

# Fetal-Type Variant of the Posterior Cerebral Artery and concurrent infarction in the Major Arterial Territories of the Cerebral Hemisphere due to stent occlusion

J. De Caro<sup>1</sup>, F. Grillo<sup>2</sup>, M. Cotroneo<sup>1</sup>, M. Colella<sup>1</sup>, C. Dell'Aera<sup>1</sup>, C. Casella<sup>1</sup>, M.C. Fazio<sup>1</sup>, P. La Spina<sup>1</sup>, D. Cosenza<sup>1</sup>, S. Galletta<sup>1</sup>, F. Granata<sup>3</sup>, R. Musolino<sup>1</sup>

1- U.O.S.D. Stroke Unit – Department of Clinical and Experimental Medicine, University of Messina

2- Biomedical Department of Internal Medicine and Medical Specialties (DIBIMIS), University of Palermo

3- U.O.C. Neuroradiology, University of Messina

## Introduction

The fetal origin of the posterior cerebral artery (f-PCA) is a frequent vascular variant in 11-29% of general population. In a fetal-type posterior circle of Willis (FTP) there is an embryonic derivation of the posterior cerebral artery (PCA) from the internal carotid artery (ICA) (1).

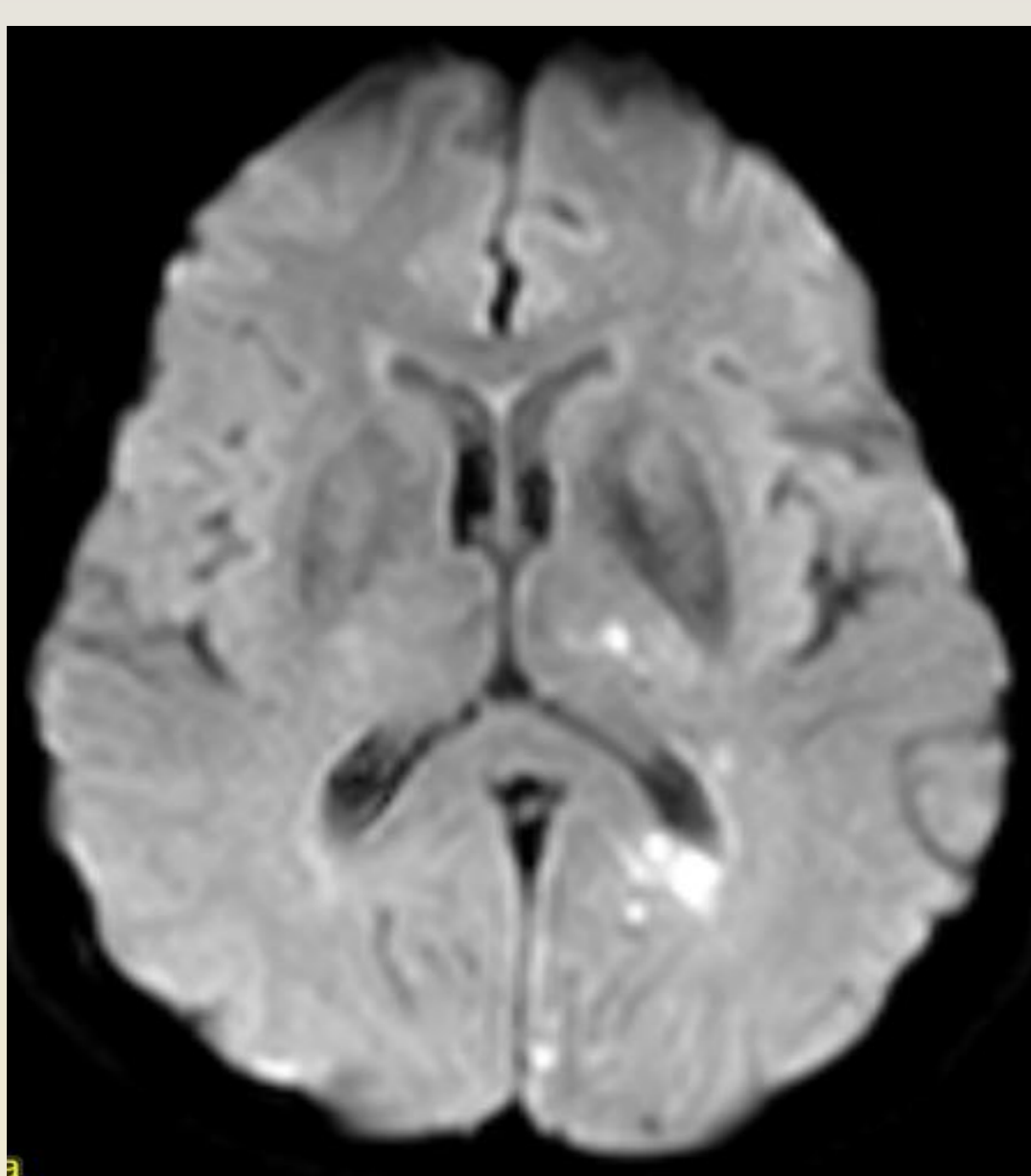
In presence of f-PCA, thromboembolism in the anterior circulation may result in paradoxical PCA territory infarction with or without concomitant infarction in the territories of the middle (MCA) or the anterior (ACA) cerebral artery (2-3).

