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Case Blog

Title: Cerebral Arterio Venous Malformation

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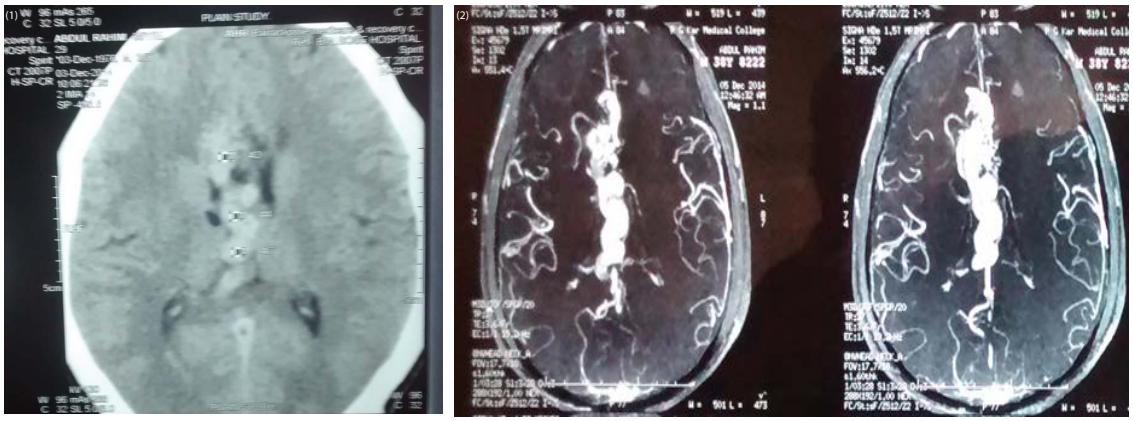

Figure 1: Plain CT scan brain showing the lesion.
Figure 2: MRA showing AVM of the brain.

Introduction

A brain arteriovenous malformation (AVM) is a tangle of abnormal blood vessels connecting arteries and veins in the brain. An arteriovenous malformation can develop anywhere, but occurs most often in the brain or spine. Even so, brain AVMs are rare and affect less than 1 per cent of the population.

The aetiology for AVM is not very clear. The most common presenting complaints of patients with AVM are headache or seizures. AVM are routinely diagnosed when CT scan is done for some other reason, not by suspecting AVM as the diagnosis. But this condition when it is classically diagnosed then can often be treated successfully to prevent complications that arise because of AVM malformations. This is a case report of a patient who presented with AVM malformation. The main presenting complaint of this patient was headache.

Case Blog

38 years old male patient attended ENT OP with complaints of severe headache. No aggravating or relieving factors. The headache was insidious in onset. The patient had consulted some local doctor and he was not relieved by taking medications. A thorough ENT examination was done. ENT causes of headache and migraine were ruled out. Also patient was not having any sinus tenderness. The patient was advised to do an emergency CT scan of brain. CT brain showed some abnormal finding. As it was plain CT scan of brain without contrast, the lesion could not be well delineated (Figure 1).

The patient was immediately referred to neuromedicine department for further evaluation and opinion. In neuromedicine department patient was advised for MR angiogram. MRA study confirmed the presence of arterio venous malformation. Now the patient is followed up regularly in the neuromedicine department.

Discussion

Arterio venous malformation can occur anywhere in the body. One among the most common sites of AVM is the Brain. The aetiology for AVM is not very clear. The most common presenting complaints of patients with AVM are headache or seizures.

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AVM are routinely diagnosed when CT scan is done for some other reason, not by suspecting AVM as the diagnosis. But this condition when it is classically diagnosed then can often be treated successfully to prevent complications that arise because of AVM malformations. The major complication of AVM is it may cause intra cerebral bleeding.

But some people with brain AVM may experience signs and symptoms other than bleeding related to the AVM [1]. Muscle weakness, vision loss are some other symptoms that the patient can rarely present with. The usual age of presentation of AVM is around 10 to 40 years of age. In our patient the age of patient was around 38 years. His only complaint was severe headache. One severe type of brain AVM, called a vein of Galen defect, causes signs and symptoms that emerge soon or immediately after birth. Major risk factors of AVM are, male patient are most commonly affected [2]. There is a possibility that this AV malformation can be seen in families, but genetically condition not well understood. Tests used to diagnose brain AVMs include:

CT scan of brain, with cerebral angiography is the most important investigation that will aid us in the diagnosis if AVM. Anyhow, MRI is more sensitive than CT and can show more subtle changes in brain tissue associated with a brain AVM. So in this patient MRA was done (Figure 2).

Conclusion

AVM though rare early diagnosis, will help in saving the life of the patient from serious complications. This patient earlier presented to ENT department. Always a clinical examination will guide to rule out the diagnosis. So when a patient presents with vague complaints of severe headache, conditions like AVM should also be kept in mind, as conditions like this when earlier diagnosed will help in saving the life of the patient from serious complications.

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