

Variant Anatomy of the Aortic Arch Branches

F. Gadzhieva, E. Kondarevich, E. Belkevich

Academic adviser: E.S.Okolokulak, M.D. Ph.D. Professor
Grodno State Medical University, Belarus

The aortic arch, arcus aortae, is a continuation of the ascending aorta, aorta ascendens. The arch starts at the level of the second rib cartilage near the left margin of the sternum. The highest point of the aortic arch is projected on the centre of the manubrium sterni. Main branches of the aortic arch are: truncus brachiocephalicus, left common carotid, left subclavian artery. We analyzed the variants of the main aortic arch branches origin using the corpse material at the Human Anatomy Department. The object of the study – 8 human corpses of the both sex. Methods of the study – macropreparation, micropreparation, morphometry. In the majority of cases the classic variant was presented. The most interesting case was the example of the anomalous arteries origin as 5 branches of the aortic arch: the right common carotid artery, the left common carotid artery, the left vertebral artery, the left subclavian artery, the right subclavian artery. The arch of the aorta passed to the left of the trachea and curved posteriorly. The first branch was the right common carotid artery, next arose the left common carotid artery, than arose the left subclavian artery and at last from the posterior wall of the aortic arch in 4 mm laterally from the left subclavian artery appeared the right subclavian artery. It passed from the posterior wall and turned to the right, passed behind the trachea and oesophagus. No other anomalies of arterial structure were revealed in the cadaver. The study of the vascular variant anatomy is of the great interest nowadays. Especially it is due to the high rate of the vascular surgery development. Today the medicine obtains specific technologies to help people with different vascular pathology (aneurysm, congenital cardiac malformations etc.). In this situation the accumulating and broadening knowledge about the topographic-anatomical characteristics of the aortic arch branches is actual.

Applying of Physico-Chemical Methods in Chemic-Toxicological Analysis of Diclophenac

Panco Marcela

Academic adviser: Tamara Cotelea, M.D., Ph.D., Associate Professor
State Medical and Pharmaceutical University “Nicolae Testemitanu”, Chisinau, Republic of Moldova

The chimico-toxicological investigations on medicamental preparations represent an essential problem. Their efficiency depends on isolation, dosage and identification of compounds by various physico-chemical methods. Diclophenac is part of nonsteroidal antiinflammatory (NSAI) group used as an antiinflammatory, analgesic and antifebrile remedy. The exact mechanism of action is not absolutely known, but it is believed that the primary mechanism responsible for the antiinflammatory, antifebrile and analgesic action is the inhibition synthesis of prostaglandin by inhibiting of cyclooxygenase (COX) and it is likely to inhibit the synthesis of ADN. The inhibition of (COX) also decreases the prostaglandines from the gastric epithelium, making it more sensible to gastric acid corrosion. In this context there is a specific interest of studying of diclophenac in biological fluids. As a consequence, we suggested to clear up those factors which influence the isolation of the compound from the blood plasma. We used chloroform as an extractant, which has a specific character for the nonionized forms from biological fluids. The pH value is important which gives the possibility to isolate the compound from biological fluid, its passing from ionized form in a molecular one, which encourages the efficacy of extraction with lipophilic solvents. Diclophenac was extracted from blood plasma after acidulation with sulphuric acid (pH 2,5-3,0) and precipitation of proteins with