

EDITORIAL

Editorial comment on *Aortoenteric fistula causing massive bleeding: case report and clinical images*

W Wisselink

Division of Vascular Surgery, VU University Medical Center, Amsterdam, The Netherlands

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Since the advent of endovascular aortic aneurysm repair (EVAR), the incidence of aortoenteric fistula (AEF) has markedly decreased, a direct consequence of its pathogenesis. During conventional open aneurysm repair, the prosthetic aortic graft must be completely covered with aneurysm wall material in order to avoid direct contact between the (pulsating) prosthetic material and the intestine. Frequently, however, at the most crucial area, the proximal anastomosis which is just below the takeoff of the renal arteries, the quantity of aneurysm wall to work with is inadequate leaving part of the graft uncovered. Right at that very position, the most vulnerable part of the small bowel, the (retroperitoneal) duodenum, abuts the aortic anastomosis. Obviously, with EVAR these issues have become immaterial.

Clinical presentation is either critical, with massive bleeding, indolent, with anaemia, or in-between, with a so-called sentinel bleed. The latter may be explained by the temporary protective effect of circulatory shock. Obviously, patients presenting with a sentinel bleed should not receive massive fluid resuscitation in analogy with those presenting with ruptured aneurysm.

As the authors state correctly, the mortality of AEF is high due to the complexity of the surgical repair requiring: clamping of the aorta (often suprarenally), removal of the aortic graft, closure of the duodenum, and finally aortic reconstruction with an extra-

anatomically tunnelled axillo-bifemoral graft. Alternatively, in situ reconstruction with spiralled autogenous saphenous vein or even superficial femoral vein may be employed.

It is not only the incidence of AEF that has been affected, as treatment options have also been revolutionized by the newer endovascular techniques. The first treatment objective, cessation of bleeding in these often-moribund patients with ample comorbidities, may be achieved under local anaesthesia without the difficult redo surgical dissection and without aortic clamping. The drawback is the infected prosthetic material remaining in the patient, reason to coin this technique as a bridge to definitive surgical repair following resuscitation and optimization of the patient. Unfortunately, the patient described in this case study did not survive in spite of rapid and adequate coverage of the fistula and correction of coagulopathy with massive transfusion and blood component therapy with administration of Factor 7a. A possible reason may be persistent bleeding along the endograft due to a short and/or angulated aortic neck or, technically, by inadequate positioning or sizing of the graft. Unfortunately, even in cases of successful termination of bleeding, as seemed to be the case in this report, the consequences of haemorrhagic shock may prevent a satisfactory outcome.

Aortoenteric fistula, also in the endovascular era, remains a formidable challenge to surgeons and intensivists alike.

Correspondence

W Wisselink

E-mail: W.Wisselink@vumc.nl