

Title: Acute Aortic Occlusion Secondary to an Atherosclerotic Thrombus: A Rare Phenomenon

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Category: Interesting Clinical Case Study

Introduction

Acute aortic occlusion (AAO) is a rare and fatal phenomenon that results from an abrupt obstruction of the aorta, commonly caused by a saddle embolus at the aortic bifurcation or an atherosclerotic thrombus.

Case report

A 74-year-old female with hypertension and peripheral artery disease presented with acute onset of dyspnea with abdominal pain. Initial examination revealed a blood pressure of 246/111 mmHg and oxygen saturation of 92% on ambient air. A non-contrast CT revealed a bulky calcified thrombus completely obstructing the proximal abdominal aorta (Figure 1A), bilateral renal arteries (B1 and B2), celiac trunk (C1), and superior mesenteric artery (C2). She then developed flash pulmonary edema and lower extremity numbness with femoral pulses undetectable by doppler.

The patient was taken to the operating room and aortic angiography demonstrated lack of distal blood flow (Figure 2D). She underwent an aortic balloon angioplasty which established palpable dorsalis pedis pulses (Figure 2E) with a subsequent CT showing patency within the aortic thrombus (Figure F1).

Immediately postoperatively, a mean arterial pressure greater than 90 mmHg was necessary to maintain adequate lower limb perfusion. The patient was started on low-dose aspirin and three days of heparin infusion to prevent re-occlusion of her descending aorta. Her post-angioplasty course was complicated by cecal necrosis requiring emergent right hemicolectomy, angioedema requiring cessation of aspirin, and renal failure requiring hemodialysis. The patient later passed away on hospital day 74.

Discussion

This case highlights the need for prompt recognition and the high likelihood of complications even with successful revascularization [1-6]. More studies are needed to investigate AAO management to decrease the high association of morbidity and mortality with the disease.

Figures

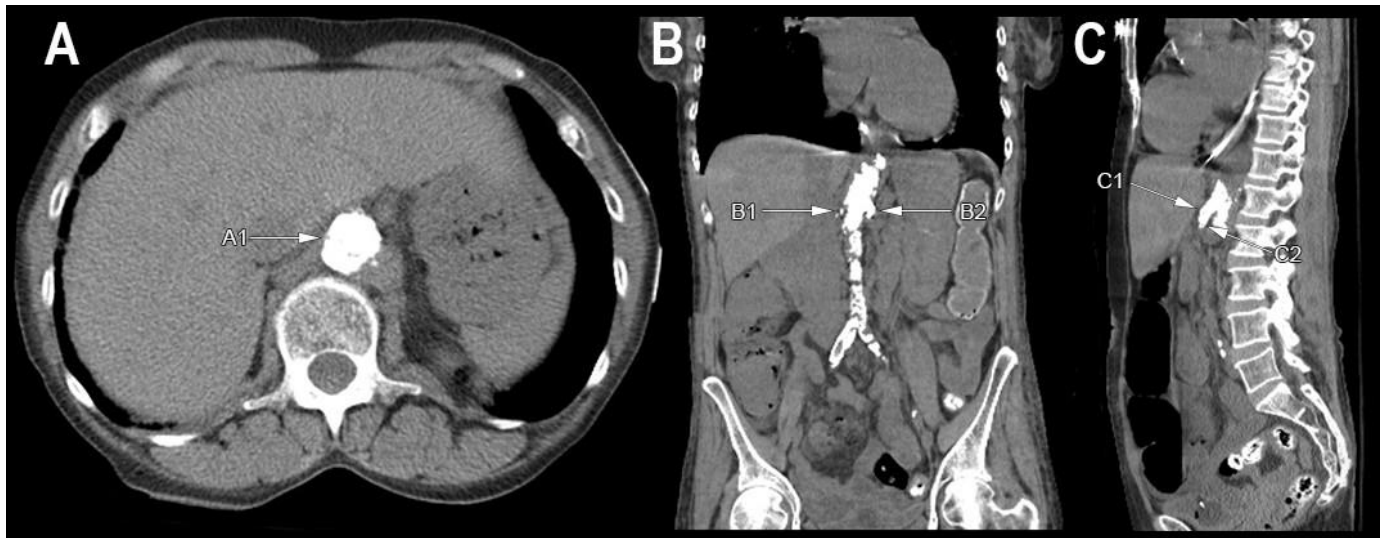


Figure 1: CT imaging without contrast from the initial presentation from axial (A), coronal (B), and sagittal (C) views illustrating a complete obstructive bulky calcified thrombus (A1) in the abdominal aorta with extension into the bilateral renal arteries (B1 and B2), celiac trunk (C1) and superior mesenteric artery (C2). Furthermore, there is extensive atherosclerosis of the abdominal aorta with extension to the bilateral common iliac arteries.

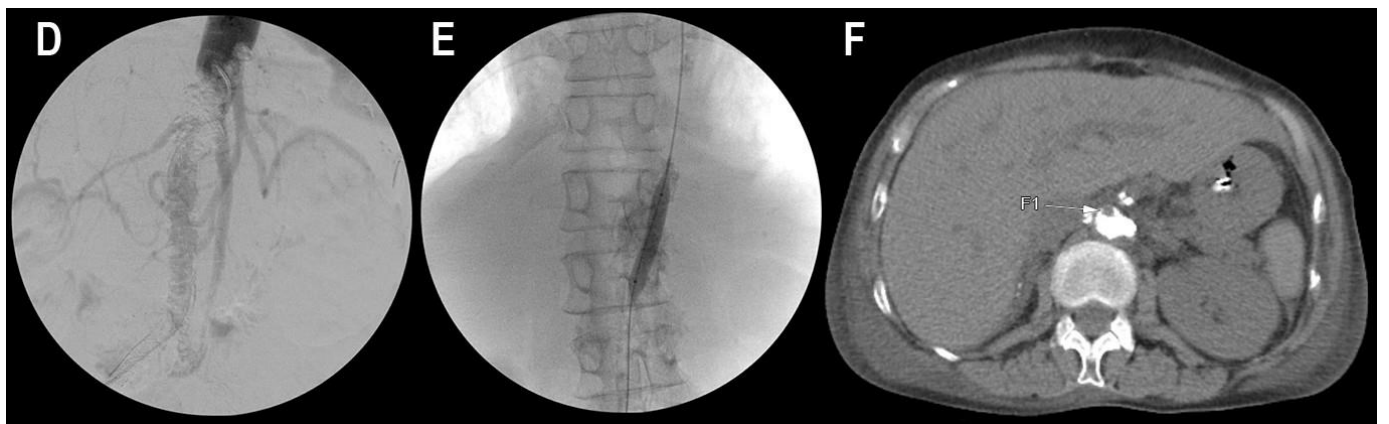


Figure 2: Aortic angiography demonstrating occlusion of distal blood flow (D) and subsequent angioplasty (E). Postoperative CT demonstrating successful angioplasty (F1).

Citations

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5. Verma, H., et al., *Surgical and endovascular treatment of occlusive aortic syndromes*. J Cardiovasc Surg (Torino), 2013. **54**(1 Suppl 1): p. 55-69.
6. Babu, S.C., P.M. Shah, and J. Nitahara, *Acute aortic occlusion--factors that influence outcome*. J Vasc Surg, 1995. **21**(4): p. 567-72; discussion 573-5.