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Closure of Oroantral Fistula Using Platelet Rich Fibrin with Endoscopic Middle Meatal Antrostomy

Abstract:

Background: Oroantral fistula (OAF) is a pathological, epithelialized, and unnatural communication between the maxillary sinus and oral cavity. Recently, functional endoscopic sinus surgery has provided minimally invasive treatment options with fewer postoperative complications. The aim of this study was to evaluate the one stage endoscopic middle meatal antrostomy (EMMA) technique with application of platelet rich fibrin membrane (PRF) for OAF closure and relief of maxillary sinusitis.

Patients and Methods: This study was conducted on nine eligible patients who suffered from OAF with odontogenic sinusitis. A complete excision of the epithelial tract and any necrotic tissue was done with proper curettage. Then, EMMA was performed with simultaneous closure of the OAF by application of PRF membrane and covering it with an acrylic splint. Patients were clinically evaluated for closure of the OAF after 14 days postoperatively, relief of the symptoms, and assessment of the pain level. Also, the size of the bone defect was measured with the aid of computed tomography (CT) preoperatively and after 24 weeks postoperatively.

Results: The patients were seven males and two females with a mean age of 38 years old. Data was collected, tabulated, and statistically analyzed. Healing of the soft tissue wound and bone formation occurred in all patients with relief of maxillary sinusitis without recording any complications. Also, the visual analogue score was statistically significant decreased on the 7th day postoperatively compared with the 1st day postoperatively ($p < .001$).

Conclusions: One-stage EMMA with the application of a PRF membrane and acrylic splint is a reliable alternative technique for OAF closure and relief of maxillary sinusitis that is associated with lower incidence of complications and minimal postoperative pain level.

Keywords: PRF membrane, oroantral fistula, endoscopic middle meatal antrostomy.

Biography

Amira Tarek has completed her master degree in Oral and Maxillofacial Surgery Department in the year 2024 from Alexandria University. She is a dentist at the Faculty of Dentistry, Alexandria University Hospital. She has published two researches recently in reputed journals. She attended different international dental congresses.