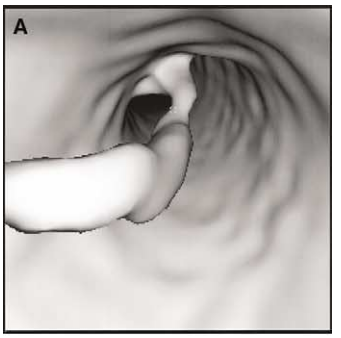
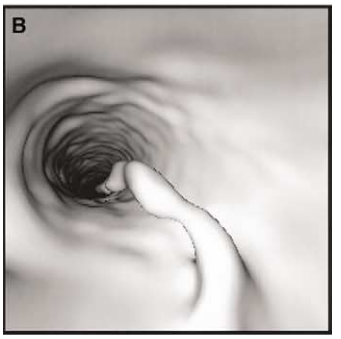
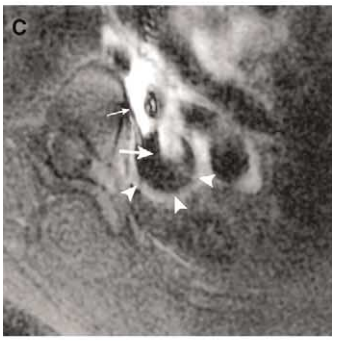
Floating thoracic aortic thrombus in "protein S" deficient patient

Tuncay Hazirolan, MD,[a] **Bruce A. Perler, MD,**[b] and **David A. Bluemke, MD, PhD,**[c] *Baltimore, Md*

A 52-year-old woman with known protein S deficiency, insulin-dependent diabetes, bilateral lower-extremity and upper-extremity deep venous thrombosis, and hypertension presented with new onset of chest pain. A computed tomography scan was obtained and revealed an aortic mass, possibly an aortic thrombus. The patient was treated with warfarin but continued to experience episodes of chest pain. Transesophageal echocardiography revealed a slender polyp-like lesion with a stalk floating free within the normal descending aorta. By using torso and transesophageal coils, magnetic resonance (MR) imaging and MR angiography were performed. MR angiography (Cover) showed an approximately 3 × 0.8-cm slender polypoid lesion attached to the wall of the thoracic aorta approximately 3 cm distal to the left subclavian artery. The MR angiography images were reformatted to depict the mass as viewed from the inside of the aorta, showing the attachment of the mass to the aortic wall viewed from below (A) as well as above (B). Cine images (available online) demonstrate the lesion floating freely within the descending aorta. Delayed postcontrast images demonstrate intense enhancement of the mass (C, *arrow*). The small arrowheads point to the aorta, and the small arrow points to the transesophageal coil.







After six weeks of heparin treatment, a repeat MR scan showed that the morphology and size of the mass was unchanged. Due to the failure to respond to formal anticoagulant therapy, the patient underwent elective surgery for resection of the mass. Through a longitudinal aortotomy, a long, dense, sessile mass (D) was easily teased free from the aorta and separated from its origin.

Most patients with floating aortic thrombus are elderly with diffuse atherosclerotic disease and ulcerated plaque as an attachment point for the thrombus. Floating thrombus in the thoracic aorta is very rare: approximately 100 cases have been described.[1]

The risk of embolic events from mobile versus immobile thrombus is reported as 73%, and 12% respectively.[2] Because of the high risk of embolic potential of mobile thrombus, definitive treatment is necessary. Thrombolysis, anticoagulant therapy, and surgery have been used as treatment with variable success. One approach is to start treatment with 2 to 3 weeks of short-term anticoagulation with heparin or low-molecular-weight heparin. If imaging shows disappearance of the thrombus, heparin is discontinued and chronic warfarin is initiated. If short-term heparin therapy fails, surgical thrombectomy is used. Patients will require long-term anticoagulation therapy with coumarin even after successful medical or surgical treatment of floating thrombus.[2]

REFERENCES

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From the Departments of Radiology and Radiological Science[a,c] and the Division of Vascular Surgery, Department of Surgery,[b] The Johns Hopkins University School of Medicine.

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