

Apical (Retrograde) periimplantitis– modified apicoectomy therapy

D. Gabrić pandurić,¹ I. Smojver,¹ M. Blašković,² J. Brozović,³ M. Sušić¹

¹Department of Oral Surgery, School of Dental Medicine, University of Zagreb, Zagreb, Croatia, ²Private Dental Office, Rijeka, Croatia, ³Private Dental Practise, Split, Croatia

Background: Implant periapical lesion (IPL) also known as retrograde peri-implantitis is a radiolucent lesion that forms around the apex of a clinically stable dental implant while the rest of the implant is surrounded with normal bone. According Reiser and Nevis the incidence of IPL is 10 : 3800 implants placed. Two different forms of IPL can be classified: inactive (noninfected) and active (infected) form. The first one is clinically asymptomatic lesion likely caused by placing implants shorter than prepared implant bed or by bone overheating. No treatment is required, only periodic monitoring. The infected form can be diagnosed by symptoms of swelling, tenderness, pain and presence of fistulous tract. The etiology is related to bone overheating, bacterial contamination, pre-existing bone pathology like cyst or granuloma, and implant surface contamination. Dental implant removal, resection of the apical implant part and debridement of the apical lesion followed by GBR are treatment modalities proposed for IPL.

Aim/Hypothesis: The aim of this case report was to present a 48-year-old female patient with subjective and objective problems associated with clinical entity of chronic sinusitis emerging 3 years after implant placement in premolar area on the right side of the upper jaw using a transcrestal/closed sinus elevation technique.

Material and methods: After the CBCT was done and the implant periapical periodontitis was diagnosed and after the patient has signed an informed consent, trapezoidal mucoperiosteal flap was raised. The modified apicoectomy (resection of the apical implant part with periapical debridement) using the lateral open window technique (a modification for sinus elevation procedure) with piezosurgery unit (PiezoMed, W&H, Austria, 2013.) was performed. Apical part of the implant was removed using low-speed surgical stainless steel bur on surgical handpiece. After apical implant part removal and exochelation of granulation tissue in periapical dental implant area, wound was covered with collagen resorbable membrane (Jason[®] membrane, Botiss Biomaterials, Germany). Soon after the treatment was done, the patient reported all signs and symptoms receding. 6 months after the surgical procedure CBCT image presented a complete healing, with new bone formation in the periapical area of the dental implant.

Results: Soon after the treatment was done the patient reported all signs and symptoms receding, without any clinical complications. During follow-ups first and third month after surgery, no clinical or subjective complications were observed. 6 months after the surgical procedure CBCT image presented a complete healing, with absence of any clinical signs and symptoms.

Conclusion and clinical implications: Modified apicoectomy of the osseointegrated dental implant may be the method of choice for retrograde periimplantitis treatment because of its safety and efficacy in clinical practise.