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HUMAN TYPOLOGICAL ASPECTS CONCERNING TO DENTAL PATHOLOGY

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Many dental anomalies in part permanent tooth agenesis, maxillary lateral incisor microdontia, palatally displaced canines as well as distoangulation of mandibular second premolars are frequently associated with maxillary lateral incisor agenesis and are considered to be of genetic nature in the patients aged 14 and over [1, p. 732e1-6]. Also anomalies ectopic localizations are described particularly of Carabelli's tubercle in Italy [2, p.517-524], maxillary second molar with 3 mesiobuccal canals in Turkey [3, p.43-46], maxillary molar with four roots and four buccal canals in India [4, p.80-84] maxillary first molar with unusual morphology in Turkey [5, p.62-65]. Implantologists wrote his works in different countries: Portugal [6, p.6825213.], Sweden [7, p.60-69], Brazil [8, p.770-775], Switzerland [9, p.338-347], America [10, p.97-110]. Dental implants on maxilla have their peculiarities by the works of American dentists [11, p.222-227], the Indian implantologists (moreover in maxilla anterior region) [12, p.1], the ones from Korea (in anterior maxilla) [13, p.312-327], Lebanon [14, p.202-208].

New investigative methods were created in various countries in part angular photography in the Kenyans and Chinese [15, p.1064-1072], in the Koreans [16, p.167-174].

Reconstruction-based digital dental occlusions are created at partially edentulism [17, p.201-210]. It is very important in maxillary-facial surgery, implantology. The previous work and this one were performed by the Chinese dentists [18, p.219-223].

Facial affect is percepted differently by people from various cultures, for example, among Roman and Arabic script readers [19, p.51-64].

Unilateral long-lasting superior oblique muscle palsy is accompanied by significant disturbance in face appearance, vision disorders as well as various dental problems (in part in mastication) as well as dental and ophthalmological operative interventions necessity [20, p.1174-1180; 21, p.457-461]. For instance, we met work of the Turkish author [22, p.283-287]. It is evidently that creating the best possible facial esthetic must be among dentist tasks in priority. It is important to mention that not only face left-right asymmetry gets disturbed but the superior-inferior one and that this problem can have congenital character [23, p.386-389].

This scientific direction can be useful in applied dentistry various directions, also to opinions of dentists from different countries. Soft tissue response and face symmetry saving is rather important after orthognathic surgery according to the German scientists opinion [24, p.339-345], Italian [25, p.1448-1452]. Face digital three-dimensional 3D image fusion processes (facial soft tissues, facial skeleton and dentition) are applied for orthodontics and orthognathic surgery planning and evaluating [26, p.341-352].

Portuguese dentists studied epidemiology and phospholipase activity of oral Candida SPP among patients with central nervous system diseases before and after cleaning procedure (ethnic aspect) [27, p.19-23]. Candidosis in children sick in Down’s syndrome was studied in ethno-age aspect in Portugal [28, p.383-396]. Iranian dentists found candidosis prevalence in denture wearing patients in 57,6% without reliable relationship between age and sex and with smoking and bad oral

hygiene as candidosis reasons [29, p.16-22]. Iranian dentists performed interesting work the main results of which concluded increased susceptibility to candidiasis in dentures wearers with O(I) blood group and decreased susceptibility in the ones with B(III) blood group [30, p.398-403].

Oral cavity heath in the students must be paid very big attention in part due to oral hygiene maintaining [31, p.351-362], tobacco cessation counseling, attitude to its application and anti-smoking programmes in various countries with national surveys managements in some of them in part in Iran [32, p.287-292; 33, p.333-338], Nigeria [34, p.406-412], Romania [35, p.172-180], Belgium [36, p.177-183], Greece [37, p.119-125], Italy [38, p.17-25], Ireland [39, p.17-22].

LITERATURE

1. Garib D.G., Alencar B.M., Laurism J.R., Baccetti T. Agenesis of maxillary lateral incisors and associated dental anomalies //Am J Orthod Dentofacial Orthop.-2010 Jun.-Vol.137, N.6.-P.732e1-6.

2. Ambu E., Dallari B., Generali L., Consolo U. Ectopic localization of Carabelli's tubercle. Review of the literature and description of two clinical classes //Minerva Stomatol.-2005 Sep.-Vol.54, N.9.-P.517-524.

