

# BÖLÜM 4

## DUDAK DAMAK YARIKLARINDA PROTETİK REHABİLİTASYON



Canan AKAY<sup>1</sup>  
Esra Nur AVUKAT<sup>2</sup>

### DUDAK DAMAK YARIKLARINDA TEDAVİ PRENSİPLERİ

Dudak Damak Yarığına (DDY) sahip hastaların tedavisi zorlu bir süreçtir. Yarık tedavisi erken dönemde başlayıp yetişkinliğe kadar devam etmektedir.<sup>1</sup>

DDY hastalarını tedavi etmenin amaçları:
Normal beslemesini sağlayabilmek
Normal konuşmasını sağlayabilmek
Normal işitmesini sağlayabilmek
Psikolojik durumunu iyileştirmek
Normal dişlenme ve oklüzyonu sağlayabilmek
Estetiği sağlayabilmek

DDY hastalarında birçok tedavi seçeneği bulunmaktadır. Bununla birlikte her vakanın özelliklerine ve yaşına göre uygun tedavinin seçilmesi gerekmektedir.<sup>4</sup> Bu tür hastaların tedavisi; dental anomaliler, kemik defektleri, kötü ağız hijyeni, çok sayıda çürük, muhtemelen periodontal hastalıklar nedeniyle dişlerin erken kaybı sonucunda meydana gelen dişsizlik ve maksiller atrofi nedeniyle zor olmaktadır.<sup>5</sup>

Cerrahi tedavi öncesinde genellikle ortodontik tedavi yapılmaktadır. Çoğu durumda iyi bir fonksiyonel ve estetik sonuç elde edebilmek için protetik rehabilitasyon gerekmektedir.<sup>6</sup> Bireysel koşullar nedeniyle cerrahi ve implant

<sup>1</sup> Doç. Dr., Eskişehir Osmangazi Üniversitesi Diş Hekimliği Fakültesi Protetik Diş Tedavisi AD., cnngar2@hotmail.com

<sup>2</sup> Arş. Gör. Dt., Eskişehir Osmangazi Üniversitesi Diş Hekimliği Fakültesi Protetik Diş Tedavisi AD., dtesravukat@gmail.com

Son yıllarda kemik grefti ihtiyacını azaltmak için zigomatik implantların kullanılması önerilmektedir.<sup>5</sup>

#### **Yarık bölgesinin implant yerleştirmeye uygun olup olmadığını belirleme önergeleri<sup>60</sup>**

İnterdental papilla oluşumunu sağlamak için kemik krestinden proksimal temasa 5 mm'lik mesafe gerekmektedir<sup>63,64</sup>

Implantı doğru konumlandırmak (özellikle labiopalatal ve meziodistal ilişkisi için) cerrahi şablon kullanılmalıdır<sup>65</sup>

Periodontal sağlık için yeterli miktarda keratinize mukoza gerekmektedir<sup>60</sup>

Morse taper implant kemiğin 2 mm altına yerleştirilmelidir<sup>65</sup>

Implant ile komşu diş kökleri arasındaki mesafe 1.5 ile 2 mm arası, komşu iki implant için en az 3 mm olmalıdır<sup>66,67</sup>

Konik ışınılı bilgisayarlı tomografi ile ölçülen labiopalatal kemik kalınlığı ortalama 8 mm olmalıdır

Implant üstü protezin yapılmacılığı bölgeye komşu dişlerin mesial ve distal yüzeyleri arasında 6 ile 7 mm mesafe olmalıdır<sup>68</sup>

Konik ışınılı bilgisayarlı tomografi ile ölçülen minimum vertikal kemik yüksekliği 10 mm olmalıdır

## **KAYNAKLAR**

1. Josip B, Proff P, Bayerlein T, Weingaertner J, Fanghaenel J, Reuther J. Treatment of patients with cleft lip, alveolus and palate—a short outline of history and current interdisciplinary treatment approaches. Journal of Cranio-Maxillofacial Surgery. 2006;34:17-21.
2. Firas A. K. Cleft lip and palate: review article. World journal of pharmaceutical and medical research. 2018;4(7): 155-163.
3. Sowmya S, Shadakshari S, Ravi M, Ganesh S, Gujjari AK. Prosthodontic care for patients with cleft palate. Journal of Orofacial Research. 2013;22-27.
4. Bidra AS. Esthetic and functional rehabilitation of a bilateral cleft palate patient with fixed prosthodontic therapy. Journal of Esthetic and Restorative Dentistry. 2012;24(4):236-244.
5. de Santis D, Trevisiol L, Cucchi A, Canton LC, Nocini PF. Zygomatic and maxillary implants inserted by means of computer-assisted surgery in a patient with a cleft palate. Journal of Craniofacial Surgery. 2010;21(3):858-862.
6. Abreu A, Londono J, Torosian A, Yu J, Levy-Bercowski D. Aesthetic concepts and interdisciplinary approach in a patient with bilateral cleft lip and palate and missing premaxilla: a case report. The Cleft Palate-Craniofacial Journal.0(0):1055665620969290.
7. Kuijpers-Jagtman A. The orthodontist, an essential partner in CLP treatment. B-ENT, 2006, 2, Suppl. 4, 57-62.
8. Christensen K, Juel K, Herskind AM, Murray JC. Long term follow up study of survival associated with cleft lip and palate at birth. Bmj. 2004;328(7453):1405.

