Assessment of Complications of Nasal Packing after Septoplasty

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Abstract

Objective: To assess the complications of postoperative nasal packing among septoplasty patients.

Methods: A total of 70 patients were randomized into two groups; 35 patients with nasal packing and 35 patients without nasal packing.

Results: Grades of pain expressed by patients in the nasal packing group during the first 24 hours postoperatively and during the removal of the pack were significantly more than that in the non-packing patients group. Postoperatively, patients who underwent nasal packing sustained significantly more epiphora, headache and sleep disturbances \((p<0.001, p=0.002\) and \(p=0.001\), respectively). There were no significant differences between both groups regarding incidence of hematoma, epistaxis or adhesions. None of the patients in either study groups experienced postoperative nasal valve narrowing or local infection.

Conclusions: Nasal packing in septoplasty patients is not necessary. It causes significantly more pain and complications, and it should be reserved only for those who have bleeding tendency.

Key Words: Septoplasty – Nasal packing – Postoperative complications.

Introduction

NASAL septal surgery is one of the commonest operations performed in otolaryngological practice. It is usually followed by nasal packing [1].

History of nasal packing after nasal surgery falls back to 1847 in the time of Gustay Killian of Germany and Otto Tiger Freer of USA, yet systematic submucosal resection and nasal packing was started in 1882 by Ephraim in Chicago and Peterson in Germany [2].

The main issues in nasal packing are to stabilize the nose in a good position after surgery and preserve the cartilages and bones in the favorable situation and reduce the risk of deviation recurrence. It is also necessary to avoid synéchia formation, nasal valve narrowing, hematoma and bleeding [3].

The advantage of nasal packing is to achieve a good apposition of the flap which could be achieved by suturing the flap with septum [4]. Others use packing to prevent adhesion and septal hematoma [5], which can be avoided by good infiltration of lidocaine, and epinephrine solution, and by good handling of nasal mucosa, correct flap elevation, and avoid injury to turbinate [6].

It appears intuitive that nasal packing may prevent or decrease the incidence of several complications. However, evidence supporting this assertion is limited at best. With limited evidence to suggest a beneficial effect and a potential for deleterious side-effects, the routine use of postoperative packing following septoplasty should be questioned [7].

So, this study aimed to assess the complications of postoperative nasal packing among septoplasty patients.

Patients and Methods

This research followed a randomized controlled study design. It was done at Al-Namas General Hospital, Aseer Region, Kingdom of Saudi Arabia. It included adult patients who underwent septoplasty between 2007 and 2010, after exclusion of those with chronic diseases (e.g., diabetes, hypertension, etc.). A total of 70 patients were randomized into either group 1 (G1) which comprised 35 patients (15 females and 20 males) with nasal packing or group 2 (G2) which comprised 35 patients (15 females and 20 males) without nasal packing. Nasal packing was removed on the second day after surgery. All patients received the same analgesic (i.e., 1000mg paracetamol).
All patients in both groups were asked to assess their pain during the first 24 hours after surgery and also on the second day after surgery (in G2) or during the removal of the packing (in G1). Pain was assessed on a visual analog scale (VAS) 0=No pain, 1=Minimal pain, 2=Moderate pain, 3=Severe pain.

All patients in both groups were discharged on the second day and were given outpatient clinic appointments on the 7th day post-surgery. They were asked to report any complaints and were examined for possible complications.

The Statistical Package for Social Sciences (SPSS version 16) was used for data entry and analysis. Descriptive and analytic statistics using Chi Square test ($\chi^2$) were applied. $p$-values less than 0.05 were considered as statistically significant.

### Results

Both study groups were gender- and age-matched, with no significant differences between groups (Table 1).

Grades of pain expressed by patients in the nasal packing group during the first 24 hours postoperatively and during the removal of the pack were significantly more than that in the non-packing patients group (Table 2).

Postoperatively, patients who underwent nasal packing (G1) sustained significantly more epiphora, headache and sleep disturbances than those of G2 ($p<0.001$, $p=0.002$ and $p=0.001$, respectively). On the other hand, there were no significant differences between both groups regarding incidence of hematoma, epistaxis or adhesions. None of the patients in either study groups experienced postoperative nasal valve narrowing or local infection (Table 3).

None of the patients in either study groups experienced postoperative nasal valve narrowing or local infection moreover, comparing the two study groups showed that the incidence rates of complications and morbidities between the two study groups were not significant regarding hematoma, epistaxis or adhesions.

### Discussion

Nasal packing has been used by otolaryngologists since long time, hoping to decrease the incidence of post-septoplasty complications and to improve the outcome of the surgery. The practice of packing the nose after septoplasty was based on a desire to prevent postoperative complications such as bleeding, septal hematoma, and adhesion formation. Stabilization of the remaining cartilage to prevent postoperative deviation is another reason that packing may be used [3].

None of the patients in either study groups experienced postoperative nasal valve narrowing or local infection and during the removal of the pack were significantly more than that in the non-packing patients group.

However, patients who underwent nasal packing sustained significantly more epiphora, headache and sleep disturbances. Moreover, grades of pain expressed by patients in the nasal packing group during the first 24 hours postoperatively and during the removal of the pack were significantly more than that in the non-packing patients group.
Findings of the present study are in agreement with those reported by several authors in several countries.

In Karachi, Pakistan, Awan and Iqbal [7] concluded that nasal packing has no significant benefits. Moreover, many patients with nasal packing complain of post-septoplasty pain, epiphora, headache, dyspnea, and severe pain during the removal of the nasal pack.

In Peshawar, Pakistan, Inayatullah et al. [2] noted that intranasal packing in septoplasty looks to be more of customary than actually required in every case. It is done preemptively just to encounter the fear of post operative bleeding.

In Iran, Naghibzadeh et al. [8] stated that the frequency of bleeding after septoplasty without nasal packing is very low and nasal packing should be reserved only for those who bleed more during surgery or develop septal hematoma. Septoplasty can be safely performed without postoperative nasal packing. Nasal packing had no significant benefits that would compensate its usage. Septal suture is one of the procedures that can be used as alternative method to nasal packing.

In UK, Bajaj et al. [9] stated that septoplasty can be safely performed without postoperative nasal packing. Only 3.8% patients required nasal packing.

In Zarqa and Irbid, Jordan Al-Raggad et al. [10] stated that septal suturing after septoplasty offers the following advantages: Elimination of discomfort for the patients, minimal complications, the outcome is almost the same as with nasal packing, and finally the hospital stay is less than with nasal packing. They concluded that suturing of the nasal septum after septoplasty should be a preferred alternative to nasal packing.

In Riyadh, Saudi Arabia, Al-Arfaj et al. [11] concluded that septoplasty can be successfully managed without packing or any other hemostatic measures.

In conclusion, nasal packing in septoplasty patients is not necessary. It causes significantly more pain and complications, and it should be reserved only for those who have bleeding tendency.

References


