

REFERENCES

- [1] Lin L, Huang G, Chen C. Etiology and treatment modalities of anterior open bite malocclusion. *J Exp Clin Med.* 2013; 5(1): 1-4.
- [2] Antoszewska J, Papadopoulos MA, Park HS, Ludwig B. Five-year experience with orthodontic miniscrew implants: a retrospective investigation of factors influencing success rates. *Am J Orthod Dentofacial Orthop.* 2009; 136: 158.
- [3] Manni A, Cozzani M, Tamborrino F, De Rinaldis S, Menini A. Factors influencing the stability of miniscrews. A retrospective study on 300 miniscrews. *Eur J Orthod.* 2011; 33(4): 388-95.
- [4] Miyawaki S, Koyama I, Inoue M, Mishima K, Sugahara T, Takano-Yamamoto T. Factors associated with the stability of titanium screws placed in the posterior region for orthodontic anchorage. *Am J Orthod Dentofacial Orthop.* 2003; 124: 373-8.
- [5] Costa A, Raffaini M, Melsen B. Miniscrews as orthodontic anchorage: a preliminary report. *Int J Adult Orthodon Orthognath Surg.* 1998; 13: 201-9.
- [6] Moon CH, Park HK, Nam JS, Im JS, Baek SH. Relationship between vertical skeletal pattern and success rate of orthodontic mini-implants. *Am J Orthod Dentofacial Orthop.* 2010; 138: 51-7.
- [7] Ozdemir F, Tozlu M, Germec-Cakan D. Quantitative evaluation of alveolar cortical bone density in adults with different vertical facial types using cone-beam computed tomography. *Korean J Orthod.* 2014; 44(1): 36-43.
- [8] Ozdemir F, Tozlu M, Germec-Cakan D. Cortical bone thickness of the alveolar process measured with cone-beam computed tomography in patients with different facial types. *Am J Orthod Dentofacial Orthop.* 2013; 143(2): 190-6.
- [9] Ludwig B, Glasl B, Bowman SJ, Wilmes B, Kinzinger GS, Lisson JA. Anatomical guidelines for miniscrew insertion: palatal sites. *J Clin Orthod.* 2011; 45(8): 433-41.

- [10] Baumgaertel S. Quantitative investigation of palatal bone depth and cortical bone thickness for mini-implant placement in adults. *Am J Orthod Dentofacial Orthop.* 2009; 136(1): 104-8.
- [11] Proffit WR, Fields HW, Sarver DM. *Contemporary orthodontics.* 4th ed. Missouri: Mosby Inc; 2007.
- [12] Chui STN, Wong WK, Hagg U. Orthodontic treatment of anterior open bite. *Int J Paediatr Dent.* 2008; 18: 78-83.
- [13] Shetty KD, Soni VP. Skeletal open bite: a non surgical approach. A review of different techniques. *Sci J.* 2007; 1.
- [14] Sarver DM, Weissman SM. Nonsurgical treatment of open bite in nongrowing patients. *Am J Orthod Dentofacial Orthop.* 1995; 108: 651-9.
- [15] Cangialosi TJ. Skeletal morphologic features of anterior open bite. *Am J Orthod.* 1984; 85: 28-36.
- [16] Haralabakis NB, Yiagtzis SC, Toutounzakis NM. Cephalometric characteristics of open bite in adults: a three dimensional cephalometric evaluation. *Int J Adult Orthodon Orthognath Surg.* 1994; 9: 223-31.
- [17] Nanda SK. Patterns of vertical growth in the face. *Am J Orthod Dentofacial Orthop.* 1988; 93(2): 103-16.
- [18] Frankel R, Frankel C. A functional approach to treatment of skeletal open bite. *Am J Orthod.* 1983; 84: 54-68.
- [19] Haydar B, Enacar A. Functional regulatory therapy in treatment of skeletal open bite. *J Nihon Univ Sch Dent.* 1992; 34: 278-87.
- [20] Nahoum H. Anterior open bite: a cephalometric analysis and suggested treatment procedures. *Am J Orthod.* 1975; 67: 513-21.
- [21] Kim YH. Overbite depth indicator with particular reference to anterior open bite. *Am J Orthod.* 1974; 65: 586-611.
- [22] Kuhn R. Control of anterior vertical dimension and proper selection of extraoral anchorage. *Angle Orthod.* 1968;38:340-9.
- [23] Cousley R. A clinical strategy for maxillary molar intrusion using orthodontic mini-implants and a customized palatal arch. *J Orthod.* 2010; 37(3): 202-8.
- [24] Park Y, Lee H, Choi N, Kim D. Open bite correction by intrusion of posterior teeth with miniscrews. *Angle Orthod.* 2008; 78(4): 699-710.

