ANATOMICAL VARIATIONS OF THE AORTIC ARCH BRANCHING PATTERN

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Key words: *aortic arch, variations, anatomy*

Background. Anatomical variations of the aortic arch and its branches are fairly common and can have important implications on prognosis and management of surgical interventions, as well as on radiological diagnostics and interventional radiology.

Aim. The aim of this study was to present the anatomical variations in branching pattern of the aortic arch in a large group of patients using CTA and consequently to determine their prevalence in our population.

Material and Methods. The study population included 1000 patients with referral diagnoses requiring CTA chest radiography, which visualizes the aortic arch. The course of the aortic arch was clearly observed in all of the 1000 patients. The anatomic features of the aortic arch itself and supra-aortic vessels were analyzed, and anatomical variations were recorded on each CT image.

Results and Discussion. The results showed that 89.3% of the cases had the usual branching pattern of the aortic arch. The most common variation was aortic arch with two branches, with left common carotid artery arising from brachiocephalic trunk (7.9%). Separate origin of the left vertebral artery between the left common carotid artery and the left subclavian artery was present in 2.8% of cases.

Conclusions. The knowledge of the anatomy of the aortic arch and its branches and the awareness of vascular variations is an imperative in diagnostic procedures and in planning surgical interventions during clinical practice.

THE CHANGES OF THE EPITHELIUM OF THE MUCOUS MEMBRANE OF THE MOUTH AND TONGUE AFTER EXPOSURE TO BROAD-BAND RED LIGHT (AN EXPERIMENTAL STUDY)

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Aim, Material and Methods. The aim of the study was to study the nature of the structural and functional features of the epithelium of the oral mucosa and the tongue of laboratory animals as a result of exposure to broadband red light.

Results and Discussion. As a result of morphological and electron microscopic analysis of the structural changes of the oral mucosa and tongue of 10 rabbits and 120 Wistar rats after exposure to broad-band red light, the absence of severe, irreversible changes in the epithelium, submucous layer and its components, mild and reversible hemodynamic and hemoreological disorders, manifested mainly by the full blood vessels of the microcirculatory bed, in three cases was seen the sludge and stasis of blood in the capillaries, as well as small ones diapedetic hemorrhages with localization in the subepithelial zone.

Conclusions. The data obtained allow recommending the method of photoneuromodulation for wider use in practice when treating patients with the burning mouth syndrome.

MAGNETIC RESONANCE MORPHOMETRY OF THE ADULT NORMAL LUMBAR INTERVERTEBRAL SPACE

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Key words: *magnetic resonance morphometry, intervertebral space*

Aim. This study aims to a) quantify and evaluate normal relationships between neighboring spinal units by using MR imaging indices, b) propose an easy to apply and reproduce method of estimating the correct amount of distraction when surgically restoring a collapsed intervertebral disc, based on individualized measurements.

Material and Methods. This is a retrospective cross-sectional MR imaging study of 119 adult subjects, aged 18 to 54, asymptomatic for low back pain. Each of the examinees should demonstrate two or more consecutive intervertebral discs classified as Pfirrmann grade I or II in order to be included. We measured and studied the relationships of disc height index, Dabbs index, Farfan index, disc convexity index and mean and posterior disc height per spinal level by using multiple regression analysis. All measurements were tested for intra- and interobserver agreement by two raters.

Results and Discussion. DHI, Dabbs, Farfan, and mean disc height had a statistically significant correlation with the spinal level and age. Our results