

The Effects of Intranasal Splints in Septal Surgery

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ABSTRACT

Nasal splints have long been used to prevent post operative nasal adhesions in septal surgery. But they are also been criticized as they cause significant morbidity in terms of post operative pain and discomfort. We have conducted a study to see the usefulness and other effects of their use. It was carried out in the ENT department of Nishtar Hospital, Multan during the period from July 2009 to April 2010. One hundred patients who underwent septal & turbinate surgery were included in the study. These were divided into two equal halves, One group had splints inserted at the end of the procedure and the other not. The patients were finally evaluated for beneficial and unwanted effects. It was concluded that adhesions formation is significantly less common in splinted patients; similarly satisfaction of the patient from the surgical outcome was much higher in the splinted than non splinted patients. However pain during one week post operative period was also higher in these patients.

Key words: Nasal splints, Septal surgery, Nasal adhesions

INTRODUCTION

Nasal Surgery is frequently complicated by the adhesions formation between the septum and the lateral wall. This complication is more common if simultaneous surgery to the septum and the turbinates is performed¹. The reported incidence is as high as 36%². To minimize this complication the nasal splints has been widely used^{3,4}. However later studies have created considerable doubt on their effectiveness and efficacy⁵. It is also noted that there use has caused an increase in the morbidity in terms of post operative pain and discomfort⁶.

A randomized prospective study was carried out to see the benefits and morbidity associated with intra nasal splints.

MATERIALS & METHODS

The study was carried out in the ENT department of Nishtar Hospital, Multan during the period from July 2009 to April 2010. One hundred patients who underwent septal & turbinate surgery were included in the study. These were divided into two equal halves each comprising of 50 by random selection. One group had splints inserted at the end of the procedure and the second was left without it. The splints were made up of plastic sheets cut from empty containers of intravenous infusion and fixed with no.2 silk suture through the septum. Nose was packed with Furacin soaked ribbon gauze which were removed after 24– 48 hours in all the cases. The splints were removed after 08 days. The patient's subjective complaint regarding post operative pain was noted during 24-48 hours after surgery during

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which pack remained in and during the week following that. During this period incidence of septal haematoma was also noted. Six weeks later, each patient was finally evaluated for the presence of adhesions; septal perforation and patient's satisfaction with the results of surgical procedure.

RESULTS

The pain and discomfort was generally observed in many of the patients during first 24 hours after surgery during which they had packs in their noses but there was no gross difference between the patients of two groups. This discomfort was attributed to the nasal packing. However further assessment during subsequent one week showed that the patients with splints were experiencing significantly more pain and discomfort than the non-splinted patients, although the overall incidence was low during this period than during first 24 hours.

Table I: Proportion of patients with nasal pain and discomfort

Pain noted in patients	Splinted n = 50	Non splinted n = 50
During first 48 hours	24	25
During week following the above period	0	6

The final assessment six weeks after surgery was made regarding the presence of adhesions, septal perforation and patient's satisfaction with the surgical outcome.

It revealed presence of intranasal adhesions in six of the non-splinted patients whereas none of the splinted patients had this complication. The septal perforation was observed in two of the splinted

patients and one from the non-splinted ones. Forty nine patients in whom the splints were placed showed their satisfaction with the surgical outcome whereas only thirty two from those without the splints were happy with the results of their operation.

Table II: The final assessment six weeks after surgery

Final assessment regarding :-	Splinted n = 50	Non splinted n = 50
Adhesions formation	0	6
Septal perforation	2	1
Satisfaction of the patients with the surgical outcome	49	32

DISCUSSION

Post operative adhesions are a common complication of septal surgery and they may occur even after the most precise surgical procedure⁷. Close contact of traumatized surfaces is probably a major contributing factor⁸. White and Murray describe 36% incidence of adhesion formation in their report in patients whose septal surgery was combined with turbinate resection². Various methods for the prevention of post operative adhesions have been proposed which include nasal decongestants, saline irrigation, nasal packing and intranasal splinting⁹. In our experience, the later technique was very useful mean to prevent formation of post operative adhesions and it is evident from the results that the routine use of intranasal splints would virtually rule out the chance of this complication. They also prevent formation of septal haematoma. However quite expectedly, they increased the morbidity from the nasal surgery in terms of post operative pain and discomfort especially during the first week after surgery. Because of this increased morbidity, it is suggested that the splints should only be used routinely in

patients undergoing septal surgery along with turbinate resection. Various materials are proposed including Silicone rubber, X-ray film, Teflon and Polyethylene. We used sheets made from the empty bottles for intravenous fluids. This material is cheap and readily available. However the very remote risk of toxic shock syndrome should be kept in mind¹⁰.

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