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Biography

Nihal Yagmur Ozcan, graduated from Cumhuriyet University Faculty of Dentistry in 2019 and is currently a Research Assistant in Oral and Maxillofacial Surgery at Süleyman Demirel University, Faculty of Dentistry. She presented a poster entitled “Dental Auto-transplantation: A Viable Alternative for Tooth Loss Management?” at the BASS Congress.

Surgical Management of Oroantral Fistula Caused by Impacted Tooth Displacement into The Maxillary Sinus with Caldwell–Luc Approach and Palatal Rotational Flap

Abstract:

Tooth displacement into the maxillary sinus is an uncommon yet clinically significant complication of posterior maxillary extractions. This report describes a 21-year-old male patient with a palatally positioned, impacted maxillary right second premolar (#15). During extraction performed under local anesthesia at an external institution, the tooth was inadvertently displaced into the maxillary sinus because of its close anatomical relationship to the sinus floor. The patient was subsequently referred to our clinic and developed an oroantral fistula. Preoperative cone-beam computed tomography (CBCT) was employed to accurately determine the position of the displaced tooth within the maxillary sinus. Surgical retrieval was accomplished using the Caldwell–Luc approach, while the oroantral communication was simultaneously closed with a palatal rotational mucoperiosteal flap. Postoperative healing progressed uneventfully, and no infection, recurrence, or further complications were observed during follow-up. This case report underlines the importance of understanding the anatomical proximity of impacted premolars to the maxillary sinus, which increases the risk of such intraoperative complications. CBCT plays a crucial role in diagnosis and surgical planning, offering precise localization and enabling a minimally invasive strategy. The Caldwell–Luc technique remains a dependable option for accessing the maxillary sinus in carefully selected cases, and the palatal rotational flap provides a reliable method for achieving tension-free closure of oroantral communications. Early recognition, appropriate imaging, and timely surgical intervention are essential to ensure optimal outcomes and minimize patient morbidity in cases of tooth displacement into the sinus.