3. Ozcan E., Aktan A.M., Ari H. A case report: Unusual anatomy of maxillary second molar with 3 mesiobuccal canals //Oral Surg Oral Med Oral Pathol Oral Radiol Endodont.-2009 Jan.-Vol.107, N.1.-P.43-46.

4. Sharma R., Maroli K., Sinha N., Simgh B. An unusual maxillary molar with four roots and four buccal canals confirmed with the aid of spiral computed tomography: a case report //J Int Oral Health.-2014 Jul.-Vol.6, N.4.-P.80-84.

5. Cobankara F.K., Terlemez A., Orucoglu H. Maxillary first molar with unusual morphology //Oral Surg Oral Med Oral Pathol Oral Radiol Endodont.-2008 Dec.-Vol.106, N.6.-P.62-65.

6. Zita Gomes R., de Vasconcelos M.R., Lopes Guerra I.M., de Almeida R.A.B., de Campos Felino A.C. Implant Stability in the Posterior Maxilla: A Controlled Clinical Trial //Biomed Res Int.-2017.-N.2017.-P.6825213.

7. Ostman P.O., Hellman M., Sennerby L. Direct implant loading in the edentulous maxilla using a bone density-adapted surgical protocol and primary implant stability criteria for inclusion //Clin Implant Dent Relat Res.-2005.-N.7 Suppl 1.-P.60-69.

8. Novellino M.M., Sesma N., Zanardi P.R., Laganá D.C. Resonance of frequency analysis of dental implants placed at the posterior maxilla varying the surface treatment only: A randomized clinical trial //Clin Implant Dent Relat Res.-2017 Oct.-Vol.19, N.5.-P.770-775.

9. Bornstein M.M., Hart C.N., Halbritter S.A., Morton D., Buser D. Early loading of nonsubmerged titanium implants with a chemically modified sand-blasted and acid-etched surface: 6-months results of a prospective case series study in the posterior mandible focusing on peri-implant crestal bone changes and implant stability quotient (ISQ) values //Clin Implant Dent Relat Res.-2009 Dec.-Vol.11, N.4.-P.338-347.

10. Cooper L., De Kok I.J., Reside G.J., Pungpapong P., Rojas-Vizcaya F. Immediate fixed restoration of the edentulous maxilla after implant placement //J Oral Maxillofac Surg.-2005 Sep.-Vol.63 (9 Suppl 2).-P.97-110.

11. Turkyilmaz I., Avci M., Kuran S., Ozbek E.N. A 4-year prospective clinical and radiological study of maxillary dental implants supporting single-tooth crowns using early and delayed loading protocols //Clin Implant Dent Relat Res.-2007 Dec.-Vol.9, N.4.-P.222-227.

12. Gupta S., Deo V., Williams C. Interproximal papillae Reconstruction around Implant Using Subepithelial Connective Tissue Graft in Maxillary Anterior Region: A Case Series //J Oral Maxillofac Res.-2012 Jul.-Vol.3, N.2.-P.1.

13. Gao E., Hei W.H., Park J.C., Pang K., Kim S.K., Kim B., Kim S.M., Lee J.H. Bone-level implants placed in the anterior maxilla: an open-label, single-arm observation study //J Periodontal Implant Sci.-2017 Oct.-Vol.47, N.5.-P.312-327.

14. Berberi A.N., Noujeim Z.N., Kanj W.H., Mearawi R.J., Salameh Z.A. Immediate placement and loading of maxillary single-tooth implants: a 3-year

prospective study of marginal bone level //J Contemp Dent Pract.-2014 Mar.-Vol.15, N.2.-P.202-208.

15. Wamalwa P., Amisi S.K., Wang Y., Chen S. Angular photogrammetric comparison of the soft-tissue facial profile of Kenyans and Chinese //J Craniofac Surg.-2011 May.-Vol.22, N.3.-P.1064-1072.

16. Rhee S.C., Dhong E.S., Yoon E.S. Photogrammetric facial analysis of attractiveness in Korean entertainers //Aesthetic Plast Surg.-2009 Mar.-Vol.33, N.2.-P.167-174.

17. Zhang J., Xia J.J., Zhou X. Reconstruction-based Digital Dental Occlusion of the Partially Edentulous Dentition //IEEE J Biomed Health Inform.-2017 Jan.-Vol.21, N.1.-P.201-210.