## Case report

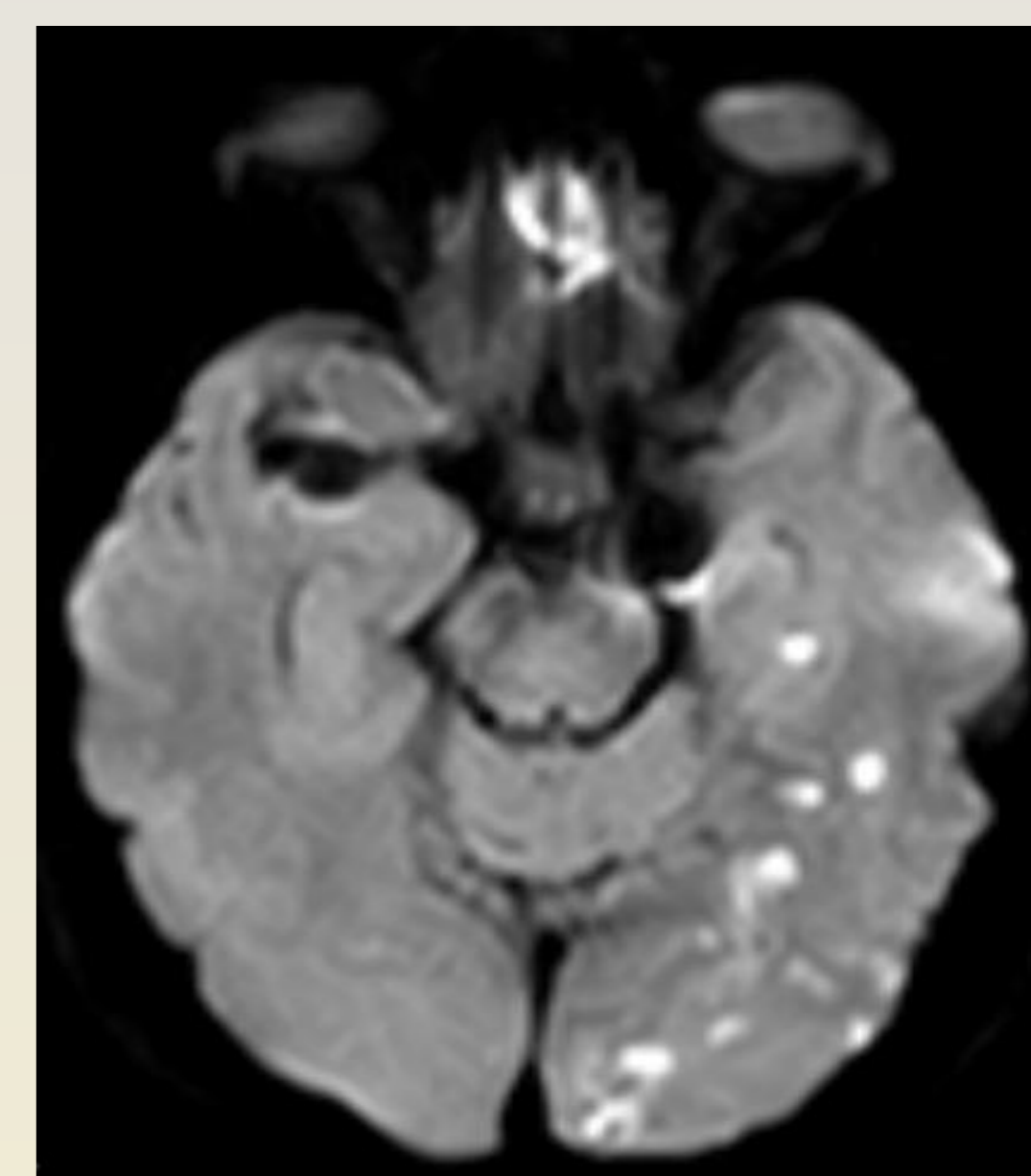
A seventy-years-old woman had sudden onset of left eyelid ptosis, in February 2017 a brain angiography showed one saccular aneurysm in the posterior wall of over-clinoid tract of the left ICA, one small aneurysm in over-clinoid tract of right ICA and a saccular aneurysm of right middle cerebral artery bifurcation. Stenting of left and right ICAs was performed with exclusion of the aneurysms from the circle.

