

Perforated Gastric Ulcer Masquerading as Myocardial Infarction: an Anatomical Case Report, Observed in a Cadaver

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ABSTRACT

Introduction: during the routine cadaveric dissection, it was observed that there was a large blood clot inside the lumen of stomach. After removing this blood clot, it was found that there was an ulcer at the posterior wall of the stomach, which further eroded the left gastric artery. This suggested that this patient died because of haemorrhagic shock. The medical records of this cadaver was procured and it was suggestive of a male patient aged 60 years was admitted to the hospital with history of chest discomfort and this patient expired in spite of the best suitable treatment. The cause of death was reported as myocardial infarction and cardiac arrest. Later, his body was donated to the anatomy department for the teaching purpose. We opine that, this is a case of perforated gastric ulcer and not a myocardial infarction.

Keywords: Hemorrhagic shock; Left gastric artery; Myocardial infarction; Peptic ulcer perforation.

Introduction

Perforated case of a gastric ulcer is an emergency and may have mortality and morbidity in about 30–50% cases. The peptic ulcers perforate in approximately 5% cases¹, which amount up to 2/3rd of mortality from it. Inadvertent usage of analgesics and H-pylori infections are the aetiological factors for the perforated peptic ulcer. It is an acute surgical emergency and carries complications like sepsis and death due to peritonitis. Acute massive pain in the epigastric pain is an indication of both myocardial Infarction and perforated peptic ulcer, thus perplexing the scenario. There are cases reported in which gastric perforation

was mimicking the myocardial infarction². The doctors should be aware of the differential diagnosis of such cases in order to prevent the unnecessary thrombolytics and interventions, which may have subsequent complications³. Here we describe a case of perforated gastric ulcer, which was coexisting with the heart attack at the hospital.

Case Report

This interesting case was accidentally found during the dissection of abdomen of a male embalmed cadaver. During dissection of his stomach and its bed, a large blood clot (Fig. 1) was observed inside the stomach. Later, it was observed that there was an ulcer



Figure 1. The blood clot, which was procured from the stomach of the cadaver.

at the posterior wall of stomach (Fig. 2), which eroded the left gastric artery. There was also erosion of lesser sac and body of pancreas (Fig. 3). The clinical history of the patient was available. This 60-year-old male patient was a hospital inpatient with history of chest discomfort along with pain in the epigastric region. He expired despite of the treatment given and the cause of his death was reported as myocardial infarction leading to cardiac failure. We opine that, the cause of death in this patient is haemorrhagic shock due to severe bleeding from the erosion of left gastric artery (Fig. 4). The cause of death may not be the myocardial infarction.

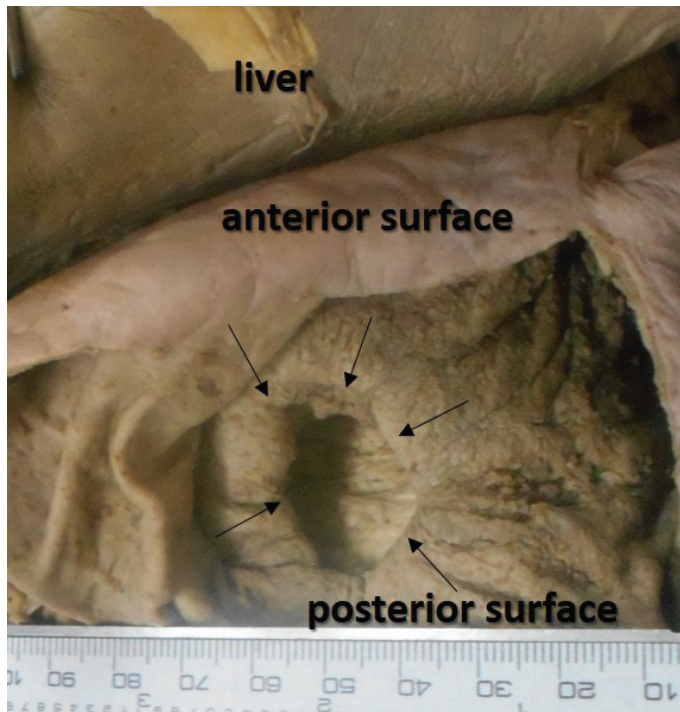


Figure 2. Stomach of the cadaver showing the perforated peptic ulcer over its posterior surface.