18. Li Y. Occlusal evaluation and design of dental implant therapy in defect dentition //Zhonghua Kou Qiang Yi Xue Za Zhi.-2016 Apr.-Vol.51, N.4.-P.219-223.

19. Health R.L., Rouhana A., Ghanem D.A. Asymmetric bias in perception of facial affect among Roman and Arabic script readers //Laterality.-2005.-N.10.-P.51-64.

20. Abtahi M.A. Assessment of the changes of macular thickness in inferior oblique weakening surgery //Journal of Isfahan Medical School (I.U.M.S.).-1st week December 2016.-Vol.34, N.401.-P.1174-1180.

21. Kelkar J., Kanade A., Agashe S., Kelkar A., Khandekar R. Outcomes of Asymmetric Primary Inferior Oblique Muscle Overaction Managed by Bilateral Myectomy and Tucking of Proximal Muscle End: A Cohort Study //Middle East Afr J Ophthalmol.-2015 Oct-Dec.-Vol.22, N.4.-P.457-461.

22. Duranoglu Y. Effectiveness of disinsertion-resection and tucking of the inferior oblique muscle in patients with unilateral long-standing superior oblique muscle palsy //J Pediatr Ophthalmol Strabismus.-2007 Sep-Oct.-Vol.44, N.5.-P.283-287.

23. Enz T.J., Jaggi G.P., Weber K.P., Sturm V., Landau K. Inferior oblique muscle anteriorization in congenital superior oblique palsy //Klin Monbl Augenheilkd.-2014 Apr.-Vol.213, N.4.-P.386-389.

24. Wermker K., Kleinheinz J., Jung S., Dirksen D. Soft tissue response and facial asymmetry after orthognathic surgery //J Craniomaxillofac Surg.-2014 Sep.-Vol.42, N.6.-P.339-345.

25. Verzé L., Bianchi F.A., Schellino E., Ramieri G. Soft tissues changes after orthognathic surgical correction of jaws asymmetry evaluated by three-dimensional surface laser scanner //J Craniofac Surgery.-2012 Sep.-Vol.23, N.5.-P.1448-1452.

26. Plooij M., Maal T.J., Haers P., Borstlap W.A., Kuipers-Jagtman A.M., Bergé S.J. Digital three-dimensional 3D image fusion processes for planning and evaluating orthodontics and orthognathic surgery. A systematic review //Int J Oral Maxillofac Surg.-2011 Apr.-Vol.40, N.4.-P.341-352.

27. Ribeiro A.S., Silva D.A., Silva F.P., Santos G.C., Campos L.M., Oliveira L.V., Santos D.A. Epidemiology and phospholipase activity of oral Candida SPP among patients with central nervous system diseases before and after cleaning procedure //Braz J Microbiol.-2010 Jan.-Vol.41, N.1.-P.19-23.

28. Vieira J.D., Ribeiro E.L., Campos Cde C., Pimenta F.C., Toledo O.A., Nagato G.M., Souza N.A., Ferreira W.M., Cardoso C.G., Dias S.M., Araúrlo Júnior C.A., Zatta D.T., Santos Jde S. Candida albicans isolated from buccal cavity of children with Down's syndrome: occurrence and growth inhibition by Streptomyces sp //Rev Soc Bras Med Trop.-2005 Sep-Oct.-Vol.38, N.5.-P.383-386.

29. Khozeymeh F., Bahremand T. Evaluation of relative frequency of chronic atrophic candidosis in patient with denture referred to dental offices in Yasouj (2003) //Journal of Islamic Dental Association of Iran (Majallah-i-Dandanpizishki).-Winter 2006.-Vol.17, N.4(57).-P.16-22.

30. Mehr Mofakham Sh., Farokhi B. Correlation between denture induced candidosis and blood group in secretor and nonsecretors //Journal of Dental School Shahid Beheshti University of Medical Science.-Fall 2002.-Vol.20, N.3.-P.398-403.

31. Haerian Ardakani A., Morowati Sharifabad M.A., Rezapour Y., Pourghayumi Azadeh A. Investigation of the relationship of oral health literacy and oral hygiene self-efficacy with DMFT and gingival index in students of Ardakan university //Payesh.-May-June 2015.-Vol.14, N.3.-P.351-362.

32. Ahmadian M., Khami M.R., Ahamdi A.E., Razeghi S., Yazdani R. Effectiveness of two interactive educational methods to teach tobacco cessation counceling for senior dental students //Eur J Dent.-2017 Jul-Sep.-Vol.11, N.3.-P.287-292.