- [25] Sugawara J, Baik UB, Umemori M, Takahashi I, Nagasaka H, Kawamura H, et al. Treatment and posttreatment dentoalveolar changes following intrusion of mandibular molars with application of a skeletal anchorage system (SAS) for open bite correction. *Int J Adult Orthodon Orthognath Surg.* 2002; 17: 243-53.
- [26] Kang YG, Kim JY, Nam JH. Control of maxillary dentition with 2 midpalatal orthodontic miniscrews. *Am J Orthod Dentofacial Orthop.* 2011; 140(6): 879-85.
- [27] Liou EJW, Chen P, Wang Y, Lin C. A computed tomographic image study on the thickness of the infrazygomatic crest of the maxilla and its clinical implication for miniscrew insertion. *Am J Ortho Dentofacial Orthop.* 2007; 131: 352-6.
- [28] Kim YH, Yang SM, Kim S, Lee JY, Kim KE, Gianelly AA, et al. Midpalatal miniscrews for orthodontic anchorage: factors affecting clinical success. *Am J Orthod Dentofacial Orthop.* 2010; 137(1): 66-72.
- [29] Nakahara K, Matsunaga S, Abe S, Tamatsu Y, Kageyama I, Hashimoto M, et al. Evaluation of the palatal bone for placement of orthodontic mini-implants in Japanese adults. *Cranio.* 2012; 30(1): 72-9.
- [30] Nienkemper M, Wilmes B, Pauls A, Drescher D. Multipurposed use of orthodontic mini-implants to achieve different treatment goals. *J Orofac Orthop.* 2012; 73: 467-76.
- [31] Kyung SH, Hong SG, Park YC. Distalization of maxillary molars with a midpalatal miniscrew. *J Clin Orthod.* 2003; 37: 22-6.
- [32] Flieger S, Ziebura T, Kleinheinz J, Wiechmann D. A simplified approach to true molar intrusion. *Head Face Med.* 2012; 8:30.
- [33] Wilmes B, Nienkemper M, Ludwig B, Nanda R, Drescher D. Upper-molar intrusion using anterior palatal anchorage and the mousetrap appliance. *J Clin Orthod.* 2013; 47(5): 314-20.
- [34] Xun C, Zeng X, Wang X. Microscrew anchorage in skeletal anterior open-bite treatment. *Angle Orthod.* 2007; 77(1): 47-55.
- [35] Papadopoulos MA, Tarawneh F. The use of miniscrew implants for temporary skeletal anchorage in orthodontics: a comprehensive review. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2007; 103(5): e6-e15.

- [36] Bjork A, Skieller V. Growth of the maxillae in 3 dimensions as revealed radiographically by the implant method. *Br J Orthod.* 1977; 4: 53-68.
- [37] Kang S, Lee SJ, Ahn SJ, Heo MS, Kim TW. Bone thickness of the palate for orthodontic mini-implant anchorage in adults. *Am J Orthod Dentofacial Orthop.* 2007;131(4 Suppl):S74-81.
- [38] Winsauer H, Vlachojannis C, Bumann A, Vlachojannis J, Chrubasik S. Paramedian vertical palatal bone height for mini-implant insertion: a systematic review. *Eur J Orthod.* 2012: 541-9.
- [39] Stockmann P, Schlegel KA, Srouf S, Neukam FW, Fenner M, Felszeghy E. Which region of the median palate is a suitable location of temporary orthodontic anchorage devices? A histomorphometric study on human cadavers aged 15-20 years. *Clin Oral Implants Res.* 2009; 20: 306-12.
- [40] Kim HJ, Yun HS, Park HD, Kim DH, Park YC. Soft-tissue and cortical-bone thickness at orthodontic implant sites. *Am J Orthod.* 2006; 130: 177-82.
- [41] Wehrbein H. Bone quality in the midpalate for temporary anchorage devices. *Clin Oral Implants Res.* 2009; 20(1): 45-9.
- [42] Han S, Bayome M, Lee J, Lee YJ, Song HH, Kook YA. Evaluation of palatal bone density in adults and adolescents for application of skeletal anchorage devices. *Angle Orthod.* 2012; 82(4): 625-31.
- [43] Henriksen B, Bavitz B, Kelly B, Harn SD. Evaluation of bone thickness in the anterior hard palate relative to midsagittal orthodontic implants. *Int J Oral Maxillofac Implants.* 2003; 18(4): 578-81.
- [44] Wehrbein H, Merz BR, Diedrich P. Palatal bone support for orthodontic implant anchorage-a clinical and radiological study. *Eur J Orthod.* 1999;21(1):65-70.
- [45] Petrey J, Saunders M, Kluemper G, Cunningham L, Beeman C. Temporary anchorage device insertion variables: effects on retention. *Angle Orthod.* 2010; 80: 446-53.
- [46] Wilmes B, Rademacher C, Olthoff G, Drescher D. Parameters affecting primary stability of orthodontic mini-implants. *J Orofac Orthop.* 2006; 67: 162-74.

