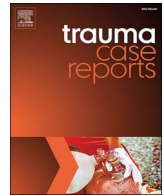


Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Trauma Case Reports

journal homepage: www.elsevier.com/locate/tcr

Case Report

Blunt traumatic celiac artery avulsion managed with celiac artery ligation and open aorto-celiac bypass[☆]

Matthew D. Kronick^{a,*}, Andrew R. Doben^a, Marvin E. Morris^a, Ronald I. Gross^a,
Amanda Kravetz^a, Jeffrey T. Nahmias^b

^a Baystate Medical Center, Tufts University School of Medicine, Springfield, MA, USA

^b University of California, Irvine, Orange, CA, USA

ARTICLE INFO

Keywords:

Vascular
Trauma
Celiac artery
Aorta

ABSTRACT

Traumatic celiac artery injuries are rare and highly lethal with reported mortality rates of 38–62%. The vast majority are caused by penetrating trauma with only 11 reported cases due to blunt trauma (Graham et al., 1978; Asensio et al., 2000, 2002). Only 3 of these cases were complete celiac artery avulsions. Management options described depend upon the type of injury and have included medical therapy with anti-platelet agents or anti-coagulants, endovascular stenting, and open ligation. We report a case of a survivor of complete celiac artery avulsion from blunt trauma managed by open bypass.

Introduction

Traumatic celiac artery injuries are rare and highly lethal with reported mortality rates of 38–62%. While the vast majority are caused by penetrating trauma, an estimated 6% of these injuries resulted from blunt force trauma, and there have been only 11 reported cases in the literature (Table 1) [1–10,12–14]. Injury patterns vary and those reported include intimal flaps, thrombosis, pseudoaneurysms, and complete avulsions. Notably only 3 of the cases of celiac artery injury due to blunt trauma reported in the literature were complete avulsions. Management options described depend upon the type of injury and have included observation, medical therapy with anti-platelet agents or anti-coagulants, endovascular placement of stents or stent grafts, and open ligation. We report the case of a survivor of complete celiac artery avulsion from blunt trauma managed by open bypass, and will present a brief review of the literature and a summary of management options.

Case report

A 75-year-old male with history of atrial fibrillation on Rivaroxaban was struck by a motor vehicle. Upon arrival he was hypotensive but with a Glasgow Coma Score of 15. A strategy of permissive hypotension was maintained based upon the patient's mental status. Plain radiographs and CT imaging were obtained and demonstrated multiple rib fractures and a celiac artery injury with contrast extravasation and associated hematoma (Fig. 1A–B). He was immediately transported to our hybrid operating room and placed under general anesthesia. Percutaneous femoral artery access was obtained and aortography was performed. This demonstrated a complete avulsion of the celiac artery with distal reconstitution via retrograde filing from the superior mesenteric artery (Fig. 2). Initially, given the stability of the patient, attempts were made to traverse the injury to perform endovascular intervention in

[☆] Poster at the Society of Clinical Vascular Surgery conference, Las Vegas, NV March 12–16, 2016.

* Corresponding author at: 759 Chestnut Street, Springfield, MA 01199, USA.

E-mail address: kronickm@gmail.com (M.D. Kronick).

<http://dx.doi.org/10.1016/j.tcr.2017.10.002>

Accepted 16 October 2017

Available online 31 October 2017

2352-6440/ © 2017 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Table 1
 Characteristics of the 11 previously reported cases of blunt celiac artery injury as well as our currently reported case.

Year	Age/gender	Mechanism	Injury type	Management	Outcome
Brown 1998	24 M	MVC	Superior mesenteric and celiac artery disruptions	Attempted SMA bypass	Operative death
Asensio 2005 (1 of 13 patients in series)	Not specified	MVC	Not specified	Not specified	Not specified
Linuma 2006	39 M	Crush injury	Partial tear of celiac artery	Open ligation	Discharged POD# 16
Suchak 2007	41 M	MVC	Delayed recognition of intimal flap of celiac artery HD#3	Endovascular stenting (Wallstent, Boston Scientific, Boston, MA, USA)	Discharged HD#10
Kirchhoff 2007	66 M	MVC	Delayed recognition of dissection and thrombosis of celiac artery HD#5	None	Death HD#7 from fulminant liver failure
Gorra 2009	29 M	Fall from 9 m	Dissection and thrombosis of celiac artery	Anticoagulation with Heparin and subsequently Warfarin for 3 months	Discharged HD#4, repeat imaging with asymptomatic celiac artery occlusion at 3 months
Colonna 2010	17 M	MVC	Complete avulsion of celiac artery	Open ligation	Discharged HD#27
Choi 2012	39 M	Crush injury	Pseudoaneurysm of celiac artery	Endovascular stent graft placement, embolization of splenic, left gastric and inferior phrenic arteries	Discharged, no evidence of complication 6 months post-procedure
Sarker 2012	26 M	MVC	Dissection of celiac artery	Anticoagulation with Enoxaparin and subsequently Warfarin for 3 months	Discharged, repeat imaging with resolution of dissection at 3 months
Osborne 2013	72 M	MVC	Complete avulsion of celiac artery	Open ligation	Discharged POD#11
Rosenthal 2015	26 M	Fall from 150 ft into river	Dissection of celiac artery	Medical management with Aspirin 81 mg	Discharge, repeat imaging with persistent asymptomatic dissection at 2 months
Kronick 2016	75 M	Pedestrian struck	Complete avulsion of celiac artery	Open aorto-celiac artery bypass	Discharged on HD#102, survival to 22 months

Download English Version:

<https://daneshyari.com/en/article/8804905>

Download Persian Version:

<https://daneshyari.com/article/8804905>

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