33. Razavi S.M., Zolfaghari B., Doost M.E., Tahani B. Attitude and practices among dentists and senior dental students in Iran toward tobacco cessation as an effort to prevent oral cancer //Asian Pac J Cancer Prev.-2015.-Vol.16, N.1.-P.333-338.

34. Uti O.G., Sofola O.O. Smoking cessation counseling in dentistry: attitudes of Nigerian dentists and dental students //J Dent Educ.-2011 Mar.-Vol.75, N.3.-P.406-412.

35. Dumitrescu A.L., Ibric S., Ibric-Cioranu V. Opinions of Romanian Dental Students Toward Tobacco Use Interventions in the Dental Setting //J Cancer educ.-2016 Mar.-Vol.31, N.1.-P.172-180.

36. Vanobbergen J., Nuytens P., van Herk P., De Visschere L. Dental students' attitude towards anti-smoking programmes: a study in Flanders, Belgium // Eur J Dent Educ.-2007 Aug.-Vol.11, N.3.-P.177-183.

37. Polychonopoulou A., Gatou T., Athanassouli T. Greek dental students' attitudes toward tobacco control programmes //Int J Dent.-2004 Jun.-Vol.54, N.3.-P.119-125.

38. Pizzo G., Licata M.E., Piscopo M.R., Coniglio M.A., Pignato S., Davis J.M. Attitudes of Italian dental and dental hygiene students toward tobacco-use cessation //Eur J Dent Educ.-2010 Feb.-Vol.14, N.1.-P.17-25.

39. McCartan B., McCreary C., Healy C. Attitudes of Irish dental, dental hygiene and dental nursing students and newly qualified practitioners to tobacco use cessation: a national survey //Eur J Dent Educ.-2008 Feb.-Vol.12, N.1.-P.17-22.

актуальним постає питання кількісної оцінки ефективності використання таких екранів.

Ключові слова: вібраційні машини, аеродинамічні екрани, сепарація, аеродинамічні характеристики, розрахунок.

Ціль даної статті – визначити показники та методи оцінки ефективні застосування аеродинамічних екранів під час вібраційної обробки насіння з вираженими аеродинамічними властивостями.

Матеріали та методи.

Для оцінки ефективності використання аеродинамічних екранів стосовно усунення шкідливого впливу аеродинамічного фактора при вібраційному очищення (сепарації) насіння, що має яскраво виражені аеродинамічні характеристики, було проведено ряд розрахунків на моделі руху повітряної маси під впливом паралельних робочих площин вібраційної машини, що синхронно коливаються. Для розрахунку використовувалася математична модель, основні положення якої викладено в [5-7].

При цьому граничні умови, з урахуванням використання аеродинамічного екрану, мали вигляд:

- для грані А (верхня грань):

$$u_{i,j,k,\tau} = 0, \qquad v_{i,j,k,\tau} = 0, \qquad w_{i,j,k,\tau} = 0\,, \tag{1}$$

$$p_{i,j,k,\tau} = p^{\text{атм.}} + \rho\,\frac{{V_{x,\tau}^{\text{к}}}^2 + {V_{y,\tau}^{\text{к}}}^2 + {V_{z,\tau}^{\text{к}}}^2}{2} \cdot \left(-\text{sign}\left\{V_{z,\tau}^{\text{к}}\right\}\right), \tag{2}$$

$$\begin{gathered} i = 1, 2, \ldots, \left(\frac{b}{h} - 1\right), \qquad j = 1, 2, \ldots, \left(\frac{a}{l} - 1\right), \\ k = \frac{H}{s} \quad , \qquad \tau = 0, 1, \ldots, \frac{T}{\Delta t} \end{gathered} \tag{3}$$

$$V_{x,\tau}^{\text{к}} = -A \cdot \Omega \cos(\Omega\tau\Delta t) \sin\beta \sin(\varepsilon - \alpha)\ , \tag{4}$$

$$V_{y,\tau}^{\text{к}} = -A \cdot \Omega \cos(\Omega\tau\Delta t) \left[\tan\alpha \cos\beta \sin(\varepsilon - \alpha) - \frac{\cos\delta}{\cos\beta}\cos(\varepsilon - \alpha)\right], \tag{5}$$