

Anatomical absence of the anterior communicating artery

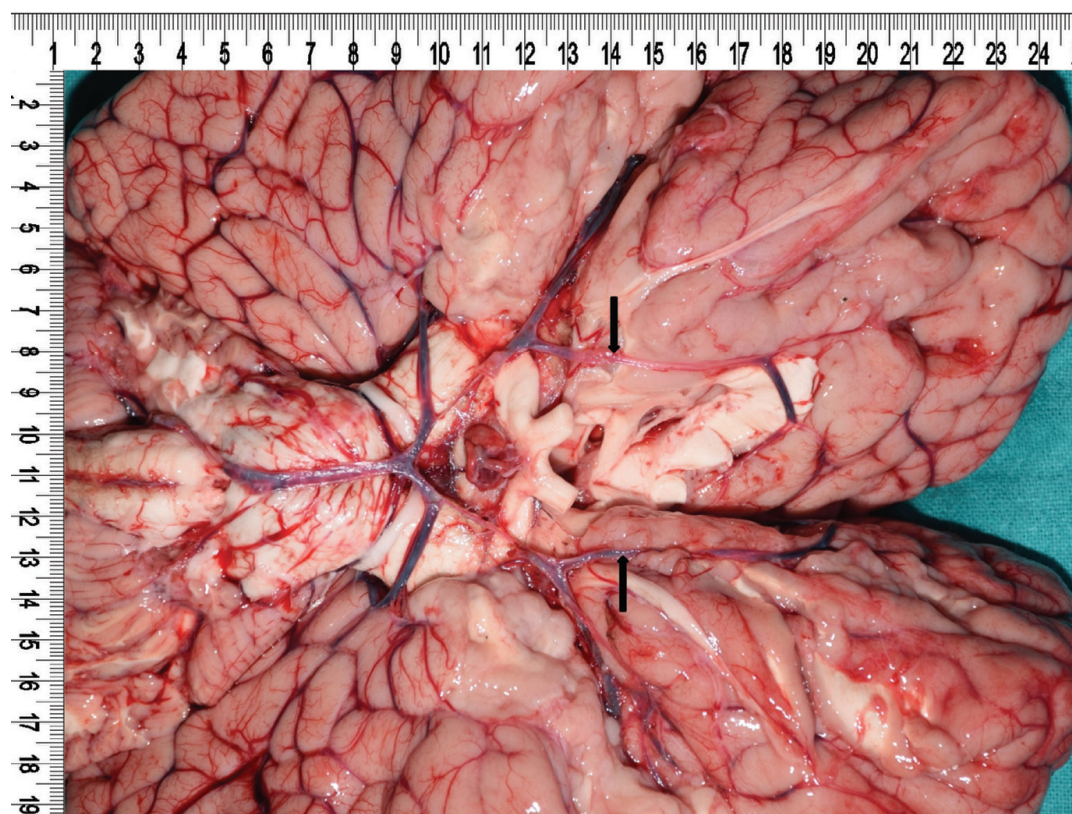


FIG 1. Anterior cerebral arteries on both sides (arrows) originating from the corresponding internal carotid artery, there is absence of an anterior communicating artery that connects both anterior cerebral arteries across the midline

A 23-year-old female with an alleged history of hanging presented to the emergency department, where she was declared 'brought dead'. During medicolegal autopsy, a typical mark of ligature was present around the neck; it was dry and parchment-like encircling the neck obliquely and incompletely above the thyroid cartilage. No other external injury was found over the body. On internal examination, all the organs were congested. After opening the skull, examination of the brain revealed the absence of the anterior communicating artery (ACoA) in the circle of Willis (Fig. 1). The two anterior cerebral arteries arise from the internal carotid arteries on each side and are part of the circle of Willis.^{1,2} The ACoA is a bridging vessel that connects the anterior cerebral arteries of both sides. It is one of the common sites for anatomical variation and aneurysm formation in the circle of Willis.¹ Common types of variations include duplication, triplication and absence of ACoA.¹ This variation was not related to the cause of death in the deceased. Knowledge of the normal anatomy and variations in this region is important during surgical and endovascular interventions to get optimal results.

Conflicts of interest. None declared

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