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RESEARCH ARTICLE

VOMITING AND EPIGASTRALGIA: IS IT BOUVERET SYNDROME? ABOUT A CASE

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Abstract

Bouveret's syndrome is defined by a pyloroduodenal obstruction due to a blockage of a gallstone that has migrated through a cholecystoduodenal fistula. It is a rare entity from which the case of a 50-year-old patient presenting with vomiting with epigastralgia is reported, in whom abdominal ultrasound objectified an aerobic cholecystitis with cholecysto-duodenal fistula; CT confirmed the ultrasound data and showed an enclosed gallstone at the duodenal level as well as oesogastroduodenalfibroscopy. The laparotomy objectified: a gallbladder attached to the genus superius with a stone measuring 4 cm which migrated at the level of the Treitz angle, the gesture consisted in the extraction of the stone and retrograde cholecystectomy as well as the resection of the fistulous path.

Introduction:-

Bouveret's syndrome is defined by a pyloro-duodenal obstruction due to a blockage of a gallstone that has migrated through a cholecysto-duodenal fistula **[1].** It is a rare condition that mainly affects elderly female subjects **[2].** This syndrome was first described in 1896 by Léon Bouveret, who published two clinical cases of patients with a gastric obstruction (pyloric), obstruction obstruction secondary to the presence of a gallstone **[3].** Since then, a little more than 300 cases have been described in the literature **[4].** To obtain a diagnosis, radiological and endoscopic techniques are required. Endoscopic treatment should always be attempted, but it usually fails, which makes surgical treatment necessary **[4].** We report the case of a woman with Bouveret syndrome revealed by a table of epigastralgia with vomiting.

Clinical case presentation

This was a 50-year-old woman known to have had asymptomatic vesicular lithiasis for 10 years, with no known comorbidity, who had presented 2 weeks prior to admission with 3 episodes of food vomiting aggravated by meals and complicated by cessation of bowel movements associated with transfixing epigastralgia. Clinical examination revealed a slightly distended abdomen with epigastric tenderness. Biological findings included hyperleukocytosis at 10,900/mm, CRP at 70, elevated urea at 1.37 g/l and creatinemia at 14 mg/L, and blood glucose at 1.54. Lipasemia at 2.5 x N, a disturbed liver balance with GOT at 4 x N, GPT at 6 x N, GGT at 2 x N, PAL at 1.5 x N; BT at 12; In addition, natraemia, kalaemia and chloraemia were normal. After intravenous rehydration, the patient underwent ultrasound examination, which revealed a thickened lithiasis gallbladder with aerobilia associated with a cholecystoduodenalfistula**(fig. 1).** A C- computed tomography (CT) scan showed a stasis stomach with a gallstone measuring 40 mm in diameter, embedded in the duodenum, and an aerobilia, suggesting a bilio-digestive fistula

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(fig2). An oesogatroduodenalfibroscopy was performed and revealed a gallstone impacting the duodenum and completely obstructing the lumen, with the presence of a large fistula at bulbar level **(Fig. 3).** Attempts at loop extraction were unsuccessful, as the patient was already suffering from cholecystitis and would undergo immediate surgery. 24 hours later, the patient underwent a cholecystectomy with extraction of the large stone and resection of the fistulous tract. Post-operatively, the patient was transferred to the intensive care unit, where post-operative follow-up was straightforward, and discharged 4 days later.

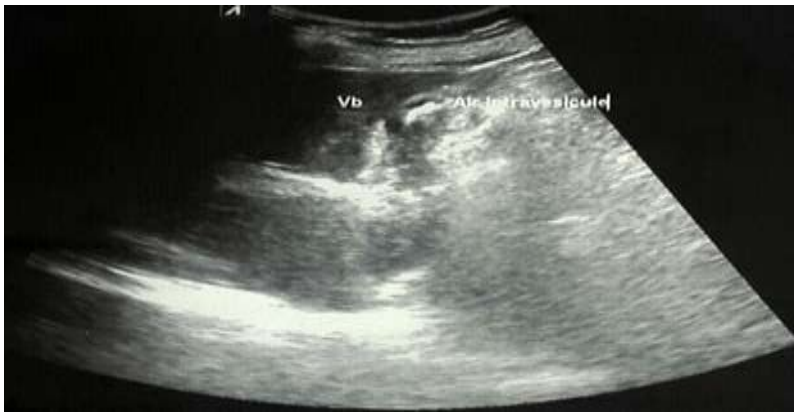

Fig 1: -Ultrasound image showing a thickened gallbladder with aerobilia and doubt about a cholecysto-duodenal fistula.

