

SPONTANEOUS EXTERNAL BILIARY FISTULA

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External biliary fistulae may arise as a complication of gallbladder surgery, may be purposefully established, or may, very rarely, be spontaneous.

The first case report of a biliary fistula following perforation of gallstones through the abdominal wall is accredited to Thilesus in 1670 (quoted by Henry and Orr⁵). By 1890 Courvoisier had published a series of 499 cases of perforation of the gallbladder, and of these 169 were listed as spontaneous external abdominal fistulae. Henry and Orr⁵ reported a case of spontaneous biliary fistula and collected a further 36 cases from the world literature between 1890 and 1948. From 1948 to 1960 inclusive only 3 additional cases^{2, 6, 8} could be found in the world literature.

Because of the increasing rarity of the condition the following case is reported and the literature is briefly reviewed.

CASE REPORT

The patient, an Indian male aged 28, was admitted to hospital on 8 April 1960, complaining of colicky upper abdominal pain and vomiting. During a previous admission he had been operated on for intestinal obstruction from worms. On examination he was pyrexial (101°F.) and the right hypochondrium was tender and rigid. Rebound tenderness could be elicited in this area. There was no evidence of jaundice. The haemoglobin was 15.7 G. per 100 ml., the leucocyte count 22,000 per c.mm., and the serum bilirubin 1.1 mg. per 100 ml.

A definite diagnosis was not made and laparotomy was decided on. Through a right upper paramedian incision, adhesions of omentum to the anterior abdominal wall were dissected free and revealed an acutely inflamed, but not unduly distended, gallbladder. This was palpated, but gallstones were not detected within it or within the common bile duct. The gallbladder was not drained or removed, since the surgeon performing the operation decided that the degree of distension did not appear to warrant a drainage procedure. Instruments were not applied to the gallbladder, and the omentum surrounding it was not stripped away. The rest of the laparotomy was normal and there was no evidence of pancreatitis. The abdomen was closed in layers without drainage. Chloramphenicol, 100 mg., was added to each 1,000 ml. of intravenous infusion.

On the fourth postoperative day the patient had a high pyrexia, with persistent tenderness and guarding in the right hypochondrium. The next day he experienced a sudden bout of colicky pain, which was followed a day later by a discharge of bile-stained fluid from the lower end of the operation wound. By the 12th day the temperature had become normal and by the 26th day there was hardly any discharge from the wound, and he was sent out of hospital.

On 14 May 1960 the patient complained of a marked purulent discharge from the wound and was re-admitted. On examination a sinus discharging pus (but not bile) was seen in the centre of a healed right upper paramedian incision. A specimen taken from the sinus was cultured and showed a heavy growth of *Staph. pyogenes* and *B. coli*. The

haemoglobin was 13.9 G. per 100 ml., and the leucocyte count 10,000 per c.mm. On 6 June a cholecystogram was performed using 'biligrafin'. This showed that the hepatic and common bile ducts could be fairly adequately visualized, but the gallbladder was not seen at any stage of the examination, which was continued for almost 3 hours. On 1 July it was decided to explore the sinus, which was discharging mucoid material. After its wall of granulation tissue had been scraped away a catheter was inserted into the sinus. Through the catheter lipiodol was injected and appeared to pool in a small cavity deep to the abdominal wall. The patient was discharged from hospital on 8 July.

On 10 November (7 months after the first admission) the patient was re-admitted, still discharging pus from the sinus, and on 18 November the sinus was explored and was found to extend into the gallbladder, which contained a solitary stone. A cholecystectomy was performed and the biliary



Fig. 1. Photograph of operative specimen showing a length of string in the biliary fistula, the chronically inflamed gallbladder to the left and the skin of the anterior abdominal wall to the right. On the extreme right is the gallstone cut in half. The rule shown is graded in cm.

fistula was excised at the same time (Fig. 1). On palpation of the common bile duct, gallstones were not detected. When the patient was discharged from hospital on 2 December, an area of superficial skin death was healing satisfactorily. Later (7 January 1961), when the patient was seen in the follow-up clinic, the abdominal wound had healed completely.