9. da Silva Filho OG, De Albuquerque MVP, Kurol J. Ectopic eruption of maxillary first-permanent molars in children with cleft lip. *The Angle Orthodontist*. 1996;66(5):373-380.
10. Proffit WR, Fields HW, Sarver DM, Ackerman JL. *Contemporary orthodontics*. St. Louis. In: Mosby. Inc; 2000.
11. Freitas JAdS, Garib DG, Oliveira M, et al. Rehabilitative treatment of cleft lip and palate: experience of the hospital for rehabilitation of craniofacial anomalies-USP (HRA-C-USP)-Part 2: Pediatric Dentistry and Orthodontics. *Journal of Applied Oral Science*. 2012;20(2):268-281.
12. Gaggl A, Schultes G, Kärcher H. Aesthetic and functional outcome of surgical and orthodontic correction of bilateral clefts of lip, palate, and alveolus. *The Cleft palate-craniofacial journal*. 1999;36(5):407-412.
13. Acar YB, Erverdi AN. Awda: Yarık damak dudak hastalarında yüz estetiği ve dental estetik için yeni ve etkili bir distraksiyon apareyi. *Türkiye Klinikleri Ortodonti-Özel Konular*. 2015;1(1):79-86.
14. Worley ML, Patel KG, Kilpatrick LA. Cleft lip and palate. *Clinics in perinatology*. 2018;45(4):661-678.
15. Zreiqat MH, Hassan R, Hanoun A. Cleft lip and palate management from birth to adulthood: an overview. *Insights into Various Aspects of Oral Health*. 2017:100-121.
16. Gülşen A, Atalay Z, Özel AŞ. Yetişkin dudak damak yarıklı olgularda estetik ve fonksiyonel tedavi yaklaşımı. *Gazi Medical Journal*. 2008;19(1).
17. Grayson BH, Santiago PE, Brecht LE, Cutting CB. Presurgical nasoalveolar molding in infants with cleft lip and palate. *The cleft palate-craniofacial journal*. 1999;36(6):486-498.
18. Hoşnute M, Aktunç E, Kargı E, et al. Yarık damak dudak aile rehberi. *SDÜ Tıp Fakültesi Dergisi*. 2002;9(1).
19. Woo AS. Evidence-based medicine: cleft palate. *Plastic and reconstructive surgery*. 2017;139(1):191e-203e.
20. Lam DJ, Starr JR, Perkins JA, et al. A comparison of nasendoscopy and multiview videofluoroscopy in assessing velopharyngeal insufficiency. *Otolaryngology—Head and Neck Surgery*. 2006;134(3):394-402.
21. Nyberg J, Havstam C. Speech in 10-year-olds born with cleft lip and palate: what do peers say? *The Cleft Palate-Craniofacial Journal*. 2016;53(5):516-526.
22. Rivkin C, Keith O, Crawford P, Hathorn I. Dental care for the patient with a cleft lip and palate. Part 2: The mixed dentition stage through to adolescence and young adulthood. *British dental journal*. 2000;188(3):131-134.
23. Takahashi, T., Fukuda, M., Yamaguchi, T., Kochi, S., Inai, T., Watanabe, M., & Echigo, S.. Use of an osseointegrated implant for dental rehabilitation after cleft repair by periosteoplasty: A case report. *The Cleft palate-craniofacial journal*. 1997;34(3):268-271.
24. Goodacre T, Swan MC. Cleft lip and palate: current management. *Paediatrics and child health*. 2012;22(4):160-168.
25. Duarte GA, Ramos RB, Cardoso MCdAF. Feeding methods for children with cleft lip and/or palate: a systematic review. *Brazilian journal of otorhinolaryngology*. 2016;82(5):602-609.
26. Shkoukani MA, Chen M, Vong A. Cleft lip—a comprehensive review. *Frontiers in pediatrics*. 2013;1:53.
27. Vig KW, Mercado AM. Overview of orthodontic care for children with cleft lip and palate, 1915-2015. *American journal of orthodontics and dentofacial orthopedics*. 2015;148(4):543-556.
28. Tome W, Yashiro K, Kogo M, Yamashiro T. Cephalometric outcomes of maxillary expansion and protraction in patients with unilateral cleft lip and palate after two types of palatoplasty. *The Cleft Palate-Craniofacial Journal*. 2016;53(6):690-694.
29. Titiz S, Çelikkol O, Ateş P, Aras A, Erverdi N. Multidisciplinary treatment of two patients

