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Vascular Surgery

UPPER GASTROINTESTINAL BLEEDING CAUSED BY BLEEDING FROM THE GALLBLADDER WALL: CASE REPORT

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ABSTRACT Upper gastrointestinal bleeding (UGB) is a life-threatening complication of gastrointestinal diseases. There is a large variety of uncommon reasons which contribute to UGB and might become reasons for misdiagnosis and sometimes lead to fatal consequences.[1]

We are presenting a man, 69 years old, with massive bleeding from the upper gastrointestinal system. After carrying out endoscopic attempts, as well as medication and blood supply, the bleeding did not stop. There was a very unusual finding during operative treatment: perforated ulcer on the duodenal bulb which was closed by the gallbladder whose wall blood vessels had eroded and were bleeding in the duodenal lumen.

Our goal was to show how unusual and unclear reasons of gastrointestinal bleeding demand adjustment in treatment. Despite modern developed endoscopic techniques, uncertain conditions demand open surgical approach, not only as a therapeutic, but also as a diagnostic method.

KEYWORDS : upper gastrointestinal bleeding, duodenal ulcer, erosion of gallbladder vessels.

INTRODUCTION:

Upper gastrointestinal bleeding (UGIB), defined as intraluminal hemorrhage proximal to the ligament of Treitz, can range from mild and asymptomatic to massive life-threatening hemorrhage.[2] Acute upper gastrointestinal bleeding is a common medical emergency which carries hospital mortality in excess of 10%. The most important causes are peptic ulcer and varices.[3] Less frequent causes are Dieulafoy lesion, hemobilia, gastric antral vascularectasia, Mallory-Weisstear, and gastroduodenal arteriovenous malformation.[4] Several drugs and endoscopic techniques, alone or in combination, have been evaluated in many studies and there is presently enough experience in terms of their efficacy. Endoscopic hemostasis is more effective than any other therapeutic intervention in thetreatment of patients with non-variceal upper gastrointestinal bleeding.[5] The prompt surgical intervention are indicated when: a) a patient continued to bleed, requiring blood transfusions at the rate of more than 500 ml in six hours in order to maint a instable vital signs; b) recurrent bleeding developed while the patient was under treatment in the hospital; and c) the patient had an actively bleeding gastric ulcer.[6]

CASE PRESENTATION:

A 69 years old man was admitted to our Surgical ward due to the haemorrhagic shock caused by bleeding from the upper gastrointestinal parts. Three days prior to his admission, he had been treated in Gastrology ward, where he had been admitted due to the strong pain in epigastric region and under the right costal margin. He had normal bowel movements with regular stool. Patient had been vomiting gastric content. He had previously been treated for pulmonary tuberculosis a few years ago. He was also a cardiac patient. He had not been using acetylsalicil acid, anticoagulant therapy or non-steroid antiinflamatory medicines. During the hospital stay, abdominal ultrasound was performed, which was normal. The subjective symptoms, including pain, stopped. Two days later there was bleeding from the nasogastric tube and melena. After that, the oesophagogastroduodenoscopy was performed, which showed bleeding from ulcer on the duodenal bulb, classified as Foresst I B. Despite few endoscopic attempts to stop the bleeding, as well as the other coservative treatments and blood transfusions, the bleeding continued, so the patient was transferred to Surgical ward. The patient was in haemorrhagic shock. His blood pressure was 65/35 mmHg, heart rate 54; which puts him on the Rockall score as a high risk patient, with a mortality of 41.1%. Abdomen was soft. Laboratory tests were done: RBC: 2.01 x10^{12}/l (normal 3.50-5.50); Hct: 15,6 % (normal 37-60); Hgb: 68 g/l (normal 110-160).We decided to do superior and inferior medial laparatomy. During the exploration of the abdomen we found the gallbladder fixed to the part of the front wall of the stomach and duodenum without blood in the abdominal cavity (Fig.1). After detaching the gallbladder from the stomach and duodenum, the perforated ulcus on the duodenal bulb was found (Fig.2). The ulcer had been closed by the gall bladder. Its wall blood vessels had been eroded due to the impact of the gastric and duodenal content ,which led to the bleeding in the duodenum (Fig.3). A smaller gastrotomy was performed in order to remove the blood coagulums from the stomach. The perforation spot was taken care of using the Graham omental patch. The blood vessel on the gallbladder's wall was ligated. (Fig.4). Cholecystectomy was not performed, due to lack of other pathological findings on gallbladder.