The patient was discharged with ASA 100mg+Ticlopidine250mg daily.

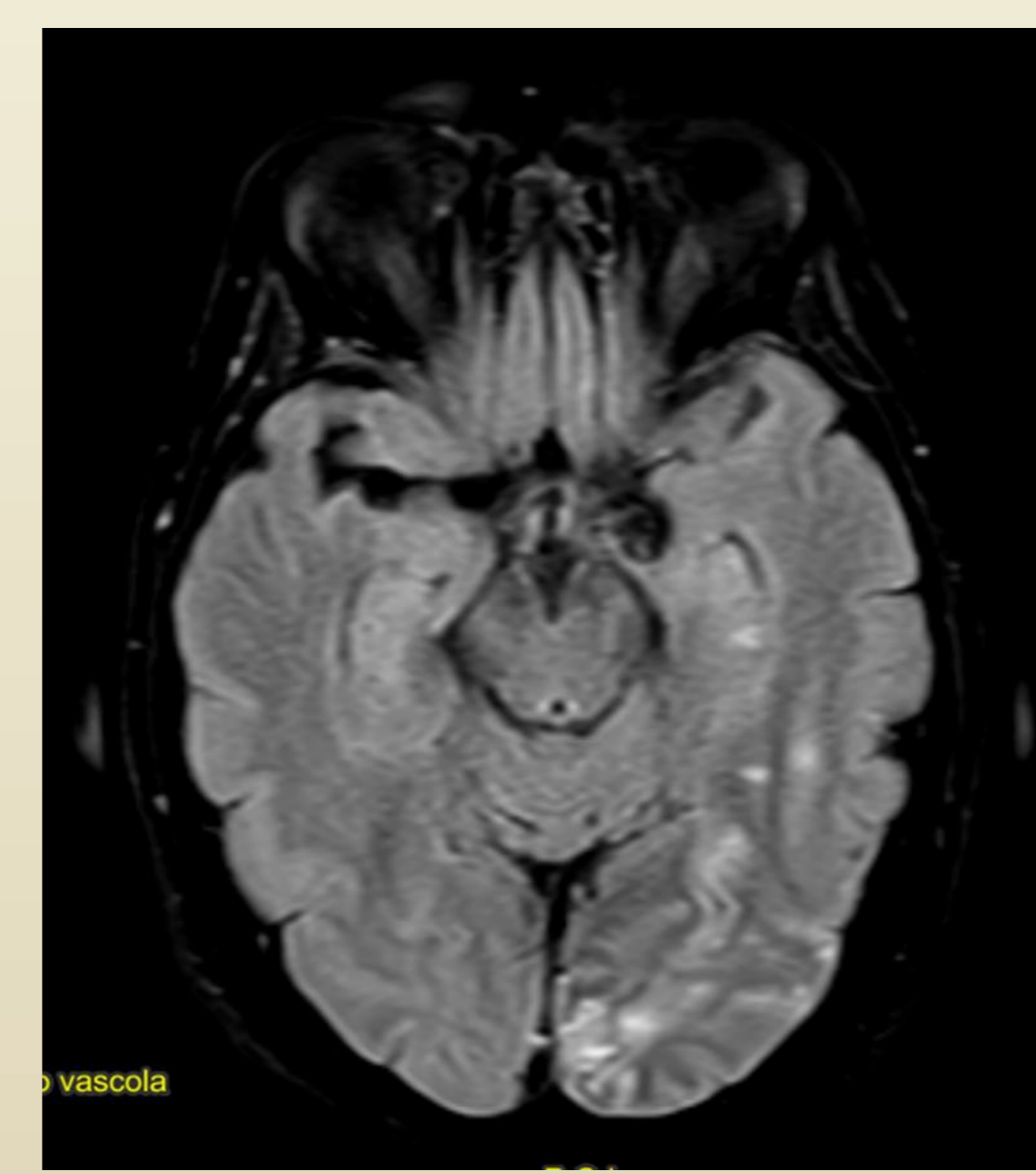
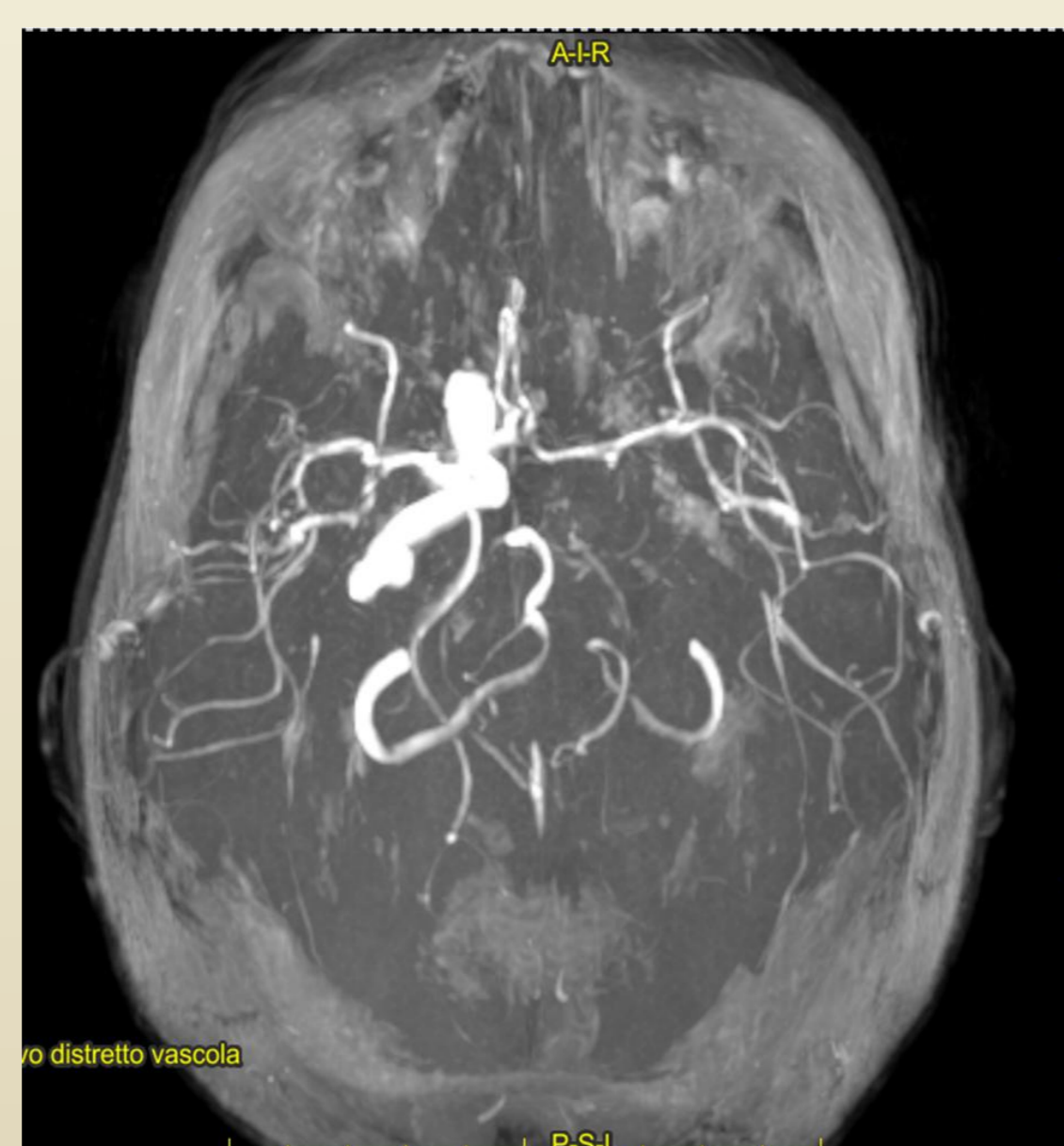
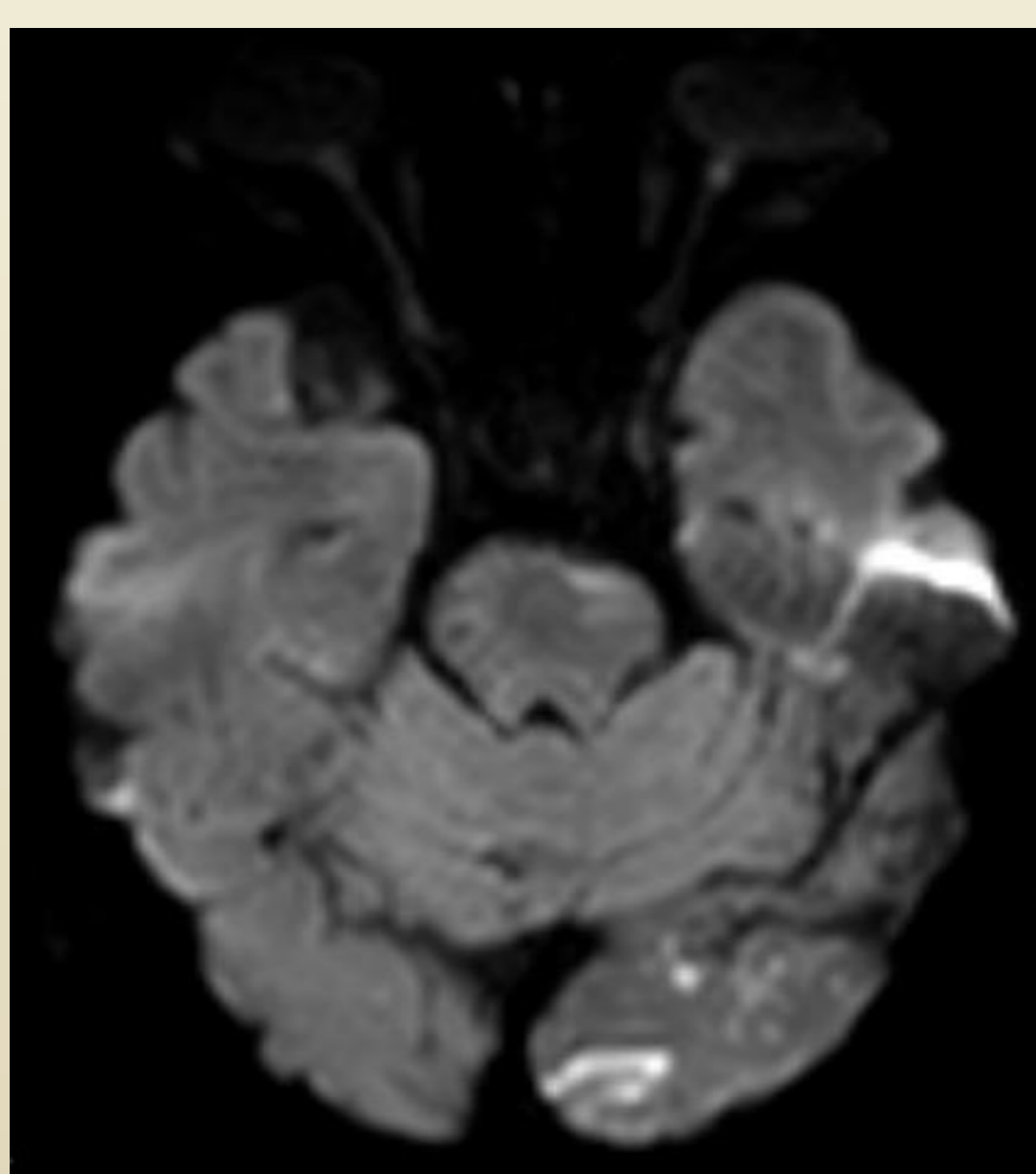
In may 2017, Ticlopidine was changed with Indobufene 200 mg because of an allergic reaction. Ten days later she experienced sudden onset of speech impairment, visual disturbance, drowsiness and right limbs weakness (NIHSS score 3).



**Brain MRI:** multiple, small, cortico-subcortical DWI and FLAIR hyperintense lesions of the left temporo-parietal and occipital lobes and in the left thalamus.



**Angio MRI:** absence of flow in the intracranial tract of left ICA and fetal variant of PCA, confirmed by Digital subtraction Angiography, that revealed total **thrombotic occlusion of left ICA.**



This case confirmed that fetal variant of posterior cerebral artery can increase the dimension and severity of anterior circulation strokes with involvement of the PCA territory.

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2- Lambert SL<sup>1</sup>, Williams FJ<sup>2</sup>, Oganisyan ZZ<sup>2</sup>, Branch LA<sup>2</sup>, Mader EC Jr<sup>2</sup>. Fetal-Type Variants of the Posterior Cerebral Artery and Concurrent Infarction in the Major Arterial Territories of the Cerebral Hemisphere. *J Investig Med High Impact Case Rep*. 2016 Sep 13;4(3)

3-Hunter JM<sup>1</sup>, Tehrani SK, Wood T, Geraghty R. Internal carotid artery stenosis presenting as ipsilateral posterior cerebral artery ischaemic stroke: a lesson to be learnt. *BMJ Case Rep*. 2013 Apr 22;2013.