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## Case Report

# Rupture of a Rare Celiomesenteric Trunk Aneurysm following Mechanical Fall

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### ABSTRACT

A celiomesenteric trunk (CMT) is an anatomical variation involving a common origin of the celiac trunk (CT) and the superior mesenteric artery (SMA). The prevalence of a celiomesenteric trunk anatomic variation has been found to be in the region of 3.4% but the incidence of aneurysms in this particular visceral artery are unknown [1]. There are only 20 cases of a celiomesenteric anomaly with an associated aneurysm documented in the last 35 years [2].

This article describes the emergency management of such an aneurysm in a frail 65-year-old female who knew about her aneurysm and was considering a recommendation for elective repair. On this occasion, the aneurysm ruptured (see figure 1) after a mechanical fall down some stairs at home. This difficult case was successfully managed with open repair and a 6mm Dacron interposition graft was sutured end-to-end with continuous 6/0 prolene from the SMA-CT common origin to the bifurcation into Splenic Artery and Common Hepatic Artery. She was discharged on post-operative day four. At her two month follow up appointment she had made an impressive recovery with no complications.

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A celiomesenteric trunk (CMT) is an anatomical variation involving a common origin of the celiac trunk (CT) and the superior mesenteric artery (SMA). The prevalence of a celiomesenteric trunk anatomic variation has been found to be in the region of 3.4% but the true incidence of aneurysms in this particular visceral artery are unknown [1]. There are only 20 cases of a celiomesenteric anomaly with an associated aneurysm documented in the last 35 years [2, 3].

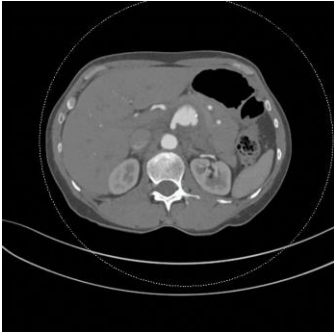
This case report describes the emergency management of such an aneurysm in a frail 65-year-old female who knew about her asymptomatic aneurysm and was considering a recommendation for elective repair. Unfortunately, the 3.5cm diameter aneurysm ruptured (see Figure 1) after a mechanical fall down some stairs. This case was successfully managed with midline laparotomy, systemic heparinisation, and establishment of proximal and distal control with vessel loops. A 6mm Dacron interposition graft was sutured end-to-end with continuous

6/0 prolene from the SMA-CT common origin to the first large bifurcation into Splenic Artery and Common Hepatic Artery. She was discharged on post-operative day four. At six months follow up she had made an impressive recovery with no complications and had a satisfactory post-operative CT-Angiogram showing a patent interposition graft with no signs of neointimal hyperplasia or other aneurysmal change.

### Discussion

This case highlights two main considerations of practice in vascular surgery: the immense variation of managing visceral artery aneurysms including in an emergency setting, and a mechanism of aneurysm rupture not commonly seen, that of mechanical fall in a frail middle-aged female. Interposition grafting using PTFE was successful in this case and the patient has had no complications or reinterventions post-operatively thus far.

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**Figure 1:** The celiomesenteric trunk demonstrates extraluminal extension of contrast at its left posterolateral aspect. There is significant haemorrhage adjacent to the aneurysm in the upper abdominal retroperitoneum and mesentery.

#### Conflicts of Interest

None.

#### Consent

Informed consent for this case report and associated images has been obtained from the patient.

#### Funding

None.

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