

# **Gallbladder Volvulus: A rare cause of acute abdomen.**

## **A case report.**

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**Gallbladder volvulus is a rare but serious event. Described for the first time by Wendal in 1898, the condition is the result of a congenital anomaly, in which the gallbladder is suspended by a mesentery which allows the rare possibility of its torsion which, when not handled urgently, results in gangrene and even peritonitis.**

**This paper describes a case of a 45 year old male patient who presented at St. Francis Mission Hospital, Nsambya with a history of an abrupt onset of upper abdominal pain. At laparotomy, torsion of the gallbladder with gangrene was found. Cholecystectomy was done. The patient had an uneventful postoperative recovery. This paper briefly describes the clinical presentation of gallbladder volvulus. We believe that this may be the first documented case of this rare condition to be documented from Uganda.**

### **Introduction**

In 1898, A V Wendel described a very rare but dangerous condition, the torsion of the gallbladder. Since that time, approximately 300 cases have been reported in literature with the patients' ages ranging between 2 and 100 years.

The condition affects males more frequently than females, particularly in old age<sup>1,2,3</sup>. Gallbladder torsion occurs in those rare anatomical positions where the organ hangs on a mesentery, the so called floating gallbladder, which makes it liable to undergo torsion with the eventual necrosis and even perforation. This paper describes the hitherto unrecorded cause of acute abdomen in Uganda and describes the difficulty of making the diagnosis of this unusual disease.

### **Cases Report**

**G.G.**, a 45 year old Ugandan male presented at St. Francis Mission Hospital Nsambya, Kampala on 6<sup>th</sup> March 1999, with a one-day history of sudden onset of severe right hypochondriac pain which later became generalized, an upper abdominal swelling and vomiting once. He reported a past history of a similar episode of acute abdominal pain about one year earlier for which he was managed with analgesics. For the past three years prior to admission, he had been experiencing some epigastric discomfort.

On examination, the patient was found to be a middle aged man in satisfactory general and nutritional state. He had mild pallor but was not jaundiced. Par abdomen, there was slight

distension and tenderness in the right hypochondrium. There was no rebound tenderness nor rigidity. A provisional diagnosis of acute abdomen most likely due to perforated peptic ulcer was made. However, an abdominal radiograph in the erect position showed no gas under the diaphragm.

An urgent laparotomy was performed through a right paramedian incision. At operation, a gangrenous 180 degrees volvulus of the gallbladder at the cystic duct was discovered. The organ had no mesentery. There was neither perforation nor peritonitis. Cholecystectomy was done easily. The patient had an uneventful postoperative recovery period and was discharged a week after surgery.

## Discussion

Acute volvulus of the gallbladder is an unusual event. Since Wendel first reported it just over 100 years ago, over 300 cases have appeared in literature worldwide, eight of them during the last two years or so. Unusual mobility of the gallbladder due to congenital anomalies has been a constant feature in all occurrences.

Gallbladder torsion normally presents with an acute agonising pain and may be associated with vomiting and shock. In 1997, Vitale et al<sup>4</sup> reported a case of a 78 year old woman who presented with signs and symptoms similar to those of acute cholecystitis with abrupt onset of pain and a large palpable mass below the right costal margin within a few hours from the onset of unremitting abdominal pain. Christoudias<sup>1</sup> in 1997 reported a case of an 82 year old white female with gallbladder volvulus presenting with a chief complaint of chest pain. In the same year, Kitagawa et al<sup>5</sup> in Yokohama, Japan, reviewed two cases of gallbladder volvulus in boys aged 4 and 5 years respectively, who presented with acute abdominal disorders and whose diagnostic imaging demonstrated acute inflammatory

changes in the gallbladder with abnormal arrangement of the organ and the common bile ducts in both cases.

**The diagnostic imaging criteria of gallbladder volvulus have been defined as follows<sup>5</sup>:**

1. Collection of fluid between the gallbladder and the gallbladder fossa of the liver,
2. Presence of a horizontal rather than vertical arrangement of the vertical axis of the gallbladder,
3. The presence of a well-enhanced cystic duct located on the right side of the gallbladder and
4. Signs of inflammation including marked oedema with thickening of the wall.

The importance of an early diagnosis to avoid complications of bilious peritonitis ought to be recognized. An early surgical intervention allows a rapid resolution of the clinical picture, preventing the perforation of the gallbladder into peritoneal cavity and the complication of bilious peritonitis besides spreading of biliary stones into the peritoneal cavity.

It is worthwhile noting that if the gallbladder becomes gangrenous or ruptures, the pain passes off instantly, but signs of diffuse peritonitis soon follow. Our patient developed generalized pain but no evidence of peritonitis was found on exploration.

The treatment of choice of acute torsion of the gallbladder remains immediate cholecystectomy. Fortunately, presence of a mesentery makes surgery much easier than is the case with the ordinary cholecystectomies where the gallbladder is fixed to the liver by the peritoneum. Given the possibility of laparoscopic cholecystectomy and increasing incidence with which gallbladder volvulus is being encountered today, there is a need to stress the importance of pre-operative

suspicion of the event in patients who present with clinical features of cholecystitis but on examination are found to have a palpable mass below the right costal margin.

The case under review was diagnosed intraoperatively, which is not surprising bearing in mind the fact that this is a very rare condition, which once encountered, one may never see again in his lifetime. Luckily in our case, diagnosis of acute abdomen and the decision to operate were reached promptly thus avoiding the more dreadful complication of generalized peritonitis. Our patient had an uneventful postoperative recovery period and was discharged home within 7 days

after admission. We believe that this may be the first documented case of gallbladder volvulus in Uganda if not in East Africa.

## References

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