The Heart Surgery Forum #2013-245
16 (6), 2013 [Epub December 2013]
doi: 10.1532/HSF98.2013245

Online address: http://cardenjennings.metapress.com

Type A Intramural Hematoma Often Turns Out To Be a Type A Dissection

Sebastian Michel, MD, Christian Hagl, MD, Gerd Juchem, MD, Ralf Sodian, MD

Department of Cardiac Surgery, Ludwig-Maximilians-University, Munich, Germany

ABSTRACT

Background: The management of type A intramural hematoma (IMH) is controversial. Although most Western countries still recommend immediate surgical repair, some centers in Asia have shown good results recently with medical treatment alone. Here, we present a case of type A IMH which was discovered during the operation to be a thrombosed type A dissection.

Case Report: An 83-year-old female patient presented with acute chest pain. After diagnostic exclusion of myocardial infarction, computed tomography was performed, which showed an IMH from the ascending to the descending aorta. No intimal flap could be detected. The ascending aorta was replaced surgically with a prosthesis. During the operation, we found a ruptured intimal plaque, which had caused dissection of the aorta with thrombosis of the false lumen. The true diagnosis—thrombosed type A dissection and not IMH—was revealed neither by computed tomography nor by transesophageal echocardiography.

Conclusion: Type A IMH should still be treated with immediate surgical repair because in many cases it turns out to be thrombosed type A dissection.

INTRODUCTION

The management of type A intramural hematoma (IMH) is controversial. Although most Western countries still recommend immediate surgical repair [Evangelista 2005], some centers in Asia have shown good results recently [Kitai 2009] with medical treatment alone. Here, we present a case of type A IMH which we discovered only during surgery to be a thrombosed type A dissection. The correct diagnosis could not be made preoperatively using transesophageal echocardiography or computed tomography.

Received August 30, 2013; accepted November 25, 2013.

Correspondence: Sebastian Michel, MD, Department of Cardiac Surgery, Ludwig-Maximilians-University, Marchioninistrasse 15, D-81377 Muenchen, Munich, Germany; +49-89-7095-0 (e-mail: Sebastian.Michel@med.uni-muenchen.de).

CASE REPORT

An 83-year-old female patient presented with acute chest pain. On physical examination her heart rate was 80/min and her blood pressure was 110/75 mmHg on both arms. Electrocardiogram and laboratory results did not show any signs of acute myocardial ischemia. Computed tomography revealed an IMH with a circular thrombosed lumen of 2-3 mm (Figure 1) from the ascending to the descending aorta. The maximum diameter of the ascending aorta was 48 mm. Transesophageal echocardiography demonstrated good ventricular function, mild aortic regurgitation, and no pericardial effusion. No classical intimal flap could be seen.

The ascending aorta was replaced with a 28-mm Vascutek® prosthesis. The patient recovered well and was discharged 6 days later. On close inspection of the specimen (Figure 2), we found a ruptured intimal plaque (arrow), which had caused aortic dissection and extensive hematoma/thrombosis of the false lumen.

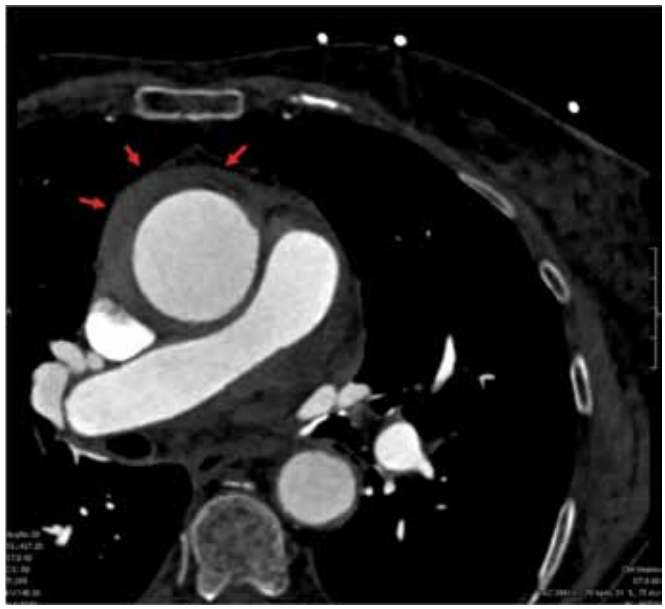

Figure 1. Computed tomography of the ascending aorta: IMH with a circular thrombosed lumen of 2-3 mm (arrows).

Figure 2. Specimen of the ascending aorta. A ruptured intimal plaque (arrow) was found which had caused aortic dissection and extensive hematoma/thrombosis of the false lumen.

DISCUSSION

IMH is by definition caused by rupture of the vasa vasorum in the media, with an intact intimal layer [Hoey 2012]. Emergency surgical repair is recommended when the ascending aorta is involved [Nienaber 2012]. In many cases, however, an intimal tear can be found, and IMH turns out to be a thrombosed type A aortic dissection [Uchida 2013]. We conclude that IMH involving the ascending aorta should always be treated like a type A aortic dissection, even if no classic intimal flap, aortic regurgitation, or malperfusion can be detected preoperatively.

REFERENCES

Evangelista A, Mukherjee D, Mehta RH, et al. 2005. Acute intramural hematoma of the aorta: a mystery in evolution. Circulation 111:1063-70.

Hoey ETD, Wai D, Ganeshan A, Watkin RW. 2012. Aortic intramural haematoma: pathogenesis, clinical features and imaging evaluation. Postgrad Med J 88:661-7.

Kitai T, Kaji S, Yamamuro A, et al. 2009. Clinical outcomes of medical therapy and timely operation in initially diagnosed type A aortic intramural hematoma: a 20-year experience. Circulation 120:S292-8.

Nienaber CA, Powell JT. 2012. Management of acute aortic syndromes. Eur Heart J 33:26-35.

Uchida K, Imoto K, Karube N, et al. 2013. Intramural haematoma should be referred to as thrombosed-type aortic dissection. Eur J Cardiothorac Surg 44:366-9.