

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: <http://Elsevier.com/locate/radcr>

Case Report

Aortoenteric fistulae temporization and treatment: lessons learned from a multidisciplinary approach to 3 patients

Jeffrey Forris Beecham Chick MD, MPH, DABR^{a,*}, Jordan C. Castle MD^a, Kyle J. Cooper MD^a, Ravi N. Srinivasa MD^a, Jonathan L. Eliason MD^b, Nicholas H. Osborne MD^b, Karen M. Kim MD^c, Wael E. Saad MBBCh, FSIR^a, Minhaj S. Khaja MD, MBA^a

^a Division of Vascular and Interventional Radiology, Department of Radiology, University of Michigan Health System, 1500 East Medical Center Drive, Ann Arbor, MI 48109, USA

^b Division of Vascular Surgery, Department of Surgery, University of Michigan Health System, Ann Arbor, MI 48109, USA

^c Department of Cardiac Surgery, University of Michigan Health System, Ann Arbor, MI 48109, USA

ARTICLE INFO

Article history:

Received 8 January 2017

Accepted 6 March 2017

Available online 12 April 2017

Keywords:

Aortoenteric fistulae

Fistula

Endovascular treatment

Interventional

ABSTRACT

Aortoenteric fistulae are life-threatening conditions characterized by abnormal communications between the aorta and gastrointestinal tract. Aortoenteric fistulae may be characterized by the triad of bleeding, abdominal pain, or a pulsatile abdominal mass. Although hemorrhage is the most common presentation, it does not always occur; thus, patients may present with nonspecific symptoms. Computed tomography angiography findings suggestive of aortoenteric fistulae include ectopic gas within or adjacent to the aorta, discontinuity of the aortic wall, bowel wall thickening, and extravasation of contrast into the bowel. Endovascular treatments include retrograde balloon occlusion of the aorta and stent-graft deployment as well as coil, fibrin, and glue embolization of the fistulous tract. This report describes 3 cases of aortoenteric fistulae temporized and treated by interventional radiology and vascular and cardiac surgery at a single institution in an effort to increase awareness of this important clinical condition.

© 2017 the Authors. Published by Elsevier Inc. under copyright license from the University of Washington. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

Aortoenteric fistulae are rare life-threatening conditions characterized by abnormal communications between the aorta and gastrointestinal tract. The incidence of primary aortoenteric fistulae, those occurring without history of prior aortic intervention, is less than 1%, whereas the incidence of

secondary aortoenteric fistulae, from erosion of an aortic prosthesis into the surrounding gastrointestinal structures, is 0.36%–1.6% [1,2]. Although the pathogenesis of aortoenteric fistulae remains unknown, it is theorized to be the result of aortic or graft pulsation against the wall of the gastrointestinal tract. Aortoenteric fistulae may be characterized by the clinical triad of bleeding, abdominal pain, and pulsatile

Competing Interests: The authors have declared that no competing interests exist.

* Corresponding author.

E-mail address: jeffreychick@gmail.com (J.F.B. Chick).

<http://dx.doi.org/10.1016/j.radcr.2017.03.008>

1930-0433/© 2017 the Authors. Published by Elsevier Inc. under copyright license from the University of Washington. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



Fig. 1 – (A) Axial image from CT angiogram revealing focal aortic disruption (black arrow), duodenum draping over the aorta (white arrowhead), and focus of gas within the aortic aneurysm sac (white arrow). **(B)** Coronal reconstructed image demonstrating disruption of aortic wall (black arrow) with adjacent focus of gas within the aneurysm sac (white arrow). **(C)** Aortogram before endovascular repair highlighting site of aortic disruption (black arrow). **(D)** Aortogram after endovascular aortic repair (before balloon molding) confirming contrast within the bowel (black arrowheads). **(E)** Digital subtraction angiogram image from completion aortography showing resolution of aortoenteric fistula with widely patent endograft. CT, computed tomography.

