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CASE REPORT

Valentino's Syndrome: The Red Herring of a Perforated Viscus

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ABSTRACT

Valentino's syndrome is a rare occurrence in which a perforated peptic or duodenal ulcer is mistaken as appendicitis. It occurs when the gastric and duodenal content tract along the right paracolic gutter and accumulate at the right lower abdomen causing irritation and inflammation to the surrounding area. The presentation can mimic acute appendicitis with tenderness at the right lower abdomen region. We present the case of a 35-year-old man who was diagnosed with perforated appendicitis but discovered a perforated peptic ulcer intraoperatively. Modified Graham's patch repair was successfully performed, and the patient's post-operative recuperation went smoothly. Valentino's syndrome is a deceptive condition that can lead to death if it is not correctly diagnosed and treated promptly. We emphasize the need to consider Valentino's syndrome as a differential diagnosis in patients with symptoms suggestive of appendicitis.

KEYWORDS: Valentino's syndrome, perforated peptic ulcer, appendicitis

INTRODUCTION

Diversity in the clinical presentation of acute abdomen renders systemic and comprehensive assessment in achieving the definite diagnosis. Non-classical symptoms of acute appendicitis divert surgeons' attentions from perforated ulcer disease. Retrospectively from one of the local public hospitals in Malaysia, it has been reported that the commonest emergency general surgery done is acute appendicitis (43%); nevertheless, high suspicion should exclude perforated viscus (1.9%) in the presence of pneumoperitoneum and peritonism [1].

Valentino's syndrome occurs when gastric or duodenal fluid collects in the right paracolic gutter causing focal peritonitis and RLQ pain [2]. The syndrome is named after Rudolph Valentino, a 1920s New York film star who developed peritonitis and multiorgan failure after undergoing open appendicectomy. The autopsy revealed a perforated gastric ulcer (PGU) which was misdiagnosed as appendicitis [3]. Here, we report a case of a 35-year-old man who was diagnosed with perforated appendicitis, but laparotomy revealed a PGU.

CASE PRESENTATION

A 35-year-old gentleman presented with acute abdominal pain for two days. The pain started at the periumbilical region then became generalized. He has been a chronic smoker and alcohol drinker for more than ten years. Otherwise, there was no recent intake of Non-Steroidal Anti-inflammatory Drugs (NSAIDs), steroids, or traditional medication. Upon arrival, he was tachycardic and febrile, but his blood pressure was normal. The abdominal examination noted generalized

tenderness with guarding at the right side of the abdomen, mainly at the right iliac fossa region. Baseline blood investigations showed leukocytosis (White blood cells count of 19 x10^9/L, NR:4.5 to 11.0). The other blood parameters were normal, except the serum amylase, which was slightly elevated. The erect chest radiograph revealed no air under the diaphragm to suggest perforated viscus (Figure 1). Even though the migratory pain suggested appendicitis, it is unusual for a 2-day history to lead to a badly perforated appendix with generalized abdominal pain. We decided to perform computed tomography (CT) scan of the abdomen/pelvis to rule out pancreatitis and to confirm the diagnosis so that the appropriate surgical approach could be determined. The CT scan revealed air under the diaphragm and in the subhepatic region, as well as free fluid around the pelvis and Morrison's pouch. There was a mildly enhancing peritoneal wall on the right flank, edematous right-sided colon with a thickened appendix. No apparent abnormalities were reported around the stomach, duodenum, or pancreas region. The impression by the radiologist in charge at that point of time was possible appendicitis, but because of pneumoperitoneum, the perforated viscus still could be a probable cause. We decided to perform exploratory laparotomy because of suspicion of perforated viscus in view of significant pneumoperitoneum on CT scan.

Figure 1 Erect chest radiograph showed left sided pleura effusion with no free air under the diaphragm

We found one litter of bilious fluids mixed with pus noted intraperitoneally with 0.5 cm perforation at the pre-pyloric of the stomach (Figure 2). The appendix looked mildly inflamed (Figure 3). The modified Graham's patch repair was performed, and the abdominal cavity lavage was done with a copious amount of warm water. The appendicectomy was not performed as the surgeon thinks the mildly inflamed appendix and right-sided colon was due to a reaction toward the stomach and duodenal juice. Post-operatively, the recovery was uneventful, and he was discharged home on day five post-surgery. Retrospectively, another radiologist looking back at the CT scan images, even though we gave no oral contrast to exclude any gastric or duodenal perforation, the extraluminal air locule near the pyloric antrum is suggestive of the perforation site correlating to the operative findings. (Figure 4).

