


Nose-shaped mass in the ascending aorta

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Abstract

A 79-year-old man was referred for urgent coronary artery bypass grafting. Contrast-enhanced computed tomography revealed an atypically nose-shaped contrast defect, which intraoperatively turned out to be an atheromatous plaque. Its preoperative detection allowed us to prevent an adverse cerebral event. This case highlights that a thorough preoperative work-up should ideally include a CT angiography, in patients where atherosclerotic changes are to be expected.

KEYWORDS

atherosclerosis, contrast-enhanced computed tomography, coronary artery bypass grafting, preoperative work-up

A 79-year-old man was referred to our department for an urgent coronary artery bypass graft procedure after suffering from a non-ST-elevation myocardial infarction. His past medical history included hypertension, dyslipidemia, hyperuricemia, and insulin-dependent Type 2 diabetes mellitus. The preoperatively performed contrast-enhanced computed tomography (CT) revealed a nose-shaped contrast defect of the lumen of the ascending aorta (Figures 1 and 2). The patient successfully underwent coronary artery bypass grafting and supracoronary ascending aortic replacement with a woven vascular prosthesis. Radiologists had suspected a thrombus, instead, intraoperatively, an unusual broad-based exophytic mass was found at the heavily calcified mid ascending aortic wall (Figure 3). Histopathological examination of the excised aortic tissue revealed an atheromatous plaque with a massive amount of cholesterol crystals, foam cells, and a few histiocytes. The elastic fibers of the aorta were fragmented and the vessel wall showed signs of dissection. Atherosclerosis of the ascending aorta is a common finding among patients scheduled for coronary artery bypass grafting and is linked to adverse cerebral outcomes.¹ The peculiar shape of the atherosclerotic disease in this patient makes this case instructive and serves to draw attention to an important issue that affects

our daily practice; partial clamping of the ascending aorta, as frequently performed in many centers during proximal anastomoses, could have resulted in devastating consequences. This case serves to highlight that a thorough preoperative work-up should ideally include a CT angiography,² in patients where



FIGURE 1 Contrast-enhanced computed tomography scan of the ascending aorta depicting a nose-shaped contrast defect

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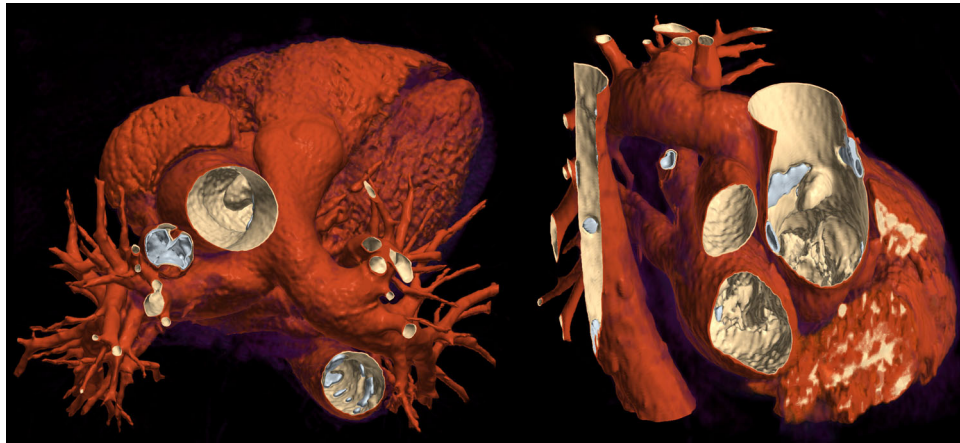


FIGURE 2 Three-dimensional reconstruction of the heart based on the computed tomography scan showing an unusual mass at the mid ascending aortic wall

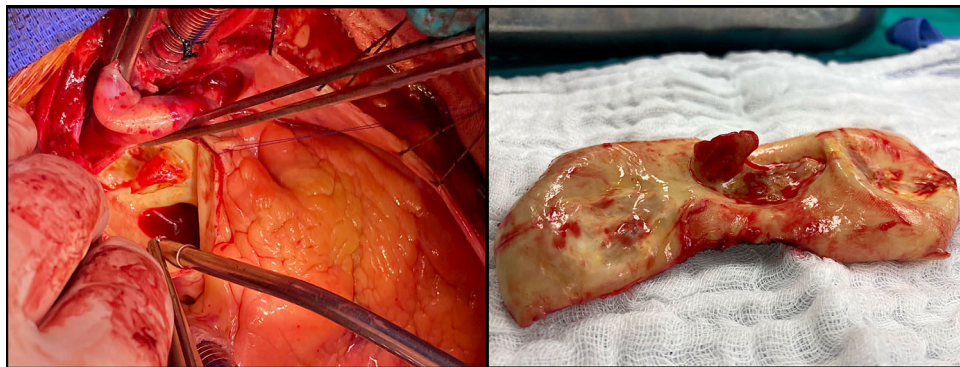


FIGURE 3 Intraoperative findings showing the affected aortic wall segment

atherosclerotic changes are to be expected, even if urgent surgery is indicated.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

ETHICS STATEMENT

The patient gave written informed consent for publication.

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