abdominal mass. Hematemesis and melena, secondary to rupture of the closely adherent aorta into the gastrointestinal tract, occurs in 32%-78% of patients with primary aortoenteric fistulae [3]. Although hemorrhage is the most common presentation, it does not always occur and patients may present with nonspecific symptoms including generalized malaise, weight loss, sepsis, and graft thrombosis. Computed tomography (CT) angiography findings suggestive of aortoenteric fistulae include ectopic gas within or adjacent to the aorta, discontinuity of the aortic wall, bowel wall thickening, and extravasation of contrast into the bowel lumen [4]. Endovascular treatments, although not definitive therapies (because the deployed materials by definition become contaminated), include retrograde balloon occlusion of the aorta and stent graft deployment, as well as coil, fibrin, and glue embolization of the fistulous tract. Despite potential treatment options, due primarily to its uncommon and variable clinical presentation, surgical mortality and overall mortality are high at 36% and 86%, respectively [5]. This report describes 3 cases of

aortoenteric fistulae temporized and treated by interventional radiology and vascular and cardiac surgery at a single institution in an effort to increase awareness of this important clinical condition.

Case report

Institutional review board approval was not required for preparation of this report. All 3 patients presented in August and September 2016. The first patient was a 76-year-old man who presented with anemia, hypotension, fever, and chills after 5 episodes of large volume, dark red, malodorous stools. CT angiogram revealed a 2.9-cm saccular aneurysm arising from the anterolateral surface of the infrarenal aorta, intimately associated with the crossing duodenum, and with surrounding inflammatory changes and a focus of gas in the aneurysm sac (Fig. 1). Aortography revealed brisk contrast extravasation into the small bowel, consistent with the suspected aortoenteric

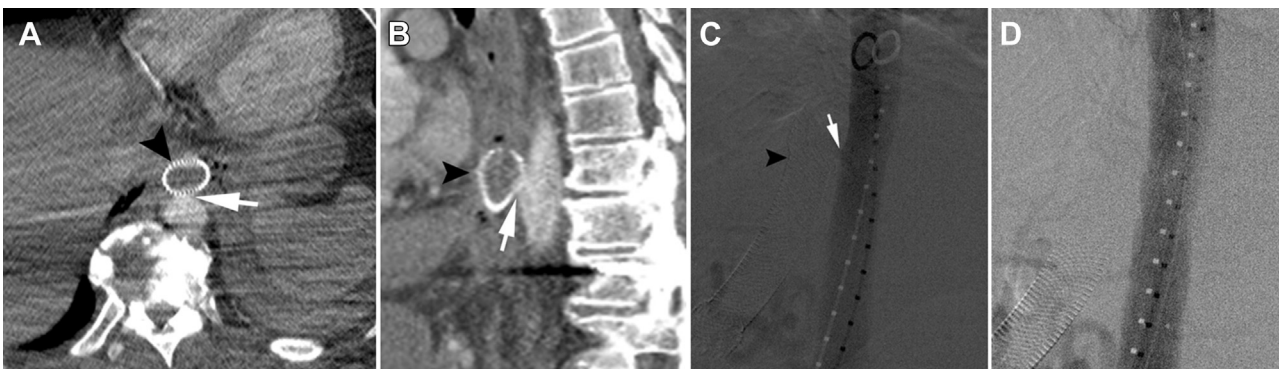


Fig. 2 – (A) Axial image from CT angiogram showing relationship of esophageal stent (black arrowhead) and aortic injury (white arrowhead). **(B)** Sagittal reconstructed image demonstrating esophageal stent (black arrowhead) and aortic disruption with contrast material within the esophageal stent (white arrow). **(C)** Digital subtraction angiography image from lateral aortography confirming irregularity along the anterior aorta (white arrow) near the rostral aspect of the esophageal stent (black arrowhead). **(D)** Digital subtraction angiography image from completion aortogram with a widely patent aortic endograft and resolution of anterior aortic irregularity. No endoleak was seen. CT, computed tomography.

Download English Version:

<https://daneshyari.com/en/article/8825425>

Download Persian Version:

<https://daneshyari.com/article/8825425>

[Daneshyari.com](https://daneshyari.com)