Original Article

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COMPARATIVE STUDY – TRANS-SEPTAL BASTING SUTURE VS NASAL PACKING AFTER SUBMUCOPERICHONDRIAL RESECTION

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ABSTRACT

Objective: To compare the effectiveness of nasal packing vs basting (quilting) suture in the control of postoperative bleeding and or haematoma formation and patient compliance of nasal packing after Submucoperichondrial Resection (SMR).

Design: Comparative clinical trial with stratified randomization.

Place and Duration of Study: Department CMH Kharian cantt from January, 2006 to March, 2007.

Materials and Methods: A total of 200 patients were included in the study. One hundred cases had basting suture and 100 had nasal packing. Patients requiring other procedures like cautery, submucosal diathermy, turbinectomy and middle meatal antrostomy were excluded. The two groups were compared for postoperative bleeding, septal haematoma formation, discomfort in nose, and general well being.

Results: Patients with basting suture were free of any discomfort postoperatively which was seen in cases with nasal packing. The two methods were equally effective in preventing excessive bleeding and septal haematoma formation.

Conclusion: We conclude that the basting suture technique avoids the patient from post operative discomfort caused by nasal packing and is equally effective in preventing post operative septal haematoma. As the post-op discomfort is significant in nasal packing we recommend quilting of the mucoperichondrial flaps.

Keywords: Basting (Quilting) Suture, Nasal Packing, Septal Surgery.

INTRODUCTION

Nasal obstruction is one of the most common complaints in patients attending ENT outdoor. Septal deviations are extremely common, but are not usually severe enough to affect nasal function. Many septal deviations are due to direct trauma. In the absence of any clear history of trauma, birth moulding is considered to be the cause. Deformity of the nasal septum can be classified as spurs, deviations and dislocations[1]. Only the more severe deviations affect nasal functions and therefore require treatment[2]. The usual surgical options are submucoperichondrial resection (SMR) and septoplasty[3]. In SMR deviated septal cartilage and bone are removed leaving 1 cm of caudal and dorsal strip to supplement lower 2/3rd of nose while in septoplasty only the deviated or dislocated part is either straightened or removed sparingly. Septoplasty procedure is preferred especially in young adults and females. After the procedure nasal packing is done either with Bismuth Iodoform Paraffin paste (BIPP) pack or paraffin gauze pack. Quilting suture technique has also been mentioned for the purpose of repair of opposing mucosal tears in the septum[4,5]. In this study the idea behind nasal packing or quilting suture is to oppose septal flaps and prevent post operative septal haematoma formation and secure haemostasis. The same has been compared in this study.

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PATIENTS AND METHODS

It was a clinical trial, carried out at CMH Kharian Cantt between January 2006 and February 2007. A total of 200 patients with symptomatic deviated nasal septum (DNS) were included from general population including army personnel reporting to ENT OPD. Both male and female were included. These patients were randomly divided in two groups of 100 each. All these patients underwent general anaesthesia and SMR was carried out. Group I was given BIPP packing post op as is generally done after nasal surgery. Group II was subjected to nasal septal suturing (NSS) using vicryl 3-0. The nasal packs were

kept for 24-48 hours depending upon the type of surgery while no packing/wicks were placed in nasal fossae of the 2nd group.

Packs were kept for 24 hrs[6].

These patients were observed postoperatively for:

(i) Excessive post op bleeding.

(ii) Septal haematoma formation.

(iii) Discomfort in nose

(iv) General well being.

All the patients were given a questionnaire on first postoperative day to grade their discomfort in the last 24 hrs as

a= No discomfort

b = Mild to moderate discomfort

c = Severe discomfort

The objective criteria behind labelling the discomfort as mild to moderate was that the patient allows the examination with some reluctance, and severe when the patient was afraid of the examination of nose, and had discomfort even without touching the nose.

Data was analyzed using SPSS version 10. Descriptive statistics were used to describe the data. Chi-square test was applied to compare qualitative variables while independent samples' t-test was applied to compare quantitative variables. *p*-value <0.05 was considered as significant.

In group I, 39 patients claimed grade 'c', 61 patients grade 'b' and none grade 'a'. While in group II, 84 patients claimed grade 'a', 16 grade 'b' and none grade 'c'.

