

Pulmonary arteriovenous malformation

Pulmonary arteriovenous fistulas (AVFs) are abnormal direct communications between the pulmonary artery and vein. Although pulmonary arteriovenous malformations (PAVMs) are rare, they are important in clinical practice because they are associated with life-threatening complications such as [brain abscess](#) (BA), stroke and lung haemorrhage.

That's a need to raise the suspicion of a pulmonary arteriovenous malformations, both isolated and in the context of a possible hereditary hemorrhagic telangiectasia, for any case of BA of unexplained etiology, in children as well as in adults ¹⁾.

Case reports

Nam et al., present two cases of brain abscess associated with asymptomatic pulmonary AVF. A 65-year-old woman was admitted with a headache and cognitive impairment that aggravated 10 days prior. An magnetic resonance (MR) imaging revealed a brain abscess with severe edema in the right frontal lobe. We performed a craniotomy and abscess removal. Bacteriological culture proved negative. Her chest computed tomography (CT) showed multiple AVFs. Therapeutic embolization of multiple pulmonary AVFs was performed and antibiotics were administered for 8 weeks. A 45-year-old woman presented with a 7-day history of progressive left hemiparesis. She had no remarkable past medical history or family history. On admission, blood examination showed a white blood cell count of 6290 cells/uL and a high sensitive C-reactive protein of 2.62 mg/L. CT and MR imaging with MR spectroscopy revealed an enhancing lesion involving the right motor and sensory cortex with marked perilesional edema that suggested a brain abscess. A chest CT revealed a pulmonary AVF in the right upper lung. The pulmonary AVF was obliterated with embolization. There needs to consider pulmonary AVF as an etiology of cerebral abscess when routine investigations fail to detect a source ²⁾.

¹⁾

Giordano P, Sangerardi M, Suppressa P, Lastella P, Attolini E, Valente F, Fiorella ML, Lenato GM, Sabbà C. Pulmonary Arteriovenous Malformations and Cerebral Abscess Recurrence in a Child With Hereditary Hemorrhagic Telangiectasia. J Pediatr Hematol Oncol. 2014 Sep 12. [Epub ahead of print] PubMed PMID: 25222056.

²⁾

Nam TK, Park YS, Kwon JT. Brain Abscesses Associated with Asymptomatic Pulmonary Arteriovenous Fistulas. J Korean Neurosurg Soc. 2017 Jan 1;60(1):118-124. doi: 10.3340/jkns.2015.0707.023. PubMed PMID: 28061502.

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Last update: **2024/06/07 02:59**

