

A Second Case of Giant Atherosclerotic Basilar Artery Causing Headache: A Case Report

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ABSTRACT

This case comes as a second case that comes to the emergence department in Al-Namas General Hospital complaining of a chronic headache. The same exact findings and symptoms were reported in a previous case report in an 86-year-old male patient. The findings of this case will be presented.

Key words: Atherosclerosis, basilar artery, basilar neuralgia, headache

INTRODUCTION

The vertebrobasilar system is one of the systems that supply the brain. The basilar artery is the single artery where both vertebral arteries join to form one artery. This artery located in a very important location (basilar groove anterior to the pons). As well, this artery bifurcate into two posterior cerebral arteries. Any abnormality in this artery could lead to serious consequences. This case present normal findings in the basilar artery that lead to chronic headache.

CASE REPORT

A 69-year-old male patient came to the emergency department complaining of a chronic headache. The patient is not hypertensive or diabetic. A brain computed tomography (CT) scan was requested for this patient. The CT scan showed a normal brain except a atherosclerotic curved basilar artery that crosses from the left side of the pons to the right side than crosses again to the left side to join the circle of Willis on the left side without making a bifurcation to two posterior cerebral arteries [Figures 1-10]. The patient case was considered normal. He was discharged and given pain killers.

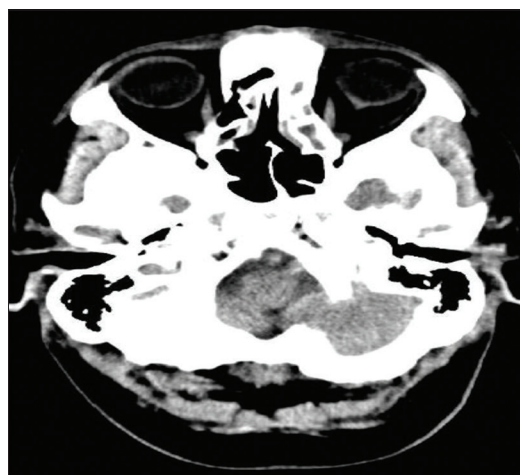


Figure 1: Vertebral arteries

DISCUSSION

The basilar artery is affected by atherosclerosis which is common in old age patients. The anatomical variation (tortuousness) and normal aging process (atherosclerosis) in this case, caused a chronic headache for the patient. There are three hypotheses that can explain the CT scan findings and the chronic headache. The atherosclerotic or calcified basilar artery will cause irritation to the following

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Figure 2: Two vertebral arteries located in front of the center and on the left side of the pons



Figure 5: The basilar artery posterior to the sella on the right side

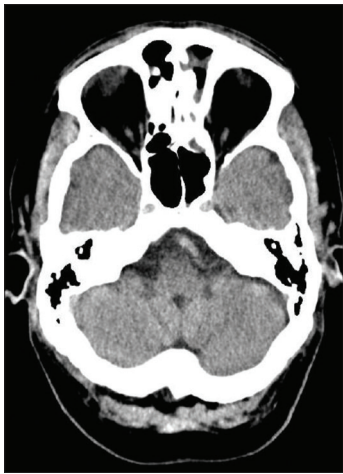


Figure 3: The (atherosclerotic) basilar artery formed at the left side of the pons and it starts crossing to the right side

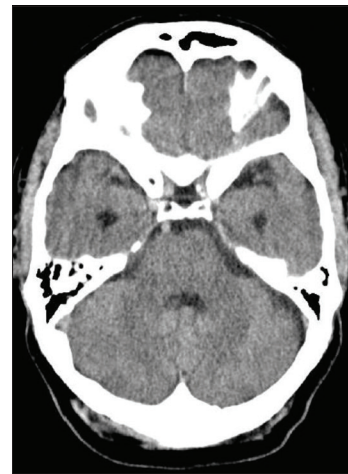


Figure 6: The basilar artery located on the right side



Figure 4: The basilar artery crossing to the right side



Figure 7: The basilar artery crosses to the left side again

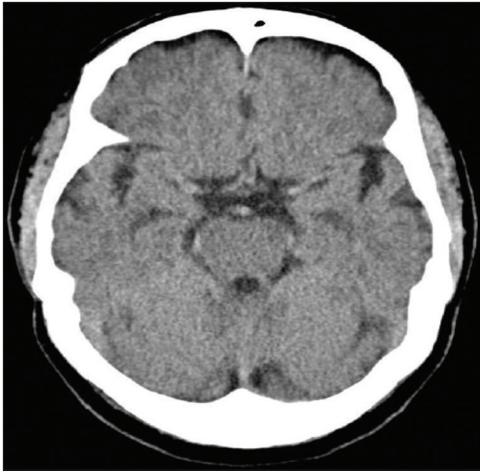


Figure 8: The basilar artery crosses to the right side to join the circle of Willis

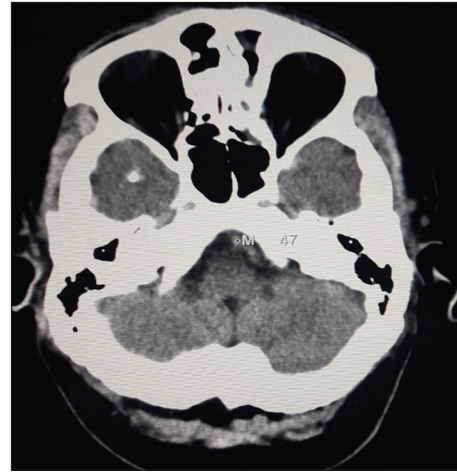


Figure 10: The Hounsfield unit is 47 in the basilar artery. The score is due to the atherosclerotic change in the basilar artery



Figure 9: The basilar artery join the circle of Willis on the left side. Is not clear if the artery bifurcates into two posterior cerebral arteries or not

structures: Brainstem, meninges (dura or pia mater which are pain sensitive meninges based on awake craniotomy procedures),^[1] and cranial nerves that located in the artery course (neurovascular compression syndrome-like trigeminal neuralgia). A previous published case is identical to this case with a chronic headache.^[2] Both patients, in this case and in the previous case, do not have hypertension or diabetes. Both CT scans showed normal findings and both patients

above 60 years old. The vertebral arteries in this case and the previous one do not show any abnormality and do not fit with dolichoectasia. This presented medical condition could be described as basilar neuralgia.

CONCLUSION

This case show a normal patient that complain of severe chronic headache. This pattern have been reported previously in a normal patient as well. A calcified or atherosclerotic torturous basilar artery is the only finding was noticed with the same pattern in both patients, same age category, same presentation, and same symptoms..

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