THE CLINICAL AND ANATOMICAL RATIONALE OF BALANCED TRANSETHMOIDAL ENDOSCOPIC AND LATERAL ORBITAL BONE DECOMPRESSION IN THE PATIENTS PRESENTING WITH OPTIC NEUROPATHY CAUSED BY THYROID EYE DISEASE

Kochetkov P. A. [1], *Grusha Ya. O.* [1, 2], *Ismailova D. S.* [1], *Svistushkin V. M.* [1], *Nadbitova E. B.* [1]

[1] Sechenov First Moscow State Medical University, Moscow, Russia; [2] Research Institute of Eye Diseases, Moscow, Russia
katerinadbitova@gmail.com

Key words: *orbital bone, decompression, transethmoid, optic neuropathy*

Aim. Of the present study was to substantiate the use of transethmoidal endoscopic orbital decompression in combination with lateral bone orbital decompression for TED.

Material and Methods. We evaluated the possibility of surgicalaccess to orbital apex using the sectional material. The stage-by-stage dissection of the orbit and resection of the lateral and medialorbital walls were carried out. We studied the following factors: the extent (depth) of the created bony window; the degree of thecloseness of the bony window to the Zinn ring; the degree of mobility of orbital soft tissues; the probability of the damage to otheradjacent structures; the assessment of probable retraction of orbital fat and eye muscles surrounding soft tissues after resection of thebone orbital walls.

Results and Discussion. The data obtained provided a basis for the application of bilateral (lateral and medial) bone decompression in thepatient presenting with optic neuropathy. The high effectiveness of this technique was demonstrated as apparent from the improvement of the visual functions and the reduction of exophthalmos.

Conclusions. Balanced lateral and medial bony orbital decompression is shown to be the optimal method for the treatment of ON associated with TED.

AGE AND GENDER CHANGES IN THE DIAMETER OF THE HUMAN ABDOMINAL AORTA

Kolsanov A. V., Gelashvili O. A., Nazaryan A. K.*

Samara State Medical University of the Ministry of Health of Russia, Samara, Russia
* g_o_a@bk.ru

Key words: *«Anatomia in silico», abdominal aorta, renal arteries, arterial hypertension*

Aim. Compare the diameters of the suprarenal and infrarenal parts of the human abdominal aorta.

Material and Methods. By the method of computational anatomy «Anatomia in silico» three-dimensional models of the vascular bed of the abdominal cavity and retroperitoneal space were constructed on the basis of multispiral computed tomography. 56 men and 36 women aged 21 to 86 years who did not have a history of kidney disease and kidney vessels.

Results and Discussion. In the course of our work, we found sex and age differences. In men, the diameter of the abdominal aorta averaged 19.74±3.67 mm, and in women 17.02±2.9 mm. The minimum diameter of the abdominal aorta in men was 14.07 mm, and in women 9.89 mm. Changes in the diameters of the abdominal aorta at the level of the renal artery divergence are associated with age-related changes in the elasticity of the abdominal aorta wall and significantly increase in both men and women. Moreover, the increase in diameter in women occurs smoothly during adulthood (from 15.7 to 16.25 mm) and during the elderly and senile age (from 18.29 to 18.76 mm). In men, the diameter oscillations are more pronounced in adulthood (from 16.71 to 19.03 mm), and in the transition from the elderly to the senile (from 20.07 to 23.74 mm).

Conclusions. The change in the diameter of the abdominal aorta can become an important circumstance that affects blood circulation inside the kidney and, as a consequence, can cause arterial hypertension.

TRANSLATIONAL ANATOMY IN THE 21ST CENTURY — IS ANATOMY REALLY A «DEAD SCIENCE»?

*Konschake Marko **

Division of Clinical and Functional Anatomy; Department for Anatomy, Histology and Embryology; Medical University of Innsbruck (MUI), Austria
* marko.konschake@i-med.ac.at

Key words: *nonrecurrent laryngeal nerve, migraine surgery, chronic hernia groin pain, inguinodynia, ultrasound, intraoperative neuromonitoring*

Background. Translational anatomic research concern, for example, basic surgical research in the disciplines endocrine surgery, plastic surgery with the topic migraine surgery and hernia surgery, all in combination with neuroimaging in the field of ultrasonography and of the Intraoperative Neuromonitoring (IONM). IONM is a basic requirement to avoid laryngeal nerve palsy and to recognize anatomic variants; for migraine surgery recent findings on the pathogenesis of frontal migraine headache support an alternative peripheral mechanism involving compressed peripheral nerves. These disciplines, also in hernia surgery avoiding chronic post-herniorrhaphy pain, therefore, require ultrasonography as an important preoperative neuroimaging-device.

Material and Methods. Anatomic variants, such as a non-recurrent inferior laryngeal nerve (nrILN), produced possible explanations for different IONM-signals which would correlate with differences in the anatomic course of the inferior laryngeal nerve. Preoperative ultrasonography was performed to evaluate the presence of a brachiocephalic trunk and the recurrent laryngeal nerve for exclusion or