## ANATOMICAL VARIANTS OF THE DEEP BRACHIAL ARTERY

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**Introduction.** Lately, due to the gradual increase of interventional radiological procedures and vascular reconstructive surgeries on the upper limb, knowledge about anatomical variants of the upper limb blood vessels has become more important. Our goal was to establish the anatomical variants of the deep brachial artery (DBA) in order to streamline the interventional procedures and surgical techniques carried on the upper limb.

**Materials and methods.** The variability of the DBA, that is the main collateral branch of the brachial artery (BA), was studied on 70 formolized adult upper limbs. The cadaveric material belonged to the Department of Anatomy and Clinical Anatomy of Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova. Through anatomical dissection, the origin of the DBA, its course and relationship to the radial nerve (RN) were studied.

**Results.** Anatomical variants of the DBA were identified in 14.3% of cases (95% CI [7.0-23.4]): in 8.6% (95% CI [2.6-15.8]) it presented number variants, and in 5.7% (95% CI [1.3-11.8]) – it was a component of common arterial trunks (CAT). In cases of double DBA, the second artery in 5.71% of cases, derived from the BA, having a various arrangement towards radial nerve (RN) when entering the humeromuscular canal (posterior to the RN – 2.9%; anterior to the RN – 1.43%; lateral to the RN – 1.43%); in the remaining 2.9% (95% CI [0.0-7.8]) – the second DBA had its origin in 1.43% (95% CI [0.0-4.8]) from the posterior circumflex humeral artery (PCHA) and superior collateral ulnar artery (SCUA). CAT with 3 branches were determined in 4.3% (95% CI [0.0-9.8]): 1) SCUA, subscapular artery (SA) and DBA (1.43%); 2) DBA and two muscular branches – 1.43%; 3) DBA, SCUA and a muscular branch were present in 1.43% of cases. CAT branching into two arteries: the DBA and SCUA were determined in 1.43%.

**Conclusions.** The atypical origin of the DBA should be taken into consideration by surgeons when harvesting the muscle flaps from the lateral region of the arm. Knowledge about the common arterial trunks variation, particularly when the DBA appears as their component is necessary to increase the efficiency in coronary bypass and in diagnostics and treatment of the brachial region surgical interventions.

Keywords: brachial artery, deep brachial artery, anatomical variants, common arterial trunks.