



**ORIGINAL RESEARCH PAPER**

**Medical Science**

**RETROPERITONEAL DUODENAL ULCER MIMICKING APPENDICITIS ASSOCIATED WITH VALENTINO'S SYNDROME.**

**KEY WORDS:**

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**ABSTRACT**

Valentino syndrome is a rare presentation of perforated peptic ulcer in retroperitoneum, which can present as right iliac fossa pain mimicking acute appendicitis (AA). The purpose of this report is to emphasise on rare presentation of right iliac fossa (RIF) tenderness in a suspected case of acute appendicitis, later diagnosed it to be Valentino's syndrome. We reported a case of 22 years old male patient presented to emergency with complaints of pain in the right groin with fever. The diagnosis was inconclusive after routine investigations and clinical examination later proceeded with contrast enhanced computed tomography which reveals air pockets around right kidney and retro pneumoperitoneum and free fluid in the Morissons pouch. An exploratory laparotomy revealed a perforation of peptic ulcer in the second part of duodenum which was closed by Graham's omental patch repair. Post-operatively antibiotics were prescribed and the patient was discharged without any complications. A differential diagnosis of Valentino syndrome for perforated duodenal ulcer must be considered, while examining a case of pain in the RIF. The final diagnosis may be intraoperative, however, contrast enhanced computed tomography scans remains gold standard ones. Valentino's syndrome occurs when gastric and duodenal fluids collect in the right paracolic gutter causing focal peritonitis and RLQ pain.

**INTRODUCTION:**

Approximately six million people in the United States having peptic ulcer disease (PUD) with an annual direct cost estimate of around 3.1 billions<sup>(1)</sup>. HELICOBACTER PYLORI infection and no steroidal anti-inflammatory drugs (NSAIDs) use are the two main causes followed by Alcohol intake. With improvements in understanding the pathogenesis of PUD and treatment with antibiotics and proton pump inhibitors (PPIs), avoidance of NSAIDs and advanced endoscopy techniques, the incidence of complications from PUD requiring surgical intervention has reduced to approximately 11.2%<sup>(2)</sup>. While this rare event of ulcer perforation is associated with high mortality at 10.6% and emergency surgeon has to be aware of it. Acute appendicitis usually present with right iliac fossa pain and some may present in few atypical ways like, diffuse abdominal pain (generalised peritonitis). There are wide range of medical disorders that present mimicking acute appendicitis includes tuboovarian abscess, colorectal cancer, sigmoid diverticulitis, acute ileocecal enterocolitis (typhilitis), gastric or duodenal perforated ulcer (Valentino's syndrome) cecal tumors etc., Valentino syndrome is a rare differential diagnosis to appendicitis and its presentation as pain in RIF can occur due to perforation of a duodenal ulcer through the retroperitoneum<sup>(3,4,5,6)</sup>. It was first reported in Italian actor RUDOLPH VALENTINO who presented with right iliac fossa pain got operated for appendicitis and later patient go deteriorated on post operative day 2 and died later his post-mortem report reveals having perforated peptic ulcer.

**Case Report:**

A 22 years old male patient had presented to emergency department with complaints of pain in the right groin for 2 days. The pain was described as continuous and sharp stabbing in nature, and non radiating and associated with fever. The fever last for 2 days which is high grade, intermittent without any chills or rigor. The medical history reveals that patient took NSAIDs ibuprofen two days ago to get relief from pain but no improvement and hence presented to

emergency. The past surgical, family and other personal histories are non-contributory. The examination showed that patient was restless and dehydrated. He had pallor, a blood pressure of 100/60mm of hg and rate of around 110 /min, oxygen saturation of 98%. The abdominal examination revealed tenderness in the RIF with guarding and decreased bowel sounds. The clinical signs of McBurney's, Rovsing, and obturator were positive with Alvarado score 7/10. The working diagnosis of acute appendicitis was assigned and patient was evaluated further. The investigations were remarkable except for decreased leukocyte count of around 3000 cells/Cumm, low haemoglobin (9.8 mg/dl), a raised C reactive protein and raised erythrocyte sedimentation rate. The serological tests were negative for HIV, and hepatitis B, C virus infection. A diagnostic abdominal ultrasound demonstrates "probe tenderness" in the RIF and anechoic appearance below the caecum. The plain radiograph of erect abdomen showed normal bowel loops and absence of gas under the diaphragm. A contrast enhanced computed tomography scan taken and it is also inconclusive for a definitive diagnosis except few air pockets over right kidney and air pockets along the right paracolic gutter and collection of fluid in the Morissons pouch and appendiceal fat stranding is absent.

Due to patient acute presentation and array of symptoms suggestive of peritonitis and having tachycardia and guarding and rigidity on examination patient was taken for surgery after getting written informed consent in English language and exploratory laparotomy was planned. Mid line laparotomy reveals appendix was found to be normal with no peritoneal collection. Further, on exploration and on mobilisation of caecum and ascending colon, there was bile stained fluid with food particles. There was no perforation noted in ascending colon and caecum.