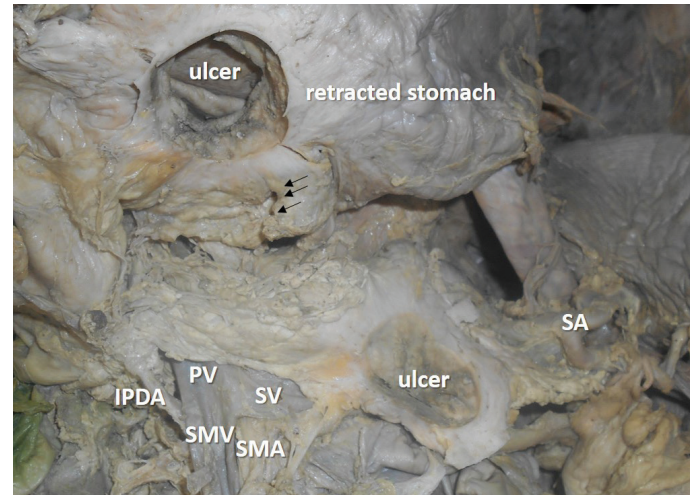


Figure 4. Abdomen of the cadaver showing the erosion of the left gastric artery (black arrows); the stomach was retracted and picture was taken to reveal the erosion of vessel (PV-portal vein; SMV-superior mesenteric vein; SV-splenic vein; SMA-superior mesenteric artery; SA-splenic artery; IPDA-inferior pancreaticoduodenal artery).

Discussion

The celiac trunk is the artery of foregut and it provides three branches, left gastric artery, splenic artery and common hepatic artery. The left gastric artery supplies the lower end of esophagus along with the stomach. It eventually anastomoses along the lesser curvature of stomach with the right gastric artery, which is a branch of the common hepatic artery. It was reported that, about 85% of cases of upper gastrointestinal bleeding is due to the erosion of the left gastric artery and its branches. The ascending branch of the left gastric artery is more predisposed to the erosion⁴. The patients with myocardial infarction usually have chest pain associated with the prodromal symptoms like fatigue, chest discomfort and malaise preceding to it. A basic 12 lead electrocardiogram

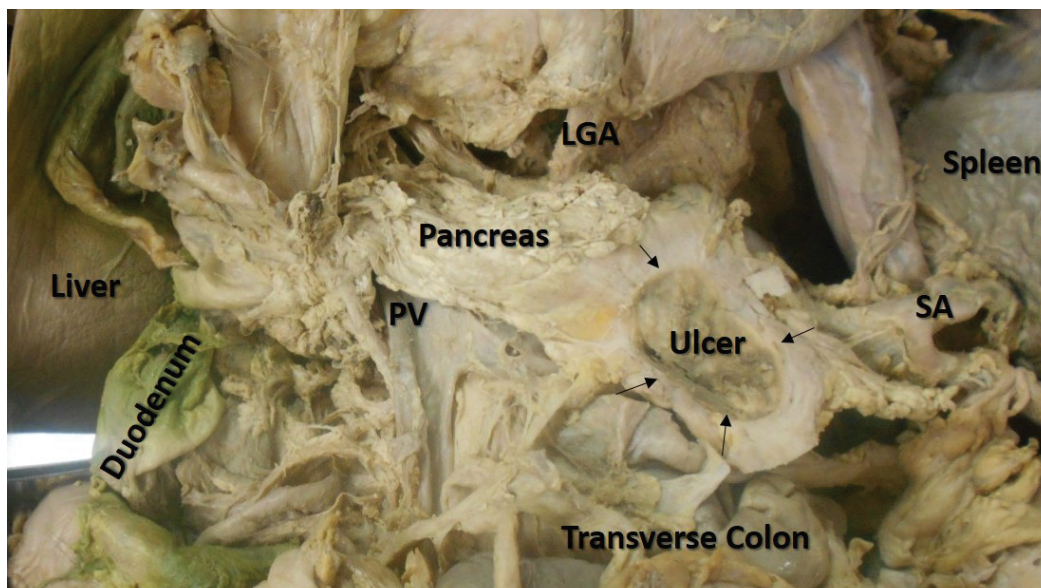


Figure 3. The abdomen of the cadaver showing the viscera, the erosion of body of pancreas (black arrows) and lesser sac (PV-portal vein; LGA-left gastric artery; SA-splenic artery).

(ECG) can diagnose the acute myocardial infarction⁵⁻⁸. However, the ECG abnormalities can also be detected in other diseases of non-cardiac involvement⁵. In those cases, cardiac markers and 3 dimensional echocardiography may help to rule out the cardiac disease⁶. However, same patient having two life-threatening diseases, myocardial infarction and perforated peptic ulcer is rare but not unheard of⁹. The treatment option in these patients is challenging and this needs some guidelines⁹.

Conclusion

Perforated peptic ulcer can be recognized as a differential diagnosis for the heart attack as it is one among the causes of acute chest pain and deferral in diagnosis may lead to life threatening complications. It is not uncommon to see the coexistence of myocardial infarction and perforated peptic ulcer. We opine that, there should be some guidelines and a decision algorithm should be there to management such complex cases.

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