VARIABILITY OF THE PAIRED VISCERAL BRANCHES OF THE ABDOMINAL AORTA

Botnari Tatiana[1], Babuci Angela[1], Zorina Zinovia[1], Catereniuc Ilia[1], Botnaru Doina[1], Ostahi Nadia[1]
[1]Department of Anatomy and Clinical Anatomy, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova.

Introduction: The demand for an individualized approach in interventional surgery of abdominal cavity organs has recently increased. Due to various surgical techniques and large number of surgeries, including kidney transplant, the variants of the paired visceral branches of the abdominal aorta (PVBAA) are clinically important, in terms of patient's safety and avoidance of complications. The variability of the PVBAA in the Republic of Moldova was reported on a rate of 1.3% referred to the total number of births. Our research aimed to evaluate the variants of the PVBAA in order to update the data on their anatomical variability.
Materials and Methods: A thorough analysis of Web of Science, Google Scholar, Scopus, PubMed and Medline databases, referred to variability of the PVBAA, was conducted. Only full articles were selected and analyzed for our purpose.
Results: The highest ratio of variability, among the PVBAA was established for the renal artery (RA). The following incidence of numerical variants was revealed: double RA (70.9%), accessory RA (32%), triple RA (11.1%), multiple RA (18%). Presence of common arterial trunks from the AA was marked out at a rate of 20-30%. A few topographical variants of the accessory renal artery origin such as: high origin (above the main renal artery), and more rare a low origin (below the main RA, or even at the level of the common iliac arteries), were revealed. Among the rare anatomical variants, an atypical double arterial anastomosis between the right portion of the Barkow's omental arch with distribution within the uterus and right ovary was reported.
Conclusions: The highest incidence of PVBAA variants was revealed for the RA, the most common being numerical variants. Knowledge of arterial variants of the PVBAA is of high clinical significance in abdominal surgery, particularly in cases of rare and unknown variants.
Keywords: variability, abdominal aorta, renal artery, testicular artery, ovarian artery.