CASE REPORT

Mobile Carotid Artery Thrombus: is it a Surgical Emergency?

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Introduction

Mobile thrombus in the extra-cranial carotid artery is an uncommon condition. Thrombus formation is thought to occur following ulceration, rupture or haemorrhage in a pre-existent atheromatous plaque in the carotid artery, in a manner similar to that in the coronaries. Partial or complete occlusion of the artery by the thrombus or distal embolism could lead to transient ischaemic attacks or hemiparesis. Since this condition is fairly uncommon, definite treatment guidelines have not been laid down.

We report a case of a patient with a mobile thrombus in the common carotid artery who was managed successfully with anticoagulation.

Case Report

A fifty-seven-year-old caucasian female was admitted to the hospital with cough and cold for which symptomatic treatment was started. Two days later she developed left upper limb monoplegia. The patient was in sinus rhythm and the cardiac chambers were free of thrombi on echocardiography. Computerised Tomography (CT) scan demonstrated 2 infarcts, one in the right caudate nucleus and the other in the right cerebral hemisphere. Carotid artery ultrasound scan (US) using a 7 MHz linear probe revealed a thrombus occupying 80% of the lumen of the right common carotid artery, extending from its mid point up to its bifurcation. The thrombus appeared to move with each pulse on real time scanning. Significant atheromatous plaques could not be seen in either internal carotid arteries.

The patient was anticoagulated with enoxaparin (1.5 mg/kg per day). CT angiogram performed 2 days later showed a 2.4 centimetre long thrombus attached to the wall of the right common carotid artery, occupying 20% of the lumen of the vessel. (Fig. 1). The enoxaparin was continued for 4 weeks during which time the patient recovered fully from her stroke. Carotid artery US was repeated by the same radiologist, who is experienced in vascular imaging and this demonstrated complete resolution of the thrombus. Enoxaparin was discontinued at this stage and the patient was started on aspirin 75 mg per day. At review 6 weeks later, the patient was completely asymptomatic. Aspirin has been advised life long.

Discussion

Mobile carotid artery thrombi are uncommon. Local atheromatous plaque complications seem to initiate thrombogenesis. However, spontaneous thrombosis has been reported in a variety of conditions including patients with circulating lupus anticoagulant.

Due to its rarity, treatment of this condition has not been standardised. It is considered by some to be a surgical emergency and immediate thrombectomy with endarterectomy would be undertaken. Others recommend anticoagulation, especially in patients who present late.

The thrombus was detected in our patient many hours after her ischaemic episode and a non-surgical approach was therefore considered most appropriate. Remarkable thrombus resolution was noted within 2 days of anticoagulation but since different imaging
modalities were used, this observation should be interpreted with caution. Complete resolution of the thrombus which was achieved subsequently with anticoagulation alone supports the non operative approach especially if presentation is late. The atheromatous plaque (if present) can then be managed according to its own merits.

References


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