

## Investigation of human cadavers: one year of anatomic variants and their clinical correlation

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During the last year we found a plethora of variants while performing anatomical dissection on human cadavers. In the present report we describe the previously quoted variation morphologies focusing on their clinical relevance.

The first variant observed was a left vertebral artery (VA) arising from the aortic arch, it is present in the 5% to the 8 % of the individuals. The left VA of aortic origin showed a remarkably higher incidence of arterial dissection than left VA of a left subclavian artery origin. Also, the present pattern has to be taken into consideration before any intervention in the local region as to avoid unexpected events in relation to the aberrant vertebral artery.

A second dissection study led to the finding of the right posterior communicating artery of the Circle of Willis absence. This morphology may be a relevant risk factor for ischemic cerebral infarction if the patient suffers of internal carotid artery occlusion or severe stenosis. The same cadaver presented another variant: anterior inferior cerebellar artery bilateral absence.

While dissecting the vein of abdomen and thorax, we discover other two variants: bilateral iliolumbar veins draining into the testicular veins and three pulmonary veins entering into the right side of the left atrium. Cognition of the first variation it is critical during the anterior approach for spinal procedures, it will help surgeons to anticipate and to avoid potentially catastrophic complication such massive haemorrhages due to an avulsion of an unexpected extra vein; whether the knowledge of the pulmonary veins variant, compatible with R3a Marom's classification pattern, is essential for guidance during paroxysmal atrial fibrillation ablation procedures and preclude perioperative bleeding in video-assisted thoracoscopic surgery (VATS).

Anatomical variant findings enlarge the current knowledge of anatomists, but also the cognition of surgeons and physicians that need to be aware and always up to date on the incidence level of the variable course of arteries, veins, and nerves especially while performing clinical tests and surgical operations.

### Keywords

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Anatomic variation, clinical correlation, human cadavers, surgery, surgical complications