DISCUSSION

Spontaneous external biliary fistulae occur more frequently in women than in men, and are found most commonly in persons in the 5th-7th decades. Most commonly the pathogenesis is an acute suppurative cholecystitis or empyema of a gallbladder containing gallstones. The fundus, which becomes adherent to the anterior abdominal wall, ruptures, discharging pus and gallstones which burrow through the abdominal wall to become discharged later; thus establishing external fistulae at varying sites. The

usual site of the external opening is the right hypochondrium. Less commonly the fistulous opening has been reported in the region of the umbilicus,⁴ the right iliac fossa,⁵ the right thigh,¹ and the left lumbar region.⁷ Associated gallstones were present in all the cases collected by Henry and Orr.² The discharge from the fistula may contain only mucus (where the cystic duct has been blocked), or bile, pus, or one or more gallstones.

Confirmation of the diagnosis is best made by injecting lipiodol through a catheter which has been inserted into the fistula, and by this means demonstrating a communication with the gallbladder. There were no deaths in the series collected by Henry and Orr² and spontaneous healing occurred in 20% of their cases. Despite this, cholecystectomy, coupled with complete excision of the fistulous tract, is the recommended treatment of choice.

It is stressed that at no time, in the case reported here, was the gallbladder interfered with, nor was the surrounding inflammatory tissue disturbed. Certainly instruments did not go near the vicinity of the gallbladder during the operation. It is interesting that in this case gallstones were not reported at the time of the first exploratory laparotomy (8 April 1960). By the time the cholecystectomy was performed 7 months later, a single gallstone had formed by precipitation of bile salts and pigments in a gallbladder with an obstructed cystic duct. It is suggested that the increasing rarity of spontaneous biliary fistulae in recent years may be attributed to increased operative intervention in acute cholecystitis.

SUMMARY

A case of spontaneous external biliary fistula is reported. A brief review of the literature is included.

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REFERENCES

1. Abell, I. (1909): *Kentucky Med. J.*, **7**, 219.
2. Drassdo, A. (1953): *Med. Mschr.*, **7**, 112.
3. Gibbon, J. H. (1901): *Philad. Med.*, **7**, 128.
4. Gill, F. (1934): *Irish J. Med. Sci.*, **6**, 87.
5. Henry, C. L. and Orr, T. G. (1949): *Surgery*, **26**, 641.

6. Lupi, A. (1956): *Rass. int. Clin. Ter.*, **36**, 20, 601.
7. McCay, F. (1930): *Brit. Med. J.*, **2**, 142.
8. Panecha, A. (1960): *Pol. Przegl. chir.*, **32**, 441.

IN MEMORIAM

HARRY MENTER, M.B., CH.B., B.A.O.

Dr. Eugene Baskind of Johannesburg, writes:

Dr. Harry Menter died suddenly on 10 June 1961 at the age of 45 years, from a coronary thrombosis. Harry Menter was born in Johannesburg and qualified with the degrees M.B., Ch.B., B.A.O. at Trinity College, Dublin. After qualifying he worked as a general practitioner in Doncaster for a time, and then undertook specialized work in gynaecology and obstetrics under Professor Canney at Cambridge Hospital. He returned to South Africa in 1942 and commenced practice in Johannesburg. He continued to maintain his great interest in obstetrics by working at the Bridgeman Memorial Hospital and at the Gospel Mission Hospital. In 1947 he returned to England for a year to do postgraduate work. On his return, and until his death, he carried on a busy general practice.



Dr. Menter

Harry Menter had a quiet, unassuming and friendly manner. This, together with his undoubted capabilities, kindness and gentleness towards the sick of all races, inspired confidence in patients and made him a most sought-after doctor. However, he was never much interested in the material rewards of practice; his goal was a high standard of medical attention to each and every one of his patients, and he continually maintained this ideal. His patients have indeed sustained a great loss.

The integrity, principles and high ideals which characterized his professional life were maintained in all other spheres and were reflected in his home and community life.

His interest in his family's sporting activities was well known and his presence at all events in which his children participated gave them the wonderful encouragement which has helped them to attain prominence in their school and university teams.

To his wife and family we express our deepest sympathy.