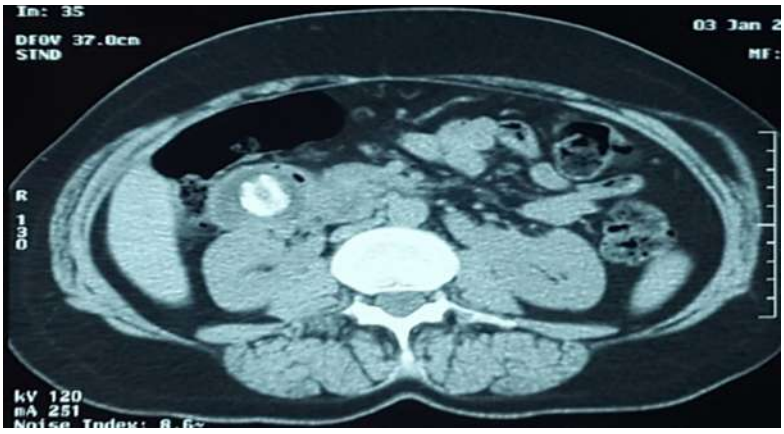

Fig 2:- Coronal section showing an ectopic gallstone measuring 40 mm in diameter obstructing the duodenal lumen.

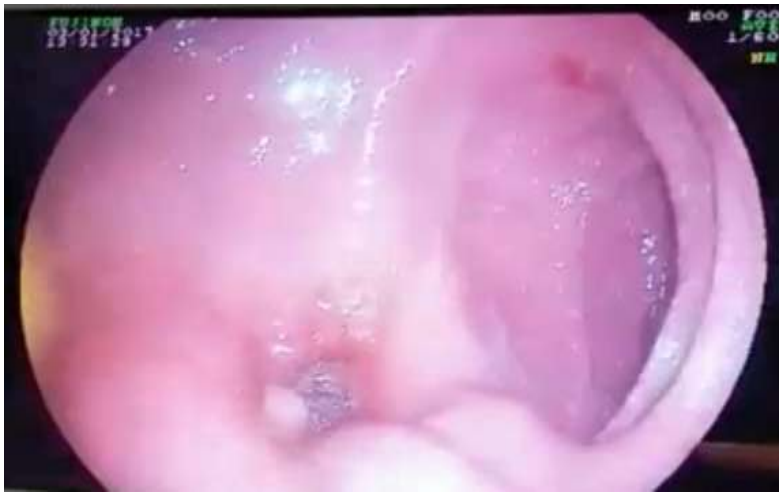

Fig 3: - Fistulous orifice in the duodenal bulb.

Discussion:-

The first description of gastric obstruction due to gallstones dates back to 1779. Bouveret's syndrome was not known as such until French physician Léon Bouveret published two cases in 1896 **[5,6].** Spontaneous bilio-digestive fistula is a rare complication of biliary lithiasis (1%), most often secondary to chronic cholecystitis in repeated flare-ups **[7].** The gallbladder adheres to the surface of the adjacent viscera at the pressure point of the stone, and progressively erodes the wall of both viscera, forming a fistulous pathway **[8].**

The fistula is most often cholecysto-duodenal (60% of cases), less often cholecysto-colic, cholecysto-gastric (5%) or jejunal. Secondly, the stone may migrate into the digestive tract, where it is either eliminated in the stool (in 90% of cases) or, more rarely, in vomit, or, in certain cases where the stone is large (> 2.5 cm), obstruct the intestinal lumen, resulting in biliary ileus **[9-10].** Indeed, biliary ileus accounts for 2-4% of small bowel obstructions (25%) in women over 65 **[11].** Obstruction occurs at the ileal level in over 85% of cases, followed by the jejunum in 10% of cases, rarely at the colonic level and exceptionally at the duodenal or pyloric level, resulting in Bouveret's syndrome in 5% of cases **[12].** The clinical presentation corresponds to gastric obstruction associated with atypical symptoms represented by nausea, vomiting (90% of cases) and epigastric pain; this picture may be complicated secondarily by a cessation of matter and gas. Digestive haemorrhage has been reported, but remains a rare complication **[13,14].**Bouveret's syndrome can also be revealed by a disturbance in the liver balance (the case of our patient) **[15].** The average age of onset is 69, with a predominance of women **[16].** A history of recurrent cholecystitis is often found.

Preoperative diagnosis is based on Rigler's radiological triad of intestinal obstruction, aerobilia and ectopic calculi; this triad is only seen on an unprepared abdomen in 15 to 30% of cases. Abdominal ultrasound allows study of the gallbladder and detection of aerobilia and cholecystitis **[17].** CT remains the examination of choice for demonstrating the radiological triad (78%) most often associated with gastric distension. This triad is completed in our observation.

Endoscopy has a dual purpose: diagnostic, by visualizing the gallstone obstructing the duodenum or pylorus, and therapeutic, by first removing the obstruction. Indeed, several cases of stone removal with or without lithotripsy have been reported **[17].**

Two controversial approaches have been proposed: the first is to perform a conventional or laparoscopic surgical enterotomy with stone extraction, while the second consists, in addition to enterotomy, of a cholecystectomy with closure of the fistula in a single operation **[7].**

Conclusion:-

Bouveret's syndrome is a rare but serious complication of vesicular lithiasis. It is a diagnosis to be borne in mind. The combination of gallbladder lithiasis and intestinal ileus should attract attention.

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