

Results. The statistical analysis of the incidence and mortality for congenital malformations, chromosomal deformities and abnormalities of children under 18 in the Republic of Moldova for the years 2008-2018 has shown a peak in 2011-2012 years. Unfortunately, the rarity of the disease impede continuous improvements in diagnostic, management and separation techniques, so each case is an opportunity to introduce new techniques and methods to help in achieving the best possible results.

Conclusions. Further work in epidemiology and molecular research is necessary to realize the etiology and pathogenesis involved in the development of this strange phenomenon of nature. Quick interventions geared toward rapid diagnosis and management should be implemented to help decrease maternal and neonatal morbidity and mortality. The evaluation of these children should be multidisciplinary, involving mainly obstetricians, pediatric anesthesiologists and pediatric surgeons.

Key words: twins, conjoined twins, Siamese twins

255. MORPHOCLINICAL ASPECTS OF KIMMERLE'S ANOMALY

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Introduction. Knowledge of the morphological abnormalities of the atlas (C1) is essential in clinical studies. The complete or partial ossification of the posterior atlanto-occipital ligament, that connects the posterolateral edge of the superior articular facet of the atlas with the superior surface of the posterior arch of C1, is called Kimmerle's anomaly (KA). Clinically KA is associated with Barré-Liéou syndrome, but sometimes, even if present, it can show no symptoms.

Aim of the study. Investigation of KA types and their prevalence depending on gender and age of the patient.

Materials and methods. This study was carried out on 145 lateral X-rays images of the cervical region of the vertebral column in patients aged between 12-88 years, in some patients KA was present in others absent, and 57 CT 3D reconstructed images of patients only with KA, aged 19-79 years, were examined. The selected images did not contain any other pathological changes of the C1. The data were analyzed by frequency analysis of occurrence and type of KA, logarithmic trend line, Pearson's χ^2 test (p-value for the test to be statistically significant is 0.05).

Results. On the X-rays images, KA was present in 28.95% of cases. The prevalence of KA among males was 13.1% and in females – 15.85% , that statistically is insignificant (χ^2 (2, N=145) = 0.64, p=0.73). On CT 3D reconstructed images, KA in females was established in 56.14% of cases and in males in 43.86% of cases. Considering both imaging studies (99 cases with KA), the prevalence of the complete KA (65.66%) and incomplete (34.34%) was statistically insignificant for both genders (χ^2 (1, n=99) = 0.22, p=0.64). The two types of KA can be present at any age independent of gender (all R2 values according to the logarithmic trend line were between 0.01-0.55). The average age for revealed KA was 47.21 years. The morphological structures of KA more detailed were observed on CT 3D reconstructed images, due to the possibility to see: the thickness of the bone bridge, the shape and the dimensions of the foramen, the unilateral, or bilateral position, the starting place of the osteophyte.

Conclusions. The presence of KA is relatively common, and it does not depend on age or gender of the patient, having a wide range of morphological variation. Regardless of the type of the anomaly, its presence should be taken into account by medical and non-medical specialists, for the recommendation of an appropriate way of life and treatment. Before surgery on the C1 region, an imaging examination (preferably CT or CT 3D) would help to choose the necessary materials and reduce the risk of damage to the adjacent structures.

Key words: atlas, Kimmerle's anomaly

256. VARIATIONS OF CORONARY ARTERY BRANCHING AND TOPOGRAPHY

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Introduction. According to medical literature, the coronary arteries are subjected to some morphological peculiarities. The research findings on variations of the topography, size and branching of vessels are highly important. It should be taken into account in cardiology for diagnosing, preventing and selecting methods of treatment of cardiac diseases as well as in cardiac surgery in case of surgical interventions.

Aim of the study. To identify the individual variations of topography and branching of the coronary arteries.

Materials and methods. According to goal of our study, 9 isolated heart samples and 2 heart-lung complex samples of adults and children were dissected by fine anatomic dissection method under binocular magnifier. The branching variations of the major coronary arteries and their topography were analyzed. The size of the arteries was measured and all the samples were photographed. The blood supply to the pericardial layer was examined on the basis of 13 samples of adults using the macromicroscopic method of elective Schiff staining of total anatomic preparations as described by M.G. Shubich and A.B. Khodos (1964, 1971), adjusted by the researchers of Human Anatomy Department (M. I. Ștefanuț, 1991, 1998; I. Catereniuc, 2000; I. Catereniuc, M. Ștefanuț, 2003).

Results. The morphological peculiarities of the coronary arteries were examined using the macro-dissection method. The left coronary artery has demonstrated high-degree variability compared to the right coronary artery. The outer diameters of the coronary arteries were relatively constant. The diameter of the left coronary artery near the aorta varied in size between 3.5 mm and 6.5 mm. The vessel immediately divided into three branches. The diameter of the right coronary artery near the aorta varied in size between 4.0 mm and 9.0 mm. In all the examined samples, the artery had one branch with multiple small collateral ramifications along its length. In one sample, the right coronary artery split into two branches of equal diameter. The arteries and their branches disappeared in the depth of the cardiac muscle and pericardial layer. The advantage of the Schiff staining method is that the reagent dyes the thinnest vessels located relatively deep. This is extremely important for macro and microscopic examinations when it refers to the sources of blood supply. The stained preparations revealed vascular plexuses formed by branches of different coronary arteries and their intrasystemic overlapping areas, which serve as a defense mechanism.