

BÖLÜM 3

Oral Kavite ve Dental Fistüller

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GİRİŞ

Fistül, iki anatomik boşluk arasında ya da bir internal kavite/veya organ ile vücut yüzeyi arasında oluşan anormal bir patolojik yoldur (1). Literatürde fistül ve sinüs terimleri sıkılıkla birbirinin yerine kullanılmaktadır. Odontojenik kökenli sinüs yollarının en sık nedeni olarak kronik periapikal apsenin süperfisiyal süreci gösterilirken, sekonder nedenler arasında travma ve periodontal enfeksiyonlar yer almaktadır (2, 3).

Çürüklük, travma veya kimyasal irritasyon ilişkili kronik periapikal apse; süngeymsi ve/veya alveolar kemikte inflamatuar kemik rezorbsiyonuna sebep olabilir (4). Pulpal enfeksiyonun pürülün yan ürünleri kök apeks bölgesinden çıktıığında kemik, periosteum ve mukozada en az dirençli yolu izler (3). Kortikal plakaya ulaşan odontojenik fistül kas ataşmanlarının ve fasiyal kılıfların konumuna göre intraoral veya ekstraoral olarak açılabilir (5-7). Sinüs yolu, maksillada kas ataşmanlarının üzerinde veya mandibulada kas ataşmanlarının altında kalırsa çene dışına çıkararak ekstraoral olarak direne olurken, kortikal plakanın perforasyonu maksiller kas bağantılarının altında veya mandibular kas bağantılarının üzerinde sinüs intraoral olarak direne olur ve dentoalveolar fistül meydana gelir (6, 8). Bazı durumlarda direnaj maksiller sinüse veya

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KAYNAKLAR

1. Mukerji R, Jones D. Facial sinus of dental origin: a case report. *Dental update*. 2002;29(4):170-1.
2. Brown RS, Jones R, Feimster T, Sam FE. Cutaneous sinus tracts (or emerging sinus tracts) of odontogenic origin: a report of 3 cases. *Clinical, cosmetic and investigational dentistry*. 2010;2:63.
3. Slutsky-Goldberg I, Tsesis I et al. Odontogenic sinus tracts: a cohort study. *Quintessence International*. 2009;40(1).
4. Cioffi G, Terezhalmay GT, Parlette H. Cutaneous draining sinus tract: an odontogenic etiology. *Journal of the American Academy of Dermatology*. 1986;14(1):94-100.
5. Cohenca N, Karni S, Rotstein I. Extraoral sinus tract misdiagnosed as an endodontic lesion. *Journal of endodontics*. 2003;29(12):841-3.
6. Johnson BR, Remeikis NA, VAN CURA JE. Diagnosis and treatment of cutaneous facial sinus tracts of dental origin. *The Journal of the American Dental Association*. 1999;130(6):832-6.
7. Spear KL, Sheridan PJ, Perry HO. Sinus tracts to the chin and jaw of dental origin. *Journal of the American Academy of Dermatology*. 1983;8(4):486-92.
8. Lewin-Epstein J, Taicher S, Azaz B. Cutaneous sinus tracts of dental origin. *Archives of dermatology*. 1978;114(8):1158-61.
9. Valderhaug J. Reaction of mucous membranes of the maxillary sinus and the nasal cavity to experimental periapical inflammation in monkeys. *International Journal of Oral Surgery*. 1973;2(3):107-14.
10. Mittal N, Gupta P. Management of extra oral sinus cases: a clinical dilemma. *Journal of endodontics*. 2004;30(7):541-7.
11. Soares JA, De Carvalho FB, Pappen FG, et al. Conservative treatment of patients with periapical lesions associated with extraoral sinus tracts. *Australian Endodontic Journal*. 2007;33(3):131-5.
12. Sammut S, Malden N, Lopes V. Facial cutaneous sinuses of dental origin—a diagnostic challenge. *British dental journal*. 2013;215(11):555-8.
13. McWalter GM, Alexander JB, Carlos E, et al. Cutaneous sinus tracts of dental etiology. *Oral surgery, oral medicine, oral pathology*. 1988;66(5):608-14.
14. Schwartz SA, Koch MA, Deas DE, et al. Combined endodontic-periodontic treatment of a palatal groove: a case report. *Journal of Endodontics*. 2006;32(6):573-8.
15. Baumgartner JC, Picket AB, Muller JT. Microscopic examination of oral sinus tracts and their associated periapical lesions. *Journal of endodontics*. 1984;10(4):146-52.
16. Asnaashari M, Ghorbanzadeh S, Azari-Marhabi S, et al. Laser assisted treatment of extra oral cutaneous sinus tract of endodontic origin: a case report. *Journal of Lasers in Medical Sciences*. 2017;8(Suppl 1):S68.
17. Moreira MSNA, de Freitas Archilla JR, Lascala CA, et al. Post-treatment apical periodontitis successfully treated with antimicrobial photodynamic therapy via sinus tract and laser phototherapy: report of two cases. *Photomedicine and Laser Surgery*. 2015;33(10):524-8.
18. Asnaashari M, Mojahedi SM, Asadi Z, et al. A comparison of the antibacterial activity of the two methods of photodynamic therapy (using diode laser 810 nm and LED lamp 630 nm) against Enterococcus faecalis in extracted human anterior teeth. *Photodiagnosis and photodynamic therapy*. 2016;13:233-7.
19. Asnaashari M, Godiny M, Azari-Marhabi S, et al. Comparison of the antibacterial effect of 810 nm diode laser and photodynamic therapy in reducing the microbial flora of root canal in endodontic retreatment in patients with periradicular lesions. *Journal of Lasers in Medical Sciences*. 2016;7(2):99.
20. Komine C, Tsujimoto Y. A small amount of singlet oxygen generated via excited methylene blue by photodynamic therapy induces the sterilization of Enterococcus faecalis. *Journal of endodontics*. 2013;39(3):411-4.



