

Anemia: An Unusual Cause of Free-Floating Thrombus of Carotid Artery

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Abstract

Case Report

Free floating thrombus (FFT) in the carotid artery is an uncommon finding and rarely reported in the literature. Less than 150 cases have been reported in the literature. We report a case of 38-year-old patient, with iron deficiency anemia under martial therapy, who presented internal carotid artery thrombosis with ischemic stroke of the superficial territory of the right middle cerebral artery. The etiological assessment did not find any cause apart from an iron deficiency anemia at 6.6g / dl. The patient was put on anticoagulant treatment with good clinical improvement (progressive recovery of motor activity) radiological (partial re-stabilization of the right internal carotid artery). We present one case with FFT suffering from anemia, with no atherosclerotic disease, managed successfully with a medical approach.

Keywords: thrombus, anemia, carotid, Free floating thrombus (FFT).

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INTRODUCTION

Free floating thrombus (FFT) in the carotid artery is an uncommon finding and rarely reported in the literature [1]. Less than 150 cases have been reported in the literature [2].

The most common underlying disorder is atherosclerotic or ulcerated plaque which commonly occurs in old men [3] but other medical and multifactorial disorders such as anemia which rare cause of Thrombus in Carotid Artery.

Owing to limited cases of FFT-ICA there is not a worldwide accepted consensus on management of FFT-ICA; therefore their managements is done based on case reports.

Here, we present one case with FFT suffering from anemia, with no atherosclerotic disease, managed successfully with a medical approach.

CASE REPORT

38-year-old patient, with iron deficiency anemia under martial therapy, who presented to our department for sudden internal carotid artery thrombosis revealed by a deficit in the left hemibody cerebral, angio-MRI revealed an ischemic stroke of the

superficial territory of the right middle cerebral artery the rest of the assessment was without abnormalities namely cardiac ultrasound, abdominopelvic ultrasound and biologically there was only a iron deficiency anemia at 6.6 g / dl, the assessment of acquired and constitutional thrombophilia did not reveal any anomaly The patient was put on anticoagulant treatment with good clinical improvement (progressive recovery of motor activity) radiological (partial re-stabilization of the right internal carotid artery).

DISCUSSION

FFT in the carotid artery is one of the rare disorders of carotid artery and less than 150 cases have been reported in the literature [2].

Incidence has been reported to be as low as 0.05% in a retrospective study with ultrasonography used for carotid artery imaging [4]. On the other hand, Buchanetal detected FFT in 1.45% (29/2,000) angiograms of patients with high-or moderate-grade ICA stenosis [5].

Many literature reports have stated that the most common etiology of FFT-ICA is atherosclerosis in approximately 75% of patients [2] other reported causes are hyperfibrinogenemia, iron deficiency anemia and

thrombocytosis, stimulant drugs, carotid aneurysms, arterial dissections, malignancy [8].

FFT usually presents with acute neurological deficit. Bhatti *et al.*, reported 92% of cases with neurological symptoms and 4% were asymptomatic [6]. Similar results were reported by Ferrero *et al.* where 14 out of 16 cases over a period of 9 years were symptomatic [7]. Our patient was symptomatic at time of presentation with neurological deficits.

Different imaging modalities have been used to diagnose FFT. Ferrero *et al.* in a single center study reported that duplex scan and digital subtraction angiography (DSA) had sensitivity of 62.5% and 100%, respectively [7]. The current American Heart Association for acute neurovascular imaging recommends CTA as the preferred modality for imaging the vasculature in acute stroke or TIA.

In previously published, different kinds of treatment have been described, including medical management alone, medical management with delayed surgery, urgent CEA, or endovascular repair of the lesion with cerebral protection. Akins *et al.*, [9] describe three cases in which women with severe iron deficiency anemia and thrombocytosis secondary to menorrhagia developed carotid artery thrombi and were treated with anticoagulants and antiplatelet therapy.

Pelz *et al.*, [10] treated 14 patients with thrombus in the cerebral vessels with anticoagulant or antiplatelet medication; 7 cases showed resolution of the thrombus at angiograms follow-up, 1 with no resolution at angiograms follow-up, whereas 6 patients subsequently underwent delayed CEA.

CONCLUSION

Usually patients with FFT-ICA are symptomatic and present with an acute emergency. Atherosclerosis and hypercoagulable states are the most common associated pathologies.

In this case we emphasize through this case the hypothesis that iron deficiency anemia can favor thrombotic events in particular at the level of unusual sites like internal carotid artery.

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