- [47] Ciarella M, Goldstein S, Kuhn J, Cody D, Brown M. Evaluation of orthogonal mechanical properties and density of human trabecular bone from the major metaphyseal regions with materials testing and computed tomography. *J Orthop Res.* 1991; 9: 674-82.
- [48] Motoyoshi M, Yoshida T, Ono A, Shimizu N. Effect of cortical bone thickness and implant placement torque on stability of orthodontic mini-implants. *Int J Oral Maxillofac Implants.* 2007; 22: 779-84.
- [49] Cattaneo PM, Dalstra M, Melsen B. Analysis of stress and strain around orthodontically loaded implants: an animal study. *Int J Oral Maxillofac Implants.* 2007;22:213-25.
- [50] Cattaneo PM, Dalstra M, Melsen B. The finite element method: a tool to study orthodontic tooth movement. *J Dent Res.* 2005;84:428-33.
- [51] Wehrbein H, Feifel H, Diedrich P. Palatal implant anchorage reinforcement of posterior teeth: a prospective study. *Am J Orthod Dentofacial Orthop.* 1999; 116:678-86.
- [52] Schlegel KA, Kinner F, Schlegel KD. The anatomic basis for palatal implants in orthodontics. *Int J Adult Orthodon Orthognath Surg.* 2002; 17(2):133-9.
- [53] Frost H. The mechanostat: a proposed pathogenic mechanism of osteoporoses and the bone mass effects of the mechanical and non-mechanical agents. *Bone Miner.* 1987; 2: 73-85.
- [54] Frost H. Wolff's law and bone's structural adaptations to mechaical usage: an overview for clinicians. *Angle Orthod.* 1994; 64: 175-88.
- [55] Proffit WR, Fields HW. Occlusal forces in normal- and long-face children. *J Dent Res.* 1983; 62:571-4.
- [56] Proffit WR, Fields HW, Nixon W. Occlusal forces in normal- and long- face adults. *J Dent Res.* 1983; 62:566-70.
- [57] Navarro M, delgado E, Monje F. Changes in mandibular rotation after muscular resection. Experimental study in rats. *Am J Orthod Dentofacial Orthop.* 1996; 108:367-79.
- [58] Garcia-Morales P, Buschang P, Throckmorton G, English J. Maximum bite force, muscle efficiency and mechanical advantage in children with vertical growth patterns. *Eur J Orthod.* 2003; 25:265-72.

- [59] Horner KA, Behrents RG, Kim KB, Buschang PH. Cortical bone and ridge thickness of hyperdivergent and hypodivergent adults. *Am J Orthod Dentofacial Orthop.* 2012;142(2):170-8.
- [60] William CS, Allan GF, Predag S. Clinical applications of cone-beam computed tomography in dental practice. *J Can Dent Assoc.* 2006;72:75-80.
- [61] Gribel B, Gribel M, Frazao D, McNamara J, Manzi F. Accuracy and reliability of craniometric measurements on lateral cephalometry and 3D measurements on CBCT scans. *Angle Orthod.* 2011;81(1):26-35.
- [62] Farnsworth D, Rossouw PE, Ceen R, Buschang P. Cortical bone thickness at common miniscrew implant placement sites. *Am J Orthod Dentofacial Orthop.* 2011; 139: 495-503.
- [63] Cassetta M, Sofan AA, Altieri F, Barbato E. Evaluation of alveolar cortical bone thickness and density for orthodontic mini-implant placement. *J Clin Exp Dent.* 2013; 5(5): e245–e52.
- [64] Yang L, Li F, Cao M, Chen H, Wang X, Chen X, et al. Quantitative evaluation of maxillary interradicular bone with cone-beam computed tomography for bicortical placement of orthodontic mini-implants. *Am J Orthod Dentofacial Orthop.* 2015; 147(6): 725-37.
- [65] Silvestrini Biavati A, Tecco S, Migliorati M, Festa F, Marzo G, Gherlone E, et al. Three-dimensional tomographic mapping related to primary stability and structural miniscrew characteristics. *Orthod Craniofac Res.* 2011;14(2):88-99.
- [66] Liou E, Chen P, Wang Y, Lin J. A computed tomographic image study on the thickness of the infrazygomatic crest of the maxilla and its clinical implications for miniscrew insertion. *Am J Orthod Dentofacial Orthop.* 2007;131(3): 352-6.
- [67] Baumgaertel S, Hans M. Assessment of infrazygomatic bone depth for miniscrew insertion. *Clin Oral Impl Res.* 2009; 20:638-42.
- [68] Vibhuteand PJ, Patil PA. Inferior level of maxillary sinus and cortical bone thickness at maxillary posterior quadrant, in three different growth patterns: 3D-computed tomographic study. *J of Oral Implants.* 2014; 2014:1-9.
- [69] Gracco A, Lombardo L, Cozzani M, Siciliani G. Quantitative cone-beam computed tomography evaluation of palatal bone thickness for orthodontic miniscrew placement. *Am J Orthod Dentofacial Orthop.* 2008; 134(3):361-9.