21. Zand V, Milani AS, Amini M, et al. Antimicrobial efficacy of photodynamic therapy and sodium hypochlorite on monoculture biofilms of *Enterococcus faecalis* at different stages of development. *Photomedicine and laser surgery*. 2014;32(5):245-51.
22. Fonseca MB, Júnior POT, Pallotta RC et al. Photodynamic therapy for root canals infected with *Enterococcus faecalis*. *Photomedicine and laser surgery*. 2008;26(3):209-13.
23. Avcı P, Gupta A, Sadasivam M, et al. Low-level laser (light) therapy (LLLT) in skin: stimulating, healing, restoring. *Seminars in cutaneous medicine and surgery*; 2013: NIH Public Access.
24. Yang Z-P, Lai Y-L. Healing of a sinus tract of periodontal origin. *Journal of Endodontics*. 1992;18(4):178-80.
25. Cantatore JL, Klein PA, Lieblich LM. Cutaneous dental sinus tract, a common misdiagnosis: a case report and review of the literature. *CUTIS-NEW YORK-*. 2002;70(5):264-75.
26. Çalışkan M, Şen B, Ozinel M. Treatment of extraoral sinus tracts from traumatized teeth with apical periodontitis. *Dental Traumatology*. 1995;11(3):115-20.
27. Nkenke E, Amann K, Reich S, et al. Submental Cutaneous Sinus Tract as a Result of Progressive Peri-Implantitis: A Case Report. *Journal of periodontology*. 2004;75(10):1417-23.
28. Bender I, Seltzer S. The oral fistula: its diagnosis and treatment. *Oral Surgery, Oral Medicine, Oral Pathology*. 1961;14(11):1367-76.
29. Lee E-Y, Kang J-Y, Kim K-W, et al. Clinical characteristics of odontogenic cutaneous fistulas. *Annals of Dermatology*. 2016;28(4):417-21.
30. Gupta M, Das D, Kapur R, Sibal N. A clinical predicament—diagnosis and differential diagnosis of cutaneous facial sinus tracts of dental origin: a series of case reports. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology*. 2011;112(6):e132-e6.
31. Marx RE, Stern D. Oral and maxillofacial pathology: a rationale for diagnosis and treatment: *Quintessence Publishing Company Hanover Park*; 2012.
32. Barrowman RA, Rahimi M, Evans MD, et al. Cutaneous sinus tracts of dental origin. *Medical journal of Australia*. 2007;186(5):264.
33. Hussein AJ, Alfars AA, Falih MA, et al. Effects of a low level laser on the acceleration of wound healing in rabbits. *North American journal of medical sciences*. 2011;3(4):193.
34. Hopkins JT, McLoda TA, Seegmiller JG, et al. Low-level laser therapy facilitates superficial wound healing in humans: a triple-blind, sham-controlled study. *Journal of athletic training*. 2004;39(3):223.
35. Yilmaz T, Suslu AE, Gursel B. Treatment of oroantral fistula: experience with 27 cases. *American journal of otolaryngology*. 2003;24(4):221-3.
36. Khandelwal P, Hajira N. Management of oro-antral communication and fistula: various surgical options. *World journal of plastic surgery*. 2017;6(1):3.
37. Borgonovo AE, Berardinelli FV, Favale M, et al. Surgical options in oroantral fistula treatment. *Open Dent J*. 2012;6:94-8.
38. Logan RM, Coates EA. Non-surgical management of an oro-antral fistula in a patient with HIV infection. *Aust Dent J*. 2003;48(4):255-8.
39. Hanazawa Y, Itoh K, Mabashi T, et al. Closure of oroantral communications using a pedicled buccal fat pad graft. *Journal of oral and maxillofacial surgery*. 1995;53(7):771-5.
40. Parvini P, Obreja K, Begic A, et al. Decision-making in closure of oroantral communication and fistula. *Int J Implant Dent*. 2019;5(1):13.
41. Amaralunga Nds. Oro-antral fistulae—a study of clinical, radiological and treatment aspects. *British Journal of Oral and Maxillofacial Surgery*. 1986;24(6):433-7.
42. Konate M, Sarfi D, El Bouhairi M, et al. Management of Oroantral Fistulae and Communications: Our Recommendations for Routine Practice. *Case Reports in Dentistry*. 2021;2021.
43. del Rey-Santamaría M, Valmaseda Castellón E, Berini Aytés L, et al. Incidence of oral sinus communications in 389 upper thymolar extraction. *Med Oral Patol Oral Cir Bucal*. 2006;11(4):E334-8.