An extensive Kocher manoeuvre was performed which revealed a retro peritoneal perforation of approximately

5x5mm in the second part of duodenum on the anterior wall is appreciated. Thorough wash was given and Graham's patch repair was done. The patch briefly induced section of an appropriately sized tension free well vascularised omentum that was used to plug the perforation.



**Figure-1: Air pockets under the diaphragm and Retroperitoneum**

The omental patch was secured by interrupted sutures placed through healthy duodenum on either side of the ulcer. The seal of the patch was confirmed with absence of bubbles, when air was passed through patient's nasogastric tube.

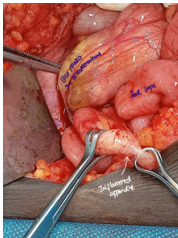
Antibiotic employed was Tazobactam with piperacillin which was started 1st Pre operative day continued till 7th postoperative day. Pantoprazole with domperidone was administered along with the antibiotics. The post-operative course of the patient was uncomplicated and he was discharged on the 7th day after surgery.



**Figure-2: Bile stained retroperitoneum**



**Figure-3: perforation over the anterior Wall of second part of duodenum**



**Figure-4: collection in right paracolic gutter And in pelvic region causing inflamed Appendix (peri appendicitis).**



**Figure-5: X-ray erect abdomen shows air pocket Around right kidney.**

**DISCUSSION:**

The RIF pain is a common presentation of a surgical problem. Correct diagnosis can usually be made by a combination of history, examination along with specific investigations. The diagnosis is straight forward most of the times.<sup>(7)</sup> occasionally, RIF pain present as a diagnostic dilemma to the clinician, as in the current scenario. The clinical history and physical examination are still the main tools to integrate the differential diagnosis of acute abdominal pain. The determinant factors for the appropriate diagnosis are location, characteristics and accompanying signs of associated RIF pain<sup>(8)</sup>. In a Mexico multinational study, 10,682 patients are evaluated for acute abdominal pain. It was determined that the four main causes were non specific abdominal pain, AA, acute cholecystitis, and small bowel obstruction. The peptic ulcer perforation ranks in the 8th position<sup>(9)</sup>. Thus, the initial working diagnosis in our case was AA, considering these facts.

The gastric and duodenal ulcers are often collectively referred to a PUD because of the similarity in their pathogenesis and treatment. HELICOBACTER pylori and non steroidal anti-inflammatory drugs (NSAIDs) contribute the most to PUD. Despite a decrease in reported ulcer-related mortality, from 3.9% in 1993 to 2.7% in 2006, over 4000 estimated deaths are caused by PUD each year<sup>(10)</sup>. The antibiotics, PPIs, avoidance of NSAIDs, and advanced endoscopic techniques had contributed to reduction in the incidence of complications from PUD. The PUD requiring surgical intervention has decreased to approximately 11%. It is noteworthy to mention that complications from PUD include haemorrhage, obstruction, cancer and perforation. The perforation has the highest mortality rate of any complication of ulcer disease approaching 15%<sup>(10)</sup>.

The Valentino syndrome occurs when fluid from perforated peptic ulcer collects in the right paracolic gutter and right lower quadrant leading to focal peritonitis and associated right lower quadrant pain. Initially, there would be diffuse or poorly localised pain over lower quadrants of the abdomen. A case of Valentino syndrome, is complicated with time, due to local irritation by the collected gastric contents, pain becomes more localised to the RIF mimicking AA. There is wide range of differentials as described earlier in these cases and the perforation is found intraoperatively. The current patient presented with acute abdominal pain localised in the lower right quadrant with signs of peritoneal irritation and systemic inflammatory response (CRP raised). Thus, we are obligated to discard AA, after ultrasonography and CECT. The abdominal CECT scan is considered as the gold standard, with a 94% sensitivity and 95% specificity. Initial imaging other than CT may demonstrate free fluid around a normal appendix on ultrasound and free air around the kidney, or "veiled kidney sign" on abdominal radiographs. Thus, the diagnosis can be roughly employed at this point as done for the current case and previously reported cases.

An exploratory laparotomy was performed which revealed a retroperitoneal perforation of anterior wall of duodenum at the level of D1, which was diagnostic/surgical approach in previously reported cases. We choose surgical approach as CECT shows air around the right kidney and retro pneumoperitoneum. The omental patch repair employed in our case, was also most common practice when smaller ulcers are present (below 5mm). A timely and successful surgery followed by course of antibiotics aided in recovery of our case without complications of life-threatening peritonitis.

**CONCLUSION**

The pain in the right lower quadrant must be carefully evaluated for retroperitoneal peptic ulcer perforation as a differential diagnosis to AA. The CECT imaging plays a critical role in diagnosing such clinically atypical cases. An early diagnostic laparoscopy can give a definitive diagnosis in case of Valentino syndrome and timely surgical intervention of perforated ulcer avoids complications carrying mortality.

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