Figure 2 0.5 cm perforation identified at the prepyloric region of the stomach

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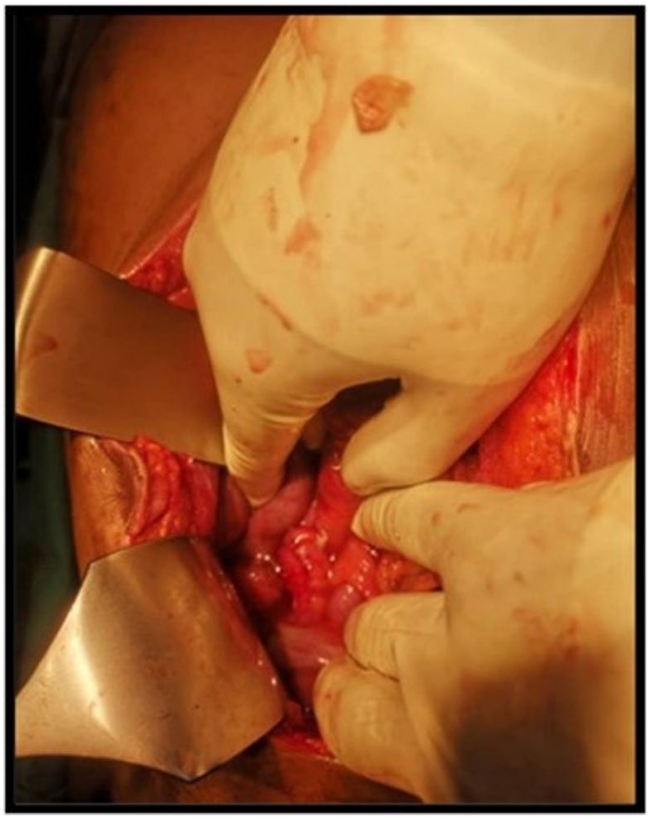

Figure 3 Inflamed appendix likely due to irritation and inflammation caused by gastric juice

Figure 4 CT Abdomen in coronal view showing a nasogastric tube with its distal tip in the pyloric antrum. Presence of air locule adjacent to this site suggestive of nearby area of perforation (corelating to the operative findings)

DISCUSSION

Perforated gastric or duodenal ulcers can be presented as appendicitis due to irritation of the peritoneal lining at the right lower abdomen. Duodenal or gastric fluid collects in the right paracolic gutter causing focal peritonitis and RLQ pain [2]. The appendix can also be inflamed (chemical peri appendicitis) [4], and if the abdomen is not adequately explored, the surgeon might misdiagnose the patient as suppurative appendicitis. This is what had happened to Rudolph Valentino [3]. Only a few cases of Valentino syndrome were reported in the existing literature [5]. Most of the patients were operated on for suspicion of appendicitis, but intraoperatively the appendix looks normal. The intra-operative exploration then revealed a perforated peptic ulcer [6].

In our case, the patient had no signs of free intraperitoneal air on the x-ray image; he had an acute abdomen with a strong suspicion of acute appendicitis. He might end up with an open appendicectomy for acute suppurative appendicitis if the CT scan was not performed. On the CT scan, the presence of pneumoperitoneum raises the possibility of a perforated viscus. As a result, a complete examination was performed by a midline incision, which showed a tiny perforated peptic ulcer in the pre-pyloric region. Another sign to suggest stomach perforation, according to the author, is the presence of bilious fluid during appendicectomy. If there is a strong suspicion that the appendix is not the underlying pathology, converting the Lanz incision to a midline laparotomy may be the best option for complete abdominal exploration. The risks of morbidity and mortality associated with late identification of perforated gastric/duodenal ulcers are substantial. To avert patient fatality, lessons must be learned from the Rudolph Valentino case [3].

In the current era of minimally invasive surgery, laparoscopic management is a feasible surgical option in managing acute abdomen [7]. Even the first laparoscopic duodenal ulcer repair was described by Mouret et al. in 1989 [8]. However, it needs an experienced laparoscopic surgeon to perform an emergency laparoscopic surgery in perforated viscus or generalized peritonitis. The conversion rate ranges from 23.3 to 33%, even in the experienced hand [7,9]. The

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technical difficulty was mainly due to intra-abdominal adhesions, obscured anatomy, and iatrogenic lesions [7]. The most recent evidence showed no difference in postoperative mortality in the open or laparoscopic approaches in patients with PGU [10]. The advantages of laparoscopy surgery are less post-operative pain, wound complications, and reduced hospital stay length. [10]. In our situation, laparoscopic surgery in generalized peritonitis might cause more harm with a longer operative time and high conversion rate due to our limited experience. However, in the case of appendicitis, the author thinks that the laparoscopic approach might be able to reduce the chance of missing the diagnosis of the PGU compared to open appendicectomy via the Lanz incision. But, there is no published study or evidence to support this statement.

CONCLUSION

Surgeons should be aware of the rare phenomenon of Valentino's syndrome and should be considered in the differential diagnosis of right lower quadrant pain, even if there is no pneumoperitoneum on an erect chest radiograph. If you have a high index of suspicion, a CECT scan with an oral contrast would help confirm the correct diagnosis. The take-home message is that a typical presentation of a common condition should not be taken for granted, as it might lead to misdiagnosis and disastrous consequences.

Conflict of Interest

Authors declare none.

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Authors' contribution

Shaiful Amir AM, A Rabi'atul Adawiyah and H Hazzeq drafted the manuscript. Mazuin MR provided the radiology input for the manuscript. All authors have read and given approval of the final version of the manuscript. Each author has particiated sufficiently in the work to take public responsibility for appropriate portions of the content as described above.

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