

Use of CMC foam sinus dressing in FESS

Kornel Szczygielski · Piotr Rapiejko ·
Andrzej Wojdas · Dariusz Jurkiewicz

Received: 18 August 2008 / Accepted: 24 September 2009
© Springer-Verlag 2009

Abstract Aim is to determine the efficacy and pain level associated with the use of dissolvable carboxymethyl cellulose (CMC) foam dressing in functional endoscopic sinus surgery (FESS) in adult patients. In the present prospective study, 60 patients with bilateral chronic rhinosinusitis were included. All patients underwent bilateral FESS. Thirty patients had both nasal cavities packed with dissolvable CMC foam (CMCF) and another 30 patients had their nasal cavities packed with routine nasal packing (RNP) in latex glove fingers. The haemostatic effect of the CMCF was assessed during the recovery period, and pain levels were recorded by the patients on a visual analogue scale 24 h after surgery. The prevalence of postoperative middle meatal synechia formation was assessed 1, 2, 4 and 8 weeks after the operation. Four (13.3%) of the patients packed with CMCF had primary postoperative bleeding during the recovery period and required additional dressing. Bleeding appeared in two (6.7%) patients packed with RNP. The mean level of pain was 0.962 (range 0–4) for patients packed with CMCF but was 5.5 (range 3–9) for patients packed with RNP. Four (6.7%) of 26 CMCF patients and 10 (35.7%) of 28 RNP patients developed a synechia in the middle meatus. We found that dissolvable CMC foam dressing is associated with very low levels of localised pain and with low levels of postoperative bleeding and synechia formation.

Keywords FESS · Nasal dressing · Pain · Synechia · Bleeding

K. Szczygielski (✉) · P. Rapiejko · A. Wojdas · D. Jurkiewicz
Department of Otolaryngology, Military Institute of The Health
Services, Szaserow 128, 04-141 Warsaw, Poland
e-mail: kornel.szczygielski@wp.pl

Introduction

Chronic rhinosinusitis (CRS) affects 5–15% of the general population in Europe [1]. A wide range of medical and surgical therapies have been used to treat CRS. Although the introduction of endoscopes into surgical treatments brings a new quality to the treatments and yields better outcomes, the risk of postoperative bleeding is still present. Therefore, in the final part of an endoscopic procedure, nasal packing is often used to prevent postoperative bleeding and lateralisation of the middle concha. As nasal packing may cause pain and rhinorrhea and is inconvenient, effective and less uncomfortable haemostatic techniques and materials are needed [2]. Recently, a new nasal dressing was introduced into clinical practice and has been reported to be more pleasant for patients. Our recent observations of the use of dissolvable packs show significantly lower levels of pain relative to standard nasal tamponades made with latex glove fingers [3]. We hypothesised that use of the new dressing device would be less painful for patients and more effective in controlling postoperative bleeding and synechia formation. We decided to compare two nasal dressings: brand new CMC foam and traditional packing. Dissolvable CMC foam (CMCF) (Stamberger Sinu-Foam[®], ArthroCare ENT Stockholm, Sweden) is vegetable-based polysaccharide foam that actively promotes platelet aggregation upon contact with blood. CMC (carboxymethyl cellulose) is widely used as a food additive (E466). Due to its non-allergic and non-toxic properties, it is also used in eardrops, diet pills and toothpastes. According to the manufacturer's descriptions, Stamberger Sinu-Foam[®] is indicated for use within nasal and sinus cavities to control minor bleeding and promote natural wound healing by supporting and separating the mucosal tissue by providing a hydrocolloidal physical