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Case Report

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Patient's Perspectives on Endoscopic SMR with Spurectomy and Post-operative Synechia Formation

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The present study aimed to discuss the patient's perspectives on recurrent epistaxis and post-operative synechia formation. Endoscopic SMR with spurectomy was performed after detailed evaluation of etiology and anatomical variations of the patient. The CT scan showed a mucosal thickening in left maxillary sinus and the bilateral inferior turbinates were hypertrophied. Following a successful surgical procedure with nasal packaging for two post-operative days, the patient developed synechia after 15 days and thus silicon splints were applied in both nostrils and kept for 7 days. The patient was reviewed regularly and after 1 month, his nasal obstruction had improved significantly with no further epistaxis. Endoscopic submucosal resection (SMR) is an easier and widely used method to correct the nasal deviation. However, the patient's discomfort and distress in endoscopic SMR with spurectomy, nasal packaging and post-operative complications arises many questions from the patient's perspectives.

Key words: Epistaxis, nasal septum, endoscopic SMR, spurectomy, synechia

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INTRODUCTION

Nasal obstruction, deviated nasal septum (DNS) and allergic sinusitis is a common problem among nasal patients in recent times. In some cases, nasal polyposis obstructs the nasal cavity unilaterally or bilaterally and causes inflammation disorder of the upper airway[1,2]. Plain X-rays are insensitive in the diagnosis of nasal problems, whereas CT scan and nasal endoscopy show the anatomical variations which are useful in implementing surgical procedures[3].

Nasal airway obstructions are generally treated by surgical procedure, most commonly by submucous resection (SMR) technique and septoplasty[4,5]. The SMR with spurectomy is a surgical procedure to correct a deviated septum. Enlarged turbinates and a deviated (crooked) septum both can interfere with breathing and sinus drainage[6]. These surgical procedure aims to remove or straighten the deviated cartilage and bone of the nasal septum. However, complications like hematoma, adhesions, septal perforation, infections are often reported in submucosal resection[7-9]. Nasal packaging or internal septal splinting is routinely adopted by surgeons, before having any postoperative complications. However, their application always remains a matter of debate in scientific and medical society[10-13]. The present study reported recurrent epistaxis and DNS with spur of a 30 years-old male which has been resolved by endoscopic SMR with spurectomy. The study also reported post-operative synechia formation and patient discomfort using nasal packaging and silicone splints.

METHODOLOGY/CASE REPORT

A 30-years-old male complaining of a 2 years history of recurrent epistaxis and DNS with spur. He has a history of allergic rhinitis and frequent nasal obstruction. Clinical examination showed left maxillary sinusitis, DNS towards right and bilateral inferior turbinate hypertrophy. This was given conservative treatment (Tranexamic acid-500 mg and sterile haemocoagulase solution, BotroClot®) to stop active bleeding but none of them can stop the recurrence of nasal bleed. The CT scan showed a mucosal thickening in left maxillary sinus and the bilateral inferior turbinates were hypertrophied (Fig. 1). The routine hematology test results i.e., differential blood count, leukocyte count, erythrocyte sedimentation rate (ESR), hemoglobin and platelet counts were in normal range. Bleeding time (BT) and clotting time (CT) were noted as 1 min 45 sec and 3 min 45 sec, respectively.

The patient was admitted to a nearby hospital and anterior nasal packaging was given to stop active bleeding. Packaging was removed after 2 days and there was no sign of bleeding. He further underwent pre-operative tests like ECG, activated partial thromboplastin time (APTT) and prothrombin time (PT). Endoscopic SMR with spurectomy was performed under general anesthesia and nasal cavity was packed with merocel pad. The packing was removed on the second post-operative day and discharged from the hospital with oral medications and nasal drops. He was given antibiotics, analgesics and antihistamines. Topical nasal decongestants were advised for 2 weeks.

