Variant Anatomy of the Aortic Arch Branches

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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 aroused 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 Chemico-Toxicological Analysis of Diclophenac

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The chimico-toxicological investigations on medicamental preparations represent an essential problem. Their efficiency depends on isolation, dosage and identification of compounds by various phisico-chemical methods. Diclophenac is part of nonsteroidal antiinflamatory (NSAI) group used as an antiinflamatory, analgesic and antifebrile remedy. The exact mechanicm of action is not absolutely known, but it is believed that the primary mechanism responsible for the antiinflamatory, antifebrile and analgesic action is the inhibition synthesis of prostaglandin by inhibiting of cyclooxygenasis (COX)and itis 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 studyingof 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 extragent, which has a specific character for the nonionized forms from byological 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 ectracted from blood plasma after acidulation with sulphuric acid(pH 2,5-3,0)and precipitation of proteins with

treechloracetic acid, acid extracts under went spectrofotometric investigations at a wave lenght of 275 nm. We applied sillicotic plaques on thin layers within chromatography of the follwing solvent system: Ethylacetate: methanol: amoniacal sol.25% (8:10:10), ethylacetate:chloroform:acetone4:1), methano:amonia 25%(100:1,5). We used the Draghendorff reagent and iodine fumes. These methods serve as a certain and efficient potential in chemico-toxicological analysis practice.