Postoperative stay in the hospital was longer in patients who had undergone anterior septoplasty with nasal packing and shorter in

patients without packing. Fifty patients without packing were discharged on the 1<sup>st</sup> day after the operation while 45 patients with packing were discharged on the 3<sup>rd</sup> postoperative day and five on the 2<sup>nd</sup> postoperative day.

**Conclusion:** Anterior septoplasty without anterior nasal packing is a safe procedure with less postoperative morbidity and with a shorter hospital stay after operation. It revealed more acceptable functional outcomes compared to anterior septoplasty with nasal packing

**Keywords:** Nasal packing, anterior septoplasty, deviated nasal septum, postoperative morbidity

### **Introduction:**

Septoplasty is the commonest traditional corrective surgical procedure widely used in reconstructive rhinology, indicated for the correction of the deviation of nasal septum (DNS). Nasal packing (internal dressing) as a final step of the septoplasty is usually applied to avoid postoperative complications. Anterior nasal packing with endonasal splint is a common practice to ensure stabilization of the operated nose after septoplasty and to reduce the risk of deviation recurrence. Nasal packing is not necessary after anterior septoplasty and the hospital stay is less in patients without nasal packing. Nasal packing causes postoperative complications like pain [1,2]. In addition to preventing postoperative complications such as endonasal bleeding, adhesion formation, apposition of mucosal flaps, and subsequent septal hematoma and septal cartilage perforation [3]. Systemic complications induced by nasal packing include sleep disturbance, respiratory problems due to blocking the nasal passage like dyspnea and decreased oxygen saturation, in addition to problems within the cardiovascular and pulmonary system, including developing the toxic shock syndrome are reported in the literature [1,4]. Nasal obstruction is the primary indication of septoplasty and can be caused by septal deviation. Deviated nasal septum may be congenital or traumatic. The aim of this study was to compare the common postoperative complications following anterior septoplasty with versus without anterior nasal packing. Postoperative complications looked at included frequency of postoperative pain, headache, respiratory discomfort, bleeding, septal perforation, hematoma, adhesion, and the length of postoperative stay in hospital.

**Patients and Methods:** One hundred patients were operated for septoplasty in Ibn Sina Central & Teaching Hospital, Hadhramout Private Hospital and Al-Madinah Private Polyclinic during the period from January 2002 to December 2012 in Mukalla city, Hadramout, Yemen. The majority of patients were between 31-40 years of age. Males were 55 and females were 45.

Local ethical committee approval was obtained for the study, and all patients signed informed consent before enrollment in the study. Patients with anterior deviated nasal septum enrolled in the study. Patients with posterior deviation of nasal septum, midfacial anomalies, previously operated patients, bleeding disorders and patients with hypertension were all excluded. Fifty patients were randomly assigned to undergo planned anterior septoplasty with nasal packing and the other 50 patients were selected to undergo anterior septoplasty without nasal packing. Postoperative complications were clinically documented by a surgeon. Detailed patient history, careful general ENT and specific examination of the nose, paranasal sinuses and midfacial area was done. Both groups were assessed by the author for postoperative complications; pain, headache, respiratory discomfort, nasal bleeding, septal perforation, hematoma and duration of postoperative hospital stay. Data was collected and analyzed using SPSS statistical software version 16.

### ***Results:***

A hundred patients were divided randomly into two equal groups (group A with nasal packing and group B without nasal packing), Fifty patients were between 31 and 40 years of age. Males were 55 and females were 45. (Figure 1&2). There was a slight difference regarding postoperative bleeding and hematoma.

Table 1- Postoperative complications and hospital stay in patients following anterior septoplasty

Variable		Pattern of management of septoplasty by gender			
		Female n= 45		Male n=55	
		Group A	Group B	Group A	Group B
		With nasal packing	Without nasal packing	With nasal Packing	Without nasal packing
Postoperative nasal bleeding	1 <sup>st</sup> day	3	6	7	6
	2 <sup>nd</sup> day	1	3	3	2
	3 <sup>rd</sup> day	5	0	12	1
Septal perforation		1	1	1	0
Nasal pain and headache		24	9	26	10
Postoperative adhesion		0	0	0	0
Septal hematoma		0	0	0	0
Respiratory discomfort		15	1	20	2
Discharge from hospital	1 <sup>st</sup> day	0	25	0	25
	2 <sup>nd</sup> day	20	0	25	0
	3 <sup>rd</sup> day	2	0	3	0

The highest incidence of postoperative bleeding was in the 3<sup>rd</sup> postoperative day in patients with nasal packing while it was minimal on the 3<sup>rd</sup> day in patients without nasal packing. Septal perforation was found in two patients with packing while perforation was seen in one patient without packing. Fifty patients who had nasal packing were found to have greater postoperative morbidity like pain, headache, breathing discomfort . Postoperative stay in the hospital was longer in patients who had undergone anterior septoplasty with nasal packing and shorter in patients without packing. Fifty patients without packing were discharged on the 1<sup>st</sup> day after the

operation while 45 patients with packing were discharged on the 3<sup>rd</sup> postoperative day and five on the 2<sup>nd</sup> postoperative day (Table1).