Technique Of Basting Suture Adopted:

After the completion of septal surgery first of all the mucoperichondrial incisions are closed with 3/0 chromic catgut suture. A 3/ 0 vicryl on needle was taken and the needle is trimmed to about 7 mm in length. A running quilt suture was started from anterior to posterior first inferiorly and then coming out superiorly from posterior to anterior and then the two ends were tied.

RESULTS

The patients were divided into two groups of 100 each. In group I, 65% were males while in group II, 60% were males. Age range of patients under study was from 18–40 years with a mean age of 29 years (SD=3.12) in group I while in group II it was 30.8 years (SD=2.96). Both the groups were comparable with respect to age ($p>0.05$) and gender ($p>0.05$).

In group I, 39 % patients claimed grade 'c' 61% patients grade 'b' and none grade 'a'. While in group II, 84% patients claimed grade 'a', 16% grade 'b' and none grade 'c'. (p-value<0.01).

Almost all the patients with nasal packing were observed to have discomfort during recovery from anaesthesia, while those in group II had a smooth recovery without any discomfort. Same was the case observed with anaesthetist as the oxygen saturation of the patients in group II was almost 100 % immediately after the recovery while it fell up to 78% in group I patients immediately after the recovery and later on reached 98% after full recovery from anaesthesia before bringing the patient out of operation theatre room. As regards general wellbeing, all the patients in group II were glad to have their nasal airway patent. They were more comfortable with eating and drinking and generally more satisfied with surgery. Patients in group I were not comfortable with nasal packs however they all tolerated it well. Patients requiring submucosal diathermy, cautery, turbinectomy and / or middle meatal antrostomy along with septal surgery were not included in the study.

No case in group I was observed to have septal haematoma formation or excessive bleeding after 24 hrs, while 2% patients had a small septal haemotoma in group II which was aspirated by needle ($p>0.05$).

The rate of complications was almost nil following surgery in both the groups. However, the second group was much happier and satisfied as they could easily breathe through the nose and swallowing & taste remained un-altered.

DISCUSSION

DNS is a fairly common problem encountered in ENT OPD. Septoplasty and SMR are performed in most of the symptomatic cases[2]. Nasal packing is usually done after the surgery. It is a very quick and effective method of securing haemostasis, preventing septal haematoma[4,7]. The problem with the packing is the discomfort and pain faced by the patient for 24-48 hrs postoperatively. Man is an obligate nose breather and breathing through mouth for 24-48 hrs keeps the patient conscious of breathing by either voluntary efforts or due to dry mouth and continuous throat irritation as most of the patients in group I described in our study[8,9]. In order to save the patient from this discomfort and pain, basting suture technique is an excellent alternative method. This method is actually used to repair the opposing tears of the septum during septal surgery[4]. Patients recover smoothly postoperatively and have no discomfort in the nose. The septum can be examined at any time after the operation. Nasal decongestant spray, (Xylometazoline, Oxymetazoline) and liquid paraffin drops instillation can be immediately started after the procedure[5]. Haematoma formation is equally avoided and there is no chance of developing toxic shock syndrome under antibiotic cover, a complication which may be seen with intranasal packing[4]. Opponents may find increased general anaesthesia time and a procedure requiring expertise[10,11]. Some surgeons may find it difficult to apply basting sutures as it is a very tedious job[12,13] but it becomes easy with proper technique and practice. Yildrim et al studied the technique of nasal packing and nasal septal suturing (NSS) in detail and found statistically better results with suturing as far as patients' compliance is concerned. In North America and Europe many surgeons prefer basting suture in uncomplicated septal surgery and nasal packing has largely fallen out of favour[14]. Septal suturing following SMR and septoplasty is therefore, a valid alternative for nasal packing[14-16].

CONCLUSION

Although post op nasal packing is very effective for haemostasis the quilting suture is better as for as the patients' well being is concerned. The amount of relief a patient gets when he can breathe through the nose after septal surgery, a little amount of extra effort by surgeon in applying basting suture is quite worthwhile and highly recommended. It is therefore suggested that nasal septal suturing be adopted as an alternative to intra nasal packing.

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