- with cleft lip and palate using archwise distraction: A case report. *Journal of stomatology, oral and maxillofacial surgery.* 2019;120(1):61-66.
30. Liou EJ, Chen P, Huang CS, Chen YR. Interdental distraction osteogenesis and rapid orthodontic tooth movement: a novel approach to approximate a wide alveolar cleft or bony defect. *Plastic and reconstructive surgery.* 2000;105(4):1262-1272.
  31. Dolanmaz D, Karaman AI, Durmus E, Malkoc S. Management of alveolar clefts using dento-osseous transport distraction osteogenesis. *The Angle Orthodontist.* 2003;73(6):723-729.
  32. Fonseca RJ, Marciani RD, Turvey TA. *Oral and maxillofacial surgery.* 2009.
  33. Mosahebi A, Kangaslu L. Cleft lip and palate. *Surgery (Oxford).* 2006;24(1):33-37.
  34. Bhuskute AA, Tollefson TT. Cleft lip repair, nasoalveolar molding, and primary cleft rhinoplasty. *Facial Plastic Surgery Clinics.* 2016;24(4):453-466.
  35. Esper LA, Sbrana MC, Ribeiro IW, Siqueira de EN, de Almeida AL. Esthetic analysis of gingival components of smile and degree of satisfaction in individuals with cleft lip and palate. *The Cleft palate-craniofacial journal.* 2009;46(4):381-387.
  36. Abreu A, Levy-Bercowski D, Yu J, et al. Interdisciplinary treatment of an adult with bilateral cleft lip and palate with missing premaxilla: The prosthodontic perspective. *The Journal of prosthetic dentistry.* 2015;114(4):609-613.
  37. Moore D, McCord JF. Prosthetic dentistry and the unilateral cleft lip and palate patient. The last 30 years. A review of the prosthodontic literature in respect of treatment options. *The European journal of prosthodontics and restorative dentistry.* 2004;12(2):70-74.
  38. Levy-Bercowski D, Abreu A, Londono J, Haeberle CB. Use of an esthetic overdenture as an alternative treatment in a patient with bilateral cleft lip and palate. *The Journal of prosthetic dentistry.* 2019;121(2):200-205.
  39. Rathee M, Sikka N, Jindal S, Kaushik A. Prosthetic rehabilitation of severe Siebert's Class III defect with modified Andrews bridge system. *Contemporary clinical dentistry.* 2015;6(Suppl 1):S114.
  40. Reisberg DJ. Dental and prosthodontic care for patients with cleft or craniofacial conditions. *The Cleft palate-craniofacial journal.* 2000;37(6):534-537.
  41. Beumer III J, Marunick MT, Esposito SJ. Maxillofacial rehabilitation: prosthodontic and surgical management of cancer-related, acquired, and congenital defects of the head and neck. *Quintessence Pub.* 2011;276.
  42. Zafiropoulos G-G, Rebbe J, Thielen U, Deli G, Beaumont C, Hoffmann O. Zirconia removable telescopic dentures retained on teeth or implants for maxilla rehabilitation. Three-year observation of three cases. *Journal of Oral Implantology.* 2010;36(6):455-465.
  43. Pellecchia R, Kang K-H, Hirayama H. Fixed partial denture supported by all-ceramic copings: a clinical report. *The Journal of prosthetic dentistry.* 2004;92(3):220-223.
  44. Ferrer JFM, González AM, Galdón BO, Juanes KB, Iranzo FB, Tomás AC. Telescopic crowns in adult case with lip and palate cleft. Update on the etiology and management. *Med Oral Patol Oral Cir Bucal.* 2006;11(4):E358-362.
  45. Balkaya MC, Sultan H, Erdem S, Mutlu D. Prosthetic rehabilitation of a patient with a unilateral cleft palate: a clinical report. *The Journal of Prosthetic Dentistry.* 2014;111(4):269-272.
  46. Narendra R, Sashi Purna C, Reddy S, Simhachalam Reddy N, Sesha Reddy P, Rajendra Prasad B. Feeding obturator-a presurgical prosthetic aid for infants with cleft lip and palate-clinical report. *Annals and Essences of Dentistry.* 2013;5(2):1-5.
  47. Akay C, Karakis D, Yalug S. An alternative impression technique for an infant with cleft palate. *Int Dent Res.* 2015;5:38-41.
  48. Acar O, Kaya B, Saka M, Yuzugullu B. Prosthodontic rehabilitation of cleft lip and palate patients using conventional methods: A case series. *International Journal of Prosthodontics & Restorative Dentistry.* 2013;3(3):120.