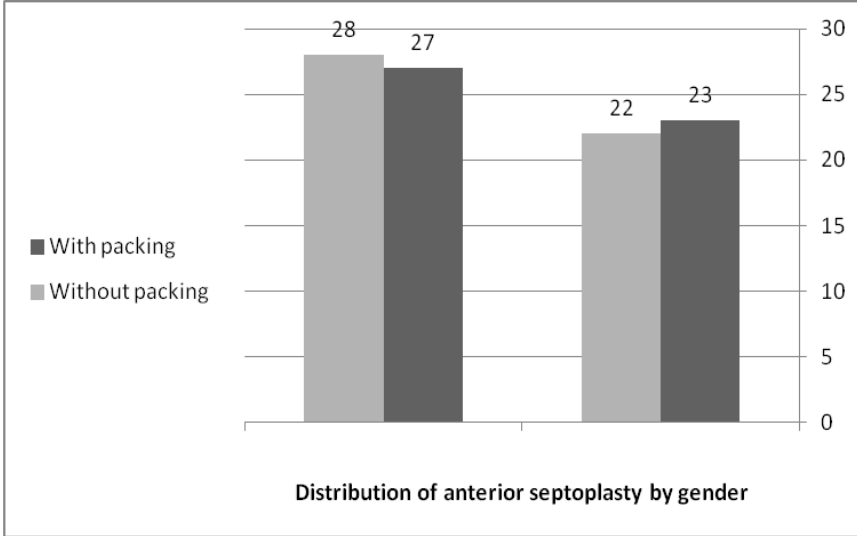


Figure-1 Distribution of anterior septoplasty by gender

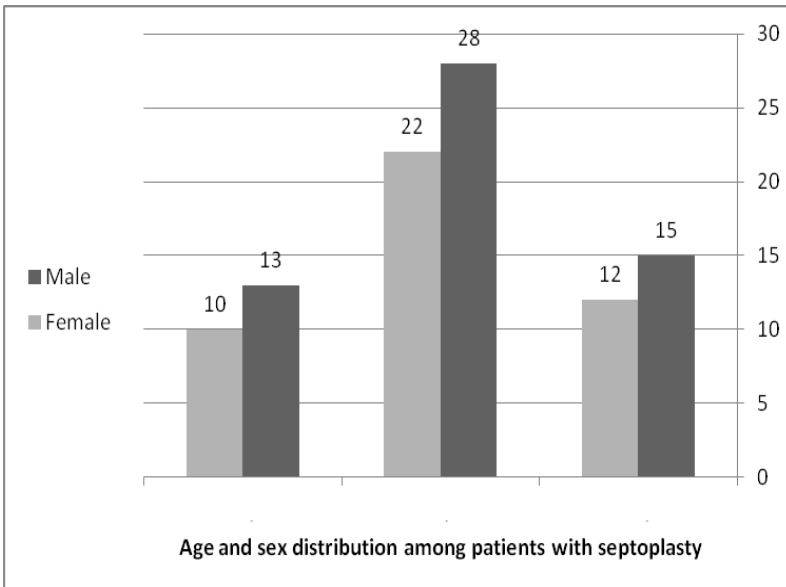


Figure-2 Age and sex distribution among patients with septoplasty



### **Discussion:**

Septoplasty is an essential element of functional and aesthetic reconstructive nasal surgery in which the phase fixation with the internal dressings is an effective method to keep the reconstructed septum in the midline and to prevent a septal hematoma [5]. The results of our trial on hundred patients who underwent anterior septoplasty and followed-up in our clinic, revealed significant differences in both groups. In this study the septal hematoma is a less seen complication in patients who have anterior septoplasty without nasal packing. Hajjiioannou et al. [6] study showed decreased rate of postoperative breathing discomfort and further postoperative complications when nasal packing was removed in the first day. Tzadik et al. reported that nasal packing and internal dressings with anterior septoplasty are unnecessary to apply to the operated nose [7]. Bajaj et al showed decreased rates of postoperative complications in patients who have undergone anterior septoplasty without nasal packing and reported that only 3.8 of the patients required nasal packing [8]. There was an insignificant difference in incidence of septal perforation between the two groups (group A and group B). In our study the patients without nasal packing left hospital earlier compared to patients with nasal packing who were discharged on second and third postoperative day. Few studies reported similar results to our study, that is postoperative nasal bleeding, pain, headache, discomfort and the stay of patients in the hospital is less observed in patients who have anterior septoplasty without nasal packing [1,9,10]. The present study showed similar results with the results from several studies reported by several authors in different countries. Jawaid et al. study stated that nasal packing can be easily avoided following septal surgery, thus minimizing postoperative discomfort of the patient [11]. Naghibzadeh et al. study concluded that septoplasty can be safely performed without postoperative nasal packing and nasal packing had no main advantages compared with trans-septal

suturing and suturing can be used as alternative method to nasal packing [12].

**Conclusion:** Anterior septoplasty without anterior nasal packing is a safe procedure with less postoperative morbidity and with a shorter hospital stay after operation. It revealed more acceptable functional outcomes compared to anterior septoplasty with nasal packing.

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