Post operative follow-up showed an adhesion of inferior turbinate and nasal septum (i.e., the formation of synechia) resulting in breathing discomfort. Thereafter, the adhesion was removed and bilateral nasal airway silicone splint was inserted and fixed by one suture to the caudal end of the nasal septum. Some minor discomforts were observed, which includes respiratory distress, dry mouth and sleep discomfort. The splints were then removed on the 7th day and nasal douching

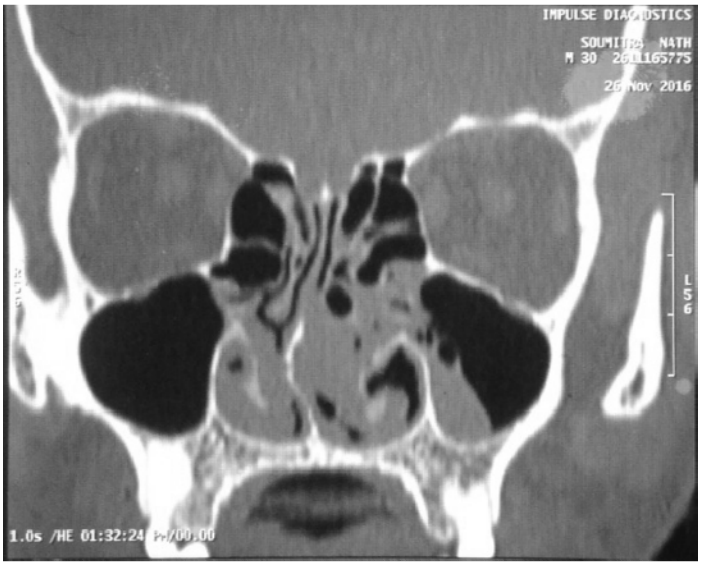

Fig. 1: CT scan of deviated nasal septum

with the isotonic sterile saline solution was advised. He was reviewed after 1 month and his nasal obstruction had improved significantly.

DISCUSSION

Endoscopic nasal surgery requires a conscientious assessment of the patient and a detailed radiological description of the etiology and anatomical variations in nose and PNS[14]. Endoscopic submucosal resection (SMR) is an easier and widely used method to correct the nasal deviation. The main advantage of endoscopic nasal surgery is the ability to reduce the morbidity by limiting the dissection area of deviation, better visualization and accessibility to remote areas and minimizes the post-operative bleedings[15]. However, lack of binocular vision, frequent cleaning of tip and expertise hand always remains a matter of concern.

Despite having a fine surgical procedure, the dissatisfactory part for both patients and doctors is post-operative synechia formation. The use of postoperative packing has been proposed to minimize postoperative complications such as hemorrhage, mucosal adhesions and septal hematoma. Rao and Vundavalli[16] reported post-operative bleeding in 5 cases (5.43%) with nasal dressing and 4 cases (5.88%) without nasal dressing. Adhesion formation was noticed in 8 cases (8.7%) with nasal dressing and 2 cases (2.94%) without nasal dressing. This study revealed that there is no considerable difference in post-operative bleeding and synechia formation in patients with or without nasal dressings post-operatively. However, in another study conducted by Sarin *et al*.[7], the incidence of synechia formation without nasal splints was 52% while in another group; it was drastically reduced to 18% after the application of nasal splints. By inserting silastic splints at the end of the operation and leaving them in place for 7 days, the risk of adhesions reduces from 26-0%[17].

Present study noticed respiratory distress, mouth and throat dryness, hypoxia and sleep discomfort after using nasal package or splints which are found to be relevant to other studies[10,18]. Minor stiffness, pain and swelling of the tip of the nose were also noted in the present study. Symptoms of nasal obstruction, reduction in the sense of smell, sneezing tendency, nasal discharge, headache, facial pain, facial pressure, snoring, oral breathing and also reduced general health after post-operative nasal packaging has also been reported by other researchers[9]. According to Naghibzadeh *et al*.[19], nasal packing after surgery should be reserved for the patients with increased risk of bleeding. Adhesions are the most common complication and patients and doctors must be aware of that. It is the responsibility of patients to consult doctor on a regular basis after surgery, so that necessary preventive measures can be taken to stop the formation of synechia and if needed, an intranasal splint may be used.

CONCLUSION

Post-operative nasal packaging is routinely adopted by surgeons as preventive measures, before having any post-operative complications. Present study highlights patient's discomfort and distress in endoscopic nasal surgeries, synechia formation and nasal packaging, which arises many questions from the patient's perspectives.

SIGNIFICANCE STATEMENTS

Present study emphasizes on patients distress and discomfort during nasal packaging and application of nasal splints which includes minor stiffness, pain, sneezing tendency, headache, facial pain, facial pressure, oral breathing, mouth and throat dryness, hypoxia, sleep discomfort and also reduced general health. Thus, it is suggested that nasal packing after surgery should be reserved for the patients with increased risk of bleeding or any post-operative complications.

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