

Partial persistence of the primitive lateral basilovertеbral anastomosis of Padget

Persistência parcial da anastomose basilovertеbral primitiva lateral de Padget

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A hypertense, smoker, and alcoholic 30-year-old male presented with vertigo and multidirectional nystagmus lasting 30 days. Magnetic Resonance Imaging (MRI) showed subacute vermian infarction (Figures 1A and 1B). He underwent digital subtraction angiography (Figures 1C and 1D), which revealed duplication of the vertebrobasilar circulation through a branch of the right vertebral artery, connected to the main circulation by a hypoplastic branch, compatible with partial persistence of the primitive lateral basilovertеbral anastomosis of Padget (PLBA) originating the

left posterior inferior cerebellar artery (Figures 2A and 2B), an embryonic remnant. PLBA persistence increases stroke chances because of the abnormal pattern of arterial supply territories and subsequent deficient collaterality^{1,2}.

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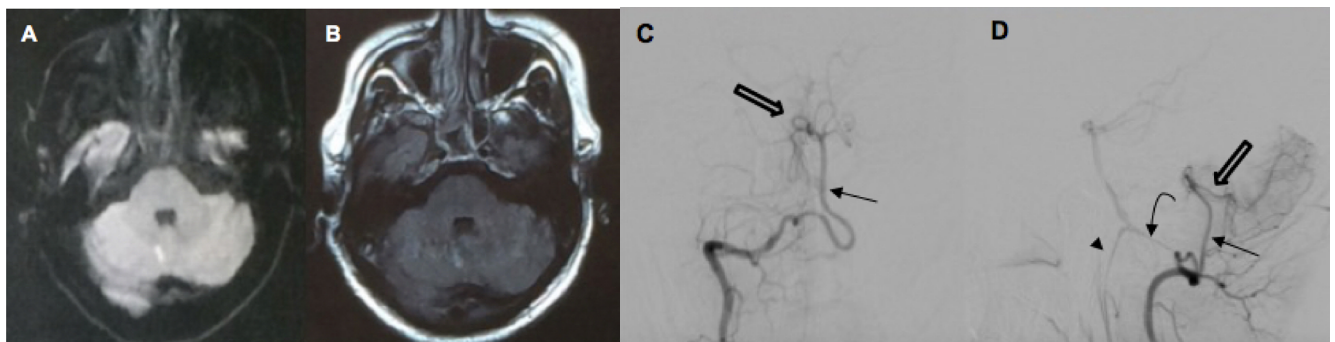


Figure 1. Axial diffusion weighted [DWI] (A) and Fluid attenuated inversion recovery [FLAIR] (B) images depict a subacute infarction area in the cerebellar vermis. Transfacial (C) and lateral (D) digital subtraction angiography with right vertebral injection images depict stenosis of the distal segment of the vertebral artery (V4) with primitive lateral basilovertеbral anastomosis (black arrow) supplying the posterior inferior cerebellar artery (PICA) (hollow arrow); the anastomosis also includes a branch to the basilar artery (curved arrow), which is also connected to the anterior spinal artery (arrowhead).

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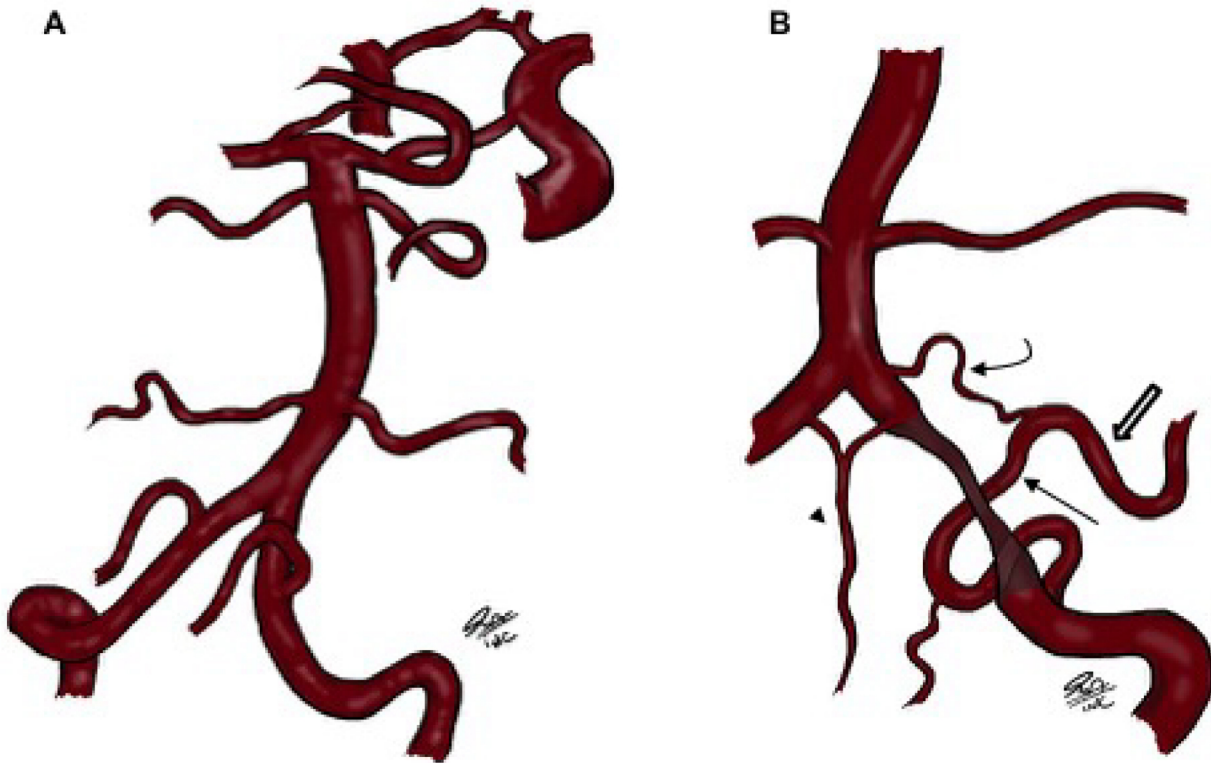


Figure 2. Illustrative drawings depict the standard posterior circulation anatomical disposition (A), in right posterior oblique view, and the patient's variant (B), in posterior view. While in most individuals both vertebral arteries connect to form the basilar artery, originating the PICA on their V4 segments, in this case such segment is hypoplastic; the anastomosis (black arrow) originates from the vertebral artery and develops the PICA (hollow arrow), with another smaller branch connecting this system to the basilar artery (curved arrow), after the emergence of the anterior spinal artery (arrowhead).

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