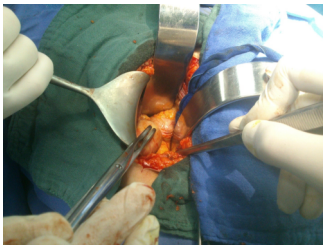

Figure 1: Gallbladder attached to the front wall of the stomach and duodenum

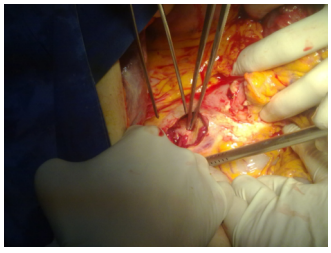

Figure 2: Perforated ulcer on the duodenum

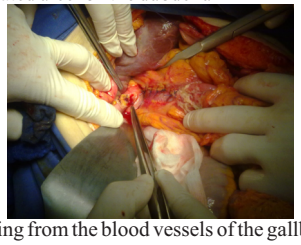

Figure 3: Bleeding from the blood vessels of the gallbladder wall

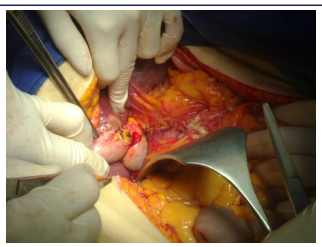

Figure 4: Ligated blood vessels of the gallbladder wall

DISCUSSION:

UGB is a common emergency situation needing prompt and accurate diagnosis. Even though the common causes of UGB, such as peptic ulcer and variceal bleeding, account for more than 80 percent of cases, there is still a large variety of uncommon reasons which contribute to UGB with digestive tract bleeding being only part of the symptoms in a certain case. A doctors should bear in mind that some rare diseases can cause rapid and massive hemorrhage and that the mortality rate could be higher than 75 percent. That means that not all cases ameliorate with conservative treatment and prompt surgical intervention is the only cure under these circumstances. Another view point is that not all sources of bleeding can be located by endoscopy. So the rational combination of endoscopy with other imaging detection, such as ultrasonography, CT scan and angiography offers more valuable information for achievement of diagnosis. [7] We have presented a case of perforated ulcer, with secundary bleeding from other nearby organ, not from the ulcer itself, as it seemed in the begining of the treatment. Patient had a good post surgical recovery, and was discharged from hospital few days later.

CONCLUSION:

One of the most common complications of a peptic ulcer is perforation, with or without bleeding from the gastric wall and duodenum or its adjacent organs and structures (omentum, intestinal loops etc).
In our case, a secondary bleeding from the gallbladder's wall was described which made it more complicated to diagnose and treat. Therefore, a clinican always has to think about the rare causes of upper gastrointestinal bleeding as well, such as secondary bleeding from an adjacent organ due to its spontaneous sealing of the perforation site.

Declarations:

Authorship
The authors confirm that all authors have made substantial contributions to all of the following:
·The conception and design of the study, or acquisition of data, or analysis and interpretation of data.
·Drafting the article or revising it critically for important intellectual content.
·Final approval of the version to be submitted.
·Sound scientific research practice

The authors further confirm that:

·The manuscript, including related data, figures and tables has not been previously published and is not under consideration else where
·No data have been fabricated or manipulated (including images) to support your conclusions
·This submission does not represent a part of single study that has been split up into several parts to increase the quantity of submissions and submitted to various journals or to one journal over time (e.g. "salami-publishing").

Plagiarism:

·The authors confirm that the work submitted is original and does not transgress the plagiarism policy of the journal.
·No data, text, or the stories by others are presented as if they were the author's own.
·Proper acknowledgements of other's work has been given (this includes material that is closely copied, summarized and/or paraphrased), quotation marks are used for verbatim copying of material.
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The authors declare no conflict of interest.

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Compliance with ethical guidelines:

"The author/s declare that this submission is in accordance with the principles laid down by the Responsible Research Publication Position Statements as developed at the 2nd World Conference on Research Integrity in Singapore, 2010."

No human or animal studies have been performed.

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