49. Lopes JFS, Pinto JHN, De Almeida ALPF, Lopes MMW, Dalben GDS. Cleft palate with Bränemark protocol implant-supported fixed denture and removable obturator. The Cleft palate-craniofacial journal. 2010;47(2):211-215.
50. Coşkun A, Yalug S, Bolayır G, Korkmaz T, Yılmaz C. Yumuşak damak obturatörleri. Cumhuriyet Üniversitesi Diş Hekimliği Fakültesi Dergisi. 2003. Cilt:6 Sayı:2.
51. Engin A. Dudak Damak Yarıklarının Protetik Tedavisinde Uygulanan Schiltsky Obturörü, Suersen Obturörü ve Farenks Uzantısız Hareketli Obturatör. Journal of Istanbul University Faculty of Dentistry.11(1):50-64.
52. Muğan N. Çene-yüz protezi. Gençlik Basimevi, İstanbul. 1979.
53. Taylor T, Desjardins R. Construction of the meatus-type obturator: Its advantages and disadvantages. Journal of Prosthetic Dentistry. 1983;49(1):80-84.
54. Beumer J, Curtis T, Firtell D. Maxillofacial rehabilitation. St Louis: Mosby. 1979:90-169.
55. Hengeerajaras P, Froum SJ, Adawi HAA, Yu P, Cho S-C. Anterior tooth replacement with an implant in a grafted alveolar cleft site: case report with a 10-year follow-up. International Journal of Periodontics & Restorative Dentistry. 2019;39(4).
56. Sedlackova K, Duskova M, Strnadel T, Kotova M, Haas M. Using dental implants in the prosthetic rehabilitation of patients with cleft defect type II. The Cleft palate-craniofacial journal. 2011;48(1):98-102.
57. Arshad M, Ameri N, Heidari A, Shirani G. Dental rehabilitation of a cleft lip and palate patient by implant-supported overdenture: A case report. Clinical Case Reports. 2020, 8.10: 1932-1936.
58. Acharya V, Brecht LE. Conventional prosthodontic management of partial edentulism with a resilient attachment-retained overdenture in a patient with a cleft lip and palate: a clinical report. The Journal of prosthetic dentistry. 2014;112(2):117-121.
59. Wermker K, Jung S, Joos U, Kleinheinz J. Dental implants in cleft lip, alveolus, and palate patients: a systematic review. International Journal of Oral & Maxillofacial Implants. 2014;29(2).
60. Pucciarelli MG, Lopes AC, Lopes JF, Soares S. Implant placement for patients with cleft lip and palate: a clinical report and guidelines for treatment. The Journal of prosthetic dentistry. 2019;121(1):9-12.
61. Katsoulis J, Pazera P, Merickske-Stern R. Prosthetically driven, computer-guided implant planning for the edentulous maxilla: a model study. Clinical Implant Dentistry and Related Research. 2009;11(3):238-245.
62. Johansson B, Friberg B, Nilson H. Digitally planned, immediately loaded dental implants with prefabricated prostheses in the reconstruction of edentulous maxillae: a 1-year prospective, multicenter study. Clinical implant dentistry and related research. 2009;11(3):194-200.
63. Wu Y-J, Tu Y-K, Huang S-M, Chan C-P. The influence of the distance from the contact point to the crest of bone on the presence of the interproximal dental papilla. Chang Gung medical journal. 2003;26(11):822-828.
64. Tarnow DP, Magner AW, Fletcher P. The effect of the distance from the contact point to the crest of bone on the presence or absence of the interproximal dental papilla. Journal of periodontology. 1992;63(12):995-996.
65. Buser D, Dahlén C, Schenck R. Guided bone regeneration. Chicago Quintessence. 1994.
66. Tarnow D, Cho S, Wallace S. The effect of inter implant distance on the height of inter-implant bone crest. Journal of periodontology. 2000;71(4):546-549.
67. Priest GF. The esthetic challenge of adjacent implants. Journal of oral and maxillofacial surgery. 2007;65(7):2-12.
68. Jain S, Reddy M, Raghav P, et al. Assessment of tooth proportions in an aesthetically acceptable smile. Journal of clinical and diagnostic research: JCDR. 2015;9(4):ZC01.