- [70] Bernhart T, Vollgruber A, Gahleitner A, Dortbudak O, Haas R. Alternative to the median region of the palate for placement of an orthodontic implant. *Clin Oral Implants Res.* 2000;11(6):595-601.
- [71] Gracco A, Lombardo L, Cozzani M, Siciliani G. Quantitative evaluation with CBCT of palatal bone thickness in growing patients. *Prog Orthod.* 2006; 7(2):164-74.
- [72] Gahleitner A, Podesser B, Schick S, Watzek G, Imhof H. Dental CT and orthodontic implants: imaging technique and assessment of available bone volume in the hard palate. *Eur J Radiol.* 2004;51:257-62.
- [73] Kyung SH. A study on the bone thickness of midpalatal suture area for miniscrew insertion. *Korean J Orthod.* 2004; 34(1):63-70.
- [74] Kyung SH, Lim JK, Park YC. The use of miniscrew as an anchorage for the orthodontic tooth movement. *Korean J Orthod.* 2001;31(4):415-24.
- [75] Asscherickx K, Hanssens J-L, Wehrbein H, Sabzevar MM. Orthodontic anchorage implants inserted in the median palatal suture and normal transverse maxillary growth in growing dogs: a biometric and radiographic study. *Angle Orthod.* 2005;75(5):826-31.
- [76] Janovic A, Milovanovic P, Saveljic I, Nikolic D, Hahn M, Rakocevic Z, et al. Microstructural properties of the mid-facial bones in relation to the distribution of occlusal loading. *Bone.* 2014;68:108-14.
- [77] Strait DS, Richmond BG, Spencer MA, Ross CF, Dechow PC, Wood BA. Masticatory biomechanics and its relevance to early hominid phylogeny: an examination of palatal thickness using finite-element analysis. *J Hum E vol.* 2007; 52(5):585-99.
- [78] Menegaz RA, Sublett SV, Figueroa SD, Hoffman TJ, Ravosa MJ. Phenotypic plasticity and function of the hard palate in growing rabbits. *Anat Rec.* 2009; 292(2):277-84.
- [79] Janovic A, Saveljic I, Vukicevic A, Nikolic D, Rakocevic Z, Jovicic G, et al. Occlusal load distribution through the cortical and trabecular bone of the human mid-facial skeleton in natural dentition: A three-dimensional finite element study. *Ann Anat.* 2015;197:16-23.

- [80] Toro-Ibacache V, Muñoz VZ, O'Higgins P. The relationship between skull morphology, masticatory muscle force and cranial skeletal deformation during biting. *Ann Anat.* 2016;203:59-68.
- [81] Fujiki T, Inoue M, Miyawaki S, Nagasaki T, Tanimoto K, Takano-Yamamoto T. Relationship between maxillofacial morphology and deglutitive tongue movement in patients with anterior open bite. *Am J Orthod Dentofacial Orthop.* 2004;125(2):160-7.
- [82] Johari M, Kaviani F, Saeedi A. Relationship between the thickness of cortical bone at maxillary mid-palatal area and facial height using CBCT. *Open Dent J.* 2015;9:287.
- [83] Vu T, Bayome M, Kook Y-A, Han SH. Evaluation of the palatal soft tissue thickness by cone-beam computed tomography. *Korean J Orthod.* 2012;42(6):291-6.