

## Case Report

# Aberrant origin of left vertebral artery: a rare case

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### ABSTRACT

The Vertebral Artery (VA) is classically described as originating as the first branch of the ipsilateral subclavian artery. The VA origin is variable and has been identified at the aortic arch, Common Carotid Artery (CCA), and Internal Carotid Artery. The VA arising from the carotid artery is an extremely uncommon variant. Left VA origin from the left CCA has been reported only thrice. These rare anomalous origins of the VA usually are asymptomatic. We describe symptomatic aberrant origin of left vertebral artery from left common carotid artery, a rare case.

**Keywords:** Aberrant origin, Hemifacial spasm, Left vertebral artery

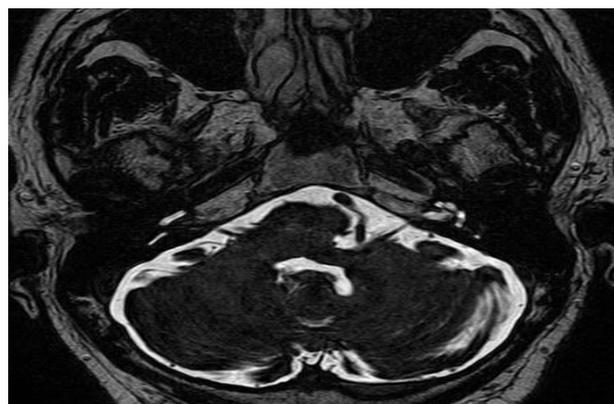
### INTRODUCTION

The VA is classically described as originating as the first branch of the ipsilateral subclavian artery. The VA origin is variable and has been identified at the aortic arch, CCA, and ICA. The most common aberrant origin, where the left VA originates from the aortic arch, between the left CCA and left subclavian artery, occurs in 2.4% to 5.8% of cases. The VA arising from the carotid artery is an extremely uncommon variant.<sup>1</sup> We describe a case of 45 year old male presented with Hemifacial spasm in which on digital subtraction angiography we found aberrant origin of left vertebral artery from left common carotid artery.

### CASE REPORT

A 45-year-old man with a medical history of hypertension presented with left hemifacial spasm for last six years. MRI Brain revealed vertebrobasilar dolichoectasia compressing left facial nerve (Figure 1). Digital subtraction angiography done revealed that left vertebral artery is originating from left common carotid artery (Figure 2) and Basilar artery having an abnormal loop towards left side (Figure 3). Patient was on medical

management but not relieved so INJ BOTOX given after which patient was symptomatically relieved. Patient is further planned for micro vascular decompression.

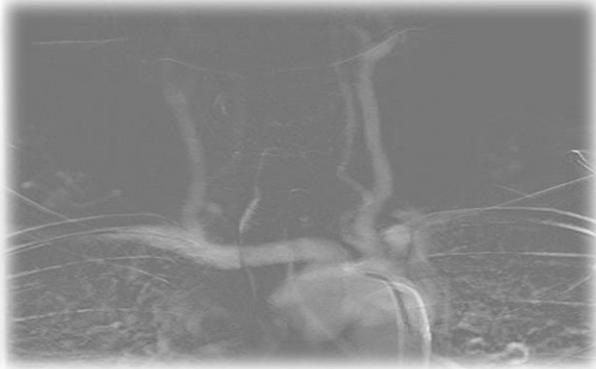


**Figure 1: MRI Brain revealed vertebrobasilar Dolichoectasia compressing left facial nerve.**

### DISCUSSION

The VA is classically described as originating as the first branch of the ipsilateral subclavian artery. The VA origin

is variable and has been identified at the aortic arch, CCA, and ICA. The most common aberrant origin, where the left VA originates from the aortic arch, between the left CCA and left subclavian artery, occurs in 2.4% to 5.8% of cases.



**Figure 2: Digital subtraction angiography (left vertebral artery is originating from left common carotid artery).**



**Figure 3: Digital subtraction angiography showing basilar artery having an abnormal loop towards left side.**

The VA arising from the carotid artery is an extremely uncommon variant. A total of 10 case reports describe the VA origin from the right carotid artery, internal and external arteries.<sup>1</sup> However, left VA origin from the left CCA has been reported only thrice.<sup>2,3</sup> Although these rare anomalous origins of the VA usually are asymptomatic, but it was symptomatic in this case so it is important to identify them before performing open surgery of the such neurovascular compression or endovascular interventions.

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