Massive Gastro-Intestinal Bleed in a Case of Aorto-Enteric Fistula: An Intraoperative Nightmare

To the Editor,

Vascular anaesthesia presents unique management challenges to a perioperative physician considering the large volume shifts, aortic clamping and de-clamping syndrome, perioperative bleeding and organ protection concerns. The challenges become magnified in background of rare presentation of the underlying vascular pathologies.

We describe a case which bears testimony to the aforementioned fact. A 62 year old male patient was scheduled for the surgical repair of an infra-renal aortic pseudo-aneurysm and a co-existent aorto-enteric fistula (AEF). Following induction of anaesthesia, a sudden hemodynamic deterioration ensued. A continuous column of fresh blood started draining through the naso-gastric (NG) tube which accounted for the existing hypotension and declining haematocrit. A cumulative amount of almost 1 L blood collected in the NG drainage system [Figure 1a], signifying a massive gastro-intestinal (GI) bleed with ongoing resuscitative endeavours to maintain hemodynamic stability. Following an immediate proximal aortic control (aortic clamping) to control GI bleed, the surgical exploration revealed an aorto-duodenal fistula at the advancing end of the aortic pseudo-aneurysmal sac [Figure 1b]. Subsequently, a patch closure of the aortic end of the AEF [Figure 1c], resection of the perforated part of the duodenum and a duodeno-jejunostomy was performed.

AEF is a rather rare cause of GI bleed. It can be categorized as primary or secondary. Secondary AEF result following surgical aortic reconstruction with an incidence of 0.6-4%.[1,2] However, the reported incidence of a primary AEF is hardly 0.04-0.07%.[3] The index case demonstrated a primary AEF arising de novo between the aorta and the duodenum. The literature also outlines duodenum as the most common part of the GI tract involved in AEF with the mechanical, inflammatory and infective components contributing to the development of the fistulous tract.[3,4] An intermittent 'herald-bleed' is often considered as subtle clue of an underlying AEF.[5] The preoperative history elucidated that the patient was experiencing intermittent episodes of hematochezia since 3 days, only to manifest as a torrential intra-operative GI bleed after anaesthetic induction.

To conclude, AEF constitutes a unique presentation of an underlying aortic-pathology, wherein the perioperative management is compounded by a multitude of factors such as the control of GI haemorrhage, infection, and maintenance of an adequate distal perfusion. The index case illustrates the role of a forewarned and a forearmed anaesthesiologist in managing this rare cohort of surgical patients.

Declaration of patient consent

The authors certify that they have obtained all appropriate

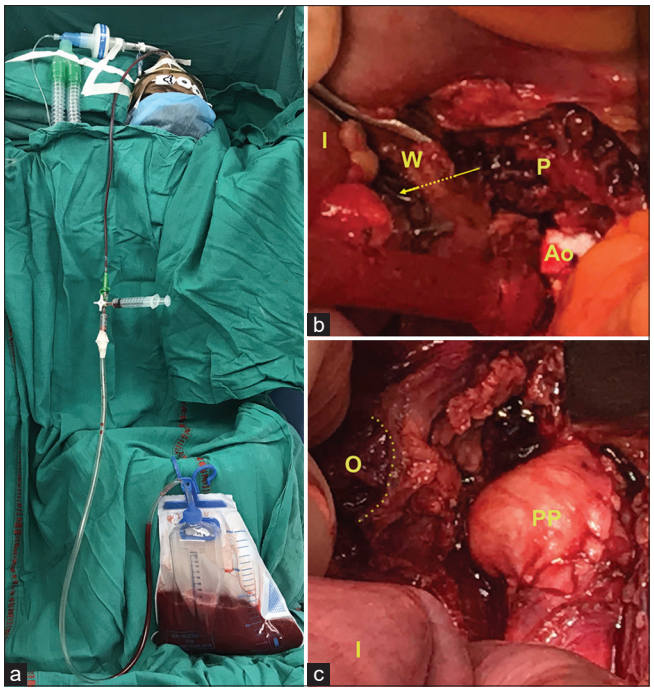

Figure 1: Depicts the nasogastric tube drainage assembly with collection of approximately a litre of blood in the volumetric chamber of the urine collecting bag (a). A surgical figure showing the pseudo-aneurysmal sac (P) with the wall of the sac (W) in the Babcock intestinal forceps, the surgical pledget marking the aortic end (Ao) of aorto-enteric fistula and the arrow representing the fistulous tract (b). Depicting the bovine pericardial patch (PP) repair of the pseudo-aneurysm, the opening of the pseudo-aneurymal sac (O) communicating with the duodenum on surgical probing (c). I denotes the intestines

patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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