

Ethnic Particularities of Nasal Bone Pyramid Using Multislice Computed Tomography

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Abstract

The aim of this study is to identify the anatomical variants of nasal bones structures in Caucasian (middle European and Balkano-Caucasian types) and Mongoloid patients. We performed a retrospective analysis of multi-slice computed tomography (MSCT) data of 97 patients with the image processing (multiplanar and 3D-volume rendering). Every kind of ethnic group has their proper specialties and described variants of pyriform apertures and nasal bones including its caudal part at the site its conjunction with nasal cartilages. The anatomic variability of these structures forming nasal shape determines the aim (augmentation, reduction) and methods of surgical approach in patients seeking rhinoplasty.

Key words: Computed Tomography, External Nose, Nasal Bone, Pyriform Sinus, Rhinoplasty.

References

1. Total of Russian population census of 2010: Statistical compendium. Moscow: IIC «Statistics of Russian Federation», 2011. 87 p. (in Russian).
2. *Kun K. S.* Races of Europe. Moscow: AST: Astrel', 2013. 816 p. (in Russian).
3. Socioeconomic status in Moscow in January 2017. Moscow: Statistics of Moscow, 2017. 28 p. (in Russian).
4. *Asghar A., Dixit A., Rani M.* Morphometric study of nasal bone and piriform aperture in human dry skull of Indian origin. *J. Clin. Diagn. Res.* 2016. V. 10. No. 1. P. AC05–7.
5. Britannica Encyclopaedia. T. II. Moscow: OOO «Astrel'», 2006. 2325 p. (in Russian).
6. *Gardner S. A.* Quantitative assessment of the morphology of the piriform aperture as an indicator of race. *FMAR.* 2015. V. 3. P. 7–15.
7. *Lee S. H., Yang T. Y., Han G. S., Kim Y. H., Jang T. Y.* Analisis of the nasal bone and nasal pyramid by three-dimensional computed tomography. *Eur. Arch. Otorhinolaryngol.* 2008. V. 265. No. 4. P. 421–424.
8. *Moon K. M., Cho G., Sung H. M., Jung M. S., Tak K. S., Jung S. W., Lee H. B., Suh I. S.* Nasal anthropometry on facial computed tomography scans for rhinoplasty in koreans. *Arch. Plast. Surg.* 2013. V. 40. No. 5. P. 610–615.
9. *Papesch E., Papesch M.* The nasal pyriform aperture and its importance. *J. Otolaryngol. Head Neck Surg.* 2016. V. 1. No. 4. P. 89–91.
10. *Wang Z. S., Peng M. Q., Wei H., Ying C. L., Wan L.* The subtle anatomical structures of normal nasal bone in MSCT image and forensic identification. *Fa Yi Xue Za Zhi.* 2014. V. 30. No. 3. P. 184–187.

11. *Yuzbasioglu N., Yilmaz M. T., Cicekcibasi A. E., Seker M., Sakarya M. E.* The evaluation of morphometry of nasal bone and pyriform aperture using multidetector computed tomography. *J. Craniofac. Surg.* 2014. V. 25. No. 6. P. 2214–2219.
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