Braz J Otorhinolaryngol. 2016;82(6):654–661

Brazilian Journal of
OTORHINOLARYNGOLOGY
www.bjorl.org

ORIGINAL ARTICLE

The effects of the time of intranasal splinting on bacterial colonization, postoperative complications, and patient discomfort after septoplasty operations☆

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Received 1 June 2015; accepted 15 November 2015
Available online 6 February 2016

KEYWORDS
Nasal splint;
Patient comfort;
Septoplasty

Abstract
Introduction: The main reason for nasal tampon placement after septoplasty is to prevent postoperative hemorrhage, while the secondary purpose is internal stabilization after operations involving the cartilaginous-bony skeleton of the nose. Silicone intranasal splints are as successful as other materials in controlling postoperative hemorrhages of septal origin. The possibility of leaving the splints intranasally for extended periods helps stabilize the septum in the midline. However, there is nothing in the literature about how long these splints can be retained inside the nasal cavity without increasing the risk of infection, postoperative complications, and patient discomfort.
Objective: The current study aimed to evaluate the association between the duration of intranasal splinting and bacterial colonization, postoperative complications, and patient discomfort.
Methods: Patients who had undergone septoplasty were divided into three groups according to the day of removal of the silicone splints. The splints were removed on the fifth, seventh, and tenth postoperative days. The removed splints were microbiologically cultured. Early and late complications were assessed, including local and systemic infections, tissue necrosis, granuloma formation, mucosal crusting, synechia, and septal perforation. Postoperative patient discomfort was evaluated by scoring the levels of pain and nasal obstruction.
Results: No significant difference was found in the rate of bacterial colonization among the different groups. Decreased mucosal crusting and synechia were detected with longer usage intervals of intranasal silicone splints. Postoperative pain and nasal obstruction were also diminished by the third postoperative day.

☆ Please cite this article as: Karatas A, Pehlivanoglu F, Salviz M, Kuvat N, Cebi IT, Dikmen B, et al. The effects of the time of intranasal splinting on bacterial colonization, postoperative complications, and patient discomfort after septoplasty operations. Braz J Otorhinolaryngol. 2016;82:654–61.

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http://dx.doi.org/10.1016/j.bjorl.2015.11.008

Conclusions: Silicone splints were well tolerated by the patients and any negative effects on postoperative patient comfort were limited. In fact, prolonged splint usage intervals reduced late complications. Long-term silicone nasal splint usage is a reliable, effective, and comfortable method in patients with excessive mucosal damage and in whom long-term stabilization of the bony and cartilaginous septum is essential.

PALAVRAS-CHAVE
Splint nasal;
Conforto do paciente;
Septoplastia

Efeitos do tempo de permanência de *splints* intranasais sobre a colonização bacteriana, complicações no pós-operatório e desconforto do paciente após septoplastia

Resumo
Introdução: A principal razão para a colocação de tampões nasais em septoplastias é a prevenção de hemorragia pós-operatória, enquanto o objetivo secundário é a estabilização interna após cirurgias que envolvam o esqueleto cartilaginoso do nariz. Os *splints* intranasais de silicone são tão eficazes como outros materiais para o controle de hemorragias do septo no pós-operatório. A possibilidade de manter os *splints* intranasais por longos períodos ajuda a estabilizar o septo na linha média. No entanto, não há nada na literatura sobre quanto tempo esses *splints* podem ser mantidos na cavidade nasal sem aumentar o risco de infecção, complicações no pós-operatório e causar desconforto ao paciente.
Objetivos: O presente estudo teve como objetivo avaliar a associação entre o tempo de tamponamento com splints intranasais e colonização bacteriana, complicações no pós-operatório e desconforto do paciente.
Método: Os pacientes submetidos a septoplastia foram divididos em três grupos, de acordo com o dia da remoção dos *splints* de silicone. Os *splints* foram removidos no 5°, 7° e 10° dias de pós-operatório, e a seguir, cultivados microbiologicamente. Complicações precoces e tardias foram avaliadas, incluindo infecções locais e sistêmicas, necrose do tecido, formação de granulomas, crostas na mucosa, sinéquias e perfuração do septo. O desconforto do paciente no pós-operatório foi avaliado com o uso de pontuação dos níveis de dor e de obstrução nasal.
Resultados: Nenhuma diferença significante foi encontrada na taxa de colonização bacteriana entre os diferentes grupos. Diminuições da formação de crostas na mucosa e de sinéquias foram detectadas com tempos mais longos de uso de *splints* de silicone. A dor e a obstrução nasal também diminuíram no terceiro dia de pós-operatório.
Conclusões: O uso de *splints* de silicone foi bem tolerado pelos pacientes, e seus efeitos negativos sobre o conforto do paciente no pós-operatório foram limitados. De fato, o tempo prolongado de uso teve um efeito redutor sobre as complicações tardias. O uso prolongado de *splint* nasal de silicone é um método confiável, eficaz e pouco desconfortável em pacientes com lesão excessiva da mucosa e naqueles cuja estabilização óssea e cartilaginosa do septo a longo prazo é essencial.

Introduction

Surgical interventions directed at the nasal septum are frequently applied in the daily practices of Ear, Nose, and Throat (ENT) specialists. Septal surgery for functional and esthetic purposes is commonly performed. The methods and materials used in nasal packing are numerous in septoplasty. Various materials including cotton tape, gauze, paraffin gauze, Tefla, Merocel, sponges, and silicone nasal splints have been recommended for this purpose.[1]

Although these materials have been employed primarily to prevent possible hemorrhage following several interventions, they are also expected to contribute to the stabilization of the nasal cartilaginous bony skeleton at the midline and promote mucosal healing.[2,3] Additionally, nasal packing is used to prevent synechiae or restenosis, particularly after surgery.[2,3] Recently, silicone nasal splints have been used after both functional interventions directed at the septum and after esthetic procedures. Nasal obstruction is less frequent when appropriate nasal lavages are performed and