44. Kraut RA, Smith RV. Team approach for closure of oroantral and oronasal fistulae. *Atlas of the oral and maxillofacial surgery clinics of North America.* 2000;8(1):55-75.
45. Grzesiak-Janas Gy, Janas A. Conservative closure of antro-oral communication stimulated with laser light. *Journal of Clinical Laser Medicine & Surgery.* 2001;19(4):181-4.
46. Poeschl PW, Baumann A, Russmueller G, et al. Closure of oroantral communications with Bichat's buccal fat pad. *J Oral Maxillofac Surg.* 2009;67(7):1460-6.
47. Lin P, Bukachevsky R, Blake M. Management of odontogenic sinusitis with persistent oro-antral fistula. *Ear, nose, & throat journal.* 1991;70(8):488-90.
48. Del Junco R, Rappaport I, Allison GR. Persistent oral antral fistulas. *Archives of Otolaryngology-Head & Neck Surgery.* 1988;114(11):1315-6.
49. Dergin G, Emes Y, Delilbasi C, et al. Management of the Oroantral Fistula. *A Textbook of Advanced Oral and Maxillofacial Surgery Volume 3:* IntechOpen; 2016.
50. Pokora LJ, editor Semiconductor lasers in selected medical applications. Láser technology IV: Applications in medicine; 1995: *International Society for Optics and Photonics.*
51. Ahmed MK, Maganzini AL, Marantz PR, et al. Risk of persistent palatal fistula in patients with cleft palate. *JAMA Facial Plastic Surgery.* 2015;17(2):126-30.
52. Kummer AW. Cleft Palate and Craniofacial Conditions: *A Comprehensive Guide to Clinical Management: A Comprehensive Guide to Clinical Management:* Jones & Bartlett Learning; 2018.
53. Henningsson G, Isberg A. Influence of palatal fistulae on speech and resonance. *Folia Phoniatr (Basel).* 1987;39(4):183-91.
54. Li F, Wang H-T, Chen Y-Y, et al. Cleft relapse and oronasal fistula after Furlow palatoplasty in infants with cleft palate: incidence and risk factors. *International Journal of Oral and Maxillofacial Surgery.* 2017;46(3):275-80.
55. Borzabadi-Farahani A, Groper JN, Tanner AM, et al. The nance obturator, a new fixed obturator for patients with cleft palate and fistula. *Journal of Prosthodontics: Implant, Esthetic and Reconstructive Dentistry.* 2012;21(5):400-3.
56. Parwal C, Pandey A, Saha SS, et al. Open cancellous bone grafting for recalcitrant palatal fistula: repurposing the papineau technique. *Plastic and Reconstructive Surgery Global Open.* 2017;5(11).
57. Ogle OE. The management of oronasal fistulas in the cleft palate patient. *Oral and Maxillofacial Surgery Clinics.* 2002;14(4):553-62.
58. Hardwicke JT, Landini G, Richard BM. Fistula incidence after primary cleft palate repair: a systematic review of the literature. *Plast Reconstr Surg.* 2014;134(4):618e-27e.
59. Smith DM, Vecchione L, Jiang S, et al. The Pittsburgh Fistula Classification System: a standardized scheme for the description of palatal fistulas. *Cleft Palate Craniofac J.* 2007;44(6):590-4.
60. Jackson I. Secondary deformities of cleft lip, nose, and cleft palate. *Plastic surgery.* 1990:2771-877.
61. Bardach J, Salyer KE, Randall P. Surgical techniques in cleft lip and palate. *Plastic and Reconstructive Surgery.* 1992;90(1):130.
62. Penna V, Bannasch H, Stark GB. The turbinate flap for oronasal fistula closure. *Annals of plastic surgery.* 2007;59(6):679-81.
63. Witzel MA, Salyer KE, Ross R. Delayed hard palate closure: the philosophy revisited. *Cleft Lip and Palate: The older patient and future prospects.* 1990;2:218.
64. Ross RB. Treatment variables affecting facial growth in complete unilateral cleft lip and palate. Part 3: alveolus repair and bone grafting. *The Cleft Palate Journal.* 1987;24(1):33-44.
65. Bureau S, Penko M, McFadden L. Speech outcome after closure of oronasal fistulas with bone grafts. *Journal of oral and maxillofacial surgery.* 2001;59(12):1408-13.