

#### ANATOMICAL VARIATIONS AND DIMENSIONS OF ARTERIES IN THE POSTERIOR PART OF THE CIRCLE OF WILLIS

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**Key words:** *the circle of Willis, variations of posterior part, diameters of arteries, length of arteries*

**Background.** The circle of Willis (COW) as an anastomotic polygon at the base of the brain, forms an important collateral network to maintain cerebral blood perfusion. Most of the variations have been reported on posterior cerebral and posterior communicating arteries.

**Aim.** The aim of this study was to investigate different anatomic variations and dimensions of posterior part of the COW and their prevalence.

**Material and Methods.** This is an observational descriptive study performed at the University Clinical Center, Clinic of Radiology. A randomized sample of 513 angiographic examinations in adult patients of both sexes without clinical manifestations for cerebrovascular disease who were instructed to exploration is included.

**Results and Discussion.** The complete anterior part of COW is common with 77.7% of the all subjects, while the posterior part had a complete structure in 27.6% of the cases. The prevalence of unilateral FTPcomA was 14.7% and bilateral FTPcomA was found in 12.9%, while hypoplasia or absence of both PCoA in 45.8%. All dimensions of the arteries are larger in male than female, except the diameter of PCoA that is larger in female ( $p < 0.05$ ). Significant differences were found in diameters of arteries between the younger and the older age groups.

**Conclusions.** Similar to other studies, most variations are related to the posterior part of the circle of Willis. Thus, knowledge of the variations, diameter and the length of the arteries of the circle of Willis has a great importance in interventional radiology for various endovascular interventions as well as during anatomy lessons.

#### POSSIBLE USE OF DERMATOGLYPHICS AS A MARKER FOR PREDICTING THE DEVELOPMENT OF SOME DISEASES

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**Key words:** *dermatoglyphics, prints, palms, diseases*

**Aim.** The term of dermatoglyphics, as defined by Cummins, refers to the study of naturally occur-

ring dermal patterns on the surface of the hands and feet. Skin patterns functions are to increase resistance and decrease slipping of hand and feet on different surfaces. Dermal ridges are formed early in intra-uterine life (6–7<sup>th</sup> week), in which period hereditary and environmental factors leading to health disorders may also cause peculiarities in patterns. Once formed, they remain unchanged through life. They can easily be detected and give us some information's about inherited characteristics and possible connection with genetic disorders and other diseases.

**Material and Methods.** Palm prints were taken using Cummin's and Midlo method. The study consists of 60 patients with schizophrenia, 60 patients with psoriasis and healthy individuals randomly chosen without history of medical disorders as a control group.

**Results and Discussion.** In this study we have shown results concerning the dermatoglyphics present in patients with schizophrenia and patients with psoriasis. Lower A-B ridge count, TRC and ATRC, more fibular loops and less whorls compared with healthy population have been found in patients with schizophrenia. In patients with psoriasis there are less connectivity and differences in the skin patterns compared to the healthy examinees. Higher A-B ridge count, TRC and ATRC are with lower values, more fibular loops and less whorls and arches were found in patients with psoriasis.

**Conclusions.** In conclusion, the importance of the dermatoglyphic investigation lies in their practical application. The relevance of dermatoglyphics is not to diagnosis, but to prognosis, they can point to individuals at risks of developing symptoms later in life so they can be included in preventive procedures.

#### ANATOMICAL VARIABILITY OF THE LEFT LOWER PHRENIC VEIN AND CORONARY SINUS IN THE APPLICATION VALVES OF INTERVENTIONAL ARRHYTHMOLOGY

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**Key words:** *coronary sinus flap, lower diaphragmatic vein*

**Aim.** Study of variants of the structure of the coronary sinus valves and the left inferior phrenic vein in the aspect of interventional arrhythmology.

**Material and Methods.** We studied 30 preparations of hearts, 120 preparations of veins of the diaphragm of people, died at the age of 22 to 75 years and phlebograms of the left lower phrenic vein in 30 patients of both sexes of the same age. Sectional,