Complete Obstruction of the Common Bile Duct Due to Chronic Pancreatitis
A Report of an unusual case including nine operations with recovery of the patient

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Complete obstruction of the common duct caused by stones, tumors within and without the common duct, cancer of the head of the pancreas and chronic pancreatitis results in absolute jaundice. It is rather unusual for chronic pancreatitis to cause permanent jaundice. Jaundice in these cases is usually intermittent in character. In a paper read in Atlantic City last year before the Surgical Section of the American Medical Association, one of us (M. B.) reported a series of cases of chronic pancreatitis in which intermittent jaundice was a characteristic sign. The case we wish to report now is especially interesting because obstruction of the common duct was complete followed by jaundice. When jaundice is complete, one must always consider the possibility of cancer of the head of the pancreas or a tumor in the region of the papilla of Vater. The patient about to be reported was no exception. With the abdomen open, the pancreas gave the impression that we were dealing with a cancer of that organ. We contemplated performing a pancreaticoduodenectomy, but after consultation with the patient’s physician (J. C. D.), we chose a short-circuiting operation.

The history is as follows:

E. C. F., age 22, female, was admitted to the Jewish Hospital 12/22/42. The chief complaint was abdominal pain. Jaundice had been present for three weeks. She stated she was perfectly well until three weeks before her admission to the hospital. Pain was referred to the back and appeared at intervals. There was some nausea before and after meals and occasional diarrhea with light colored stools was present. Itching accompanied the jaundice. Physical examination was negative except for the fact that the liver edge could be felt on deep inspiration. Laboratory studies were as follows: Hemoglobin 12.4 gm., R. B. C. 4.6, W.B. C. 8,600, Seg. 74, Ly. 26, Sugar 75, B. U. N. 11.5. The urine was acid with a trace of albumen. The Van den Bergh reaction was direct — strongly positive, indirect — 9.7 mgm. The feces contained no bile. The Wasserman reaction was negative. The patient remained in the hospital for a period of two weeks, but returned shortly after her discharge because the jaundice persisted and no improvement was noted in her general condition.

On February 10, 1943, she was seen by one of us (M. B.) in consultation. The statement at that time was made that “there was a suspicion of carcinoma of the head of the pancreas.” In addition, she exhibited Courvoisier’s sign with a large pyriform mass palpated in the right upper quadrant. While one could not judge by the character of the jaundice, its intensity resembled that of a malignant condition. Operation was advised.

On February 20, 1943, the first operation performed was a cholecystojejunostomy. At the same time tissue from the pancreas and a mesenteric gland were taken for biopsy. The pathological report was chronic pancreatitis. Fig. 1. The anastomosis was followed by drainage of large amounts of bile from the wound.

On April 10, 1943, an attempt was made to close the biliary fistula. Another biopsy was obtained and the report from the laboratory was again chronic pancreatitis. There was also a subhepatic collection of bile and pus present which was drained. The pancreas seemed to have enlarged since the last operation.

For some unaccountable reason, possibly due to a hematogenous infection, a purulent collection occurred in the pouch of Douglas. On April 26, 1943, this was drained by means of a posterior colpotomy. For the next two months the patient remained intensely jaundiced. Great difficulty was experienced in feeding the patient, and as a result, she lost much weight. Gradually, however, even though fat metabolism was greatly upset by the prolonged absence of intestinal bile, the patient improved in strength. Two and a half months after the last operation, the patient developed the signs of right lower lobe pneumonia. Shortly thereafter, she coughed up sputum which was bile tinged.

This was an unusual symptom. In a rather large operative experience on the biliary tract we had never observed a biliary pulmonary fistula. This complication must have been caused by the infection that followed the

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first operation. For months bile tinged sputum, often very copious, was expectorated.

The infection from the subhepatic space now entered the liver itself. On May 22, 1943, after resection of the 8th rib, an abscess of the liver was entered and drained.

The patient at this time was acutely ill. She continued to expectorate large quantities of bile stained sputum. Because of failing strength and nutrition, it was decided on June 26, 1943 to break down the old anastomosis of cholecystojejunostomy and perform a new one. In order to do this the jejunum had to be resected and an end to end anastomosis was performed followed by a lateral choledochogastrostomy with the aid of a T tube. A cholangiogram later showed that this anastomosis was functioning.

In August of 1943, bronchoscopec examination visualized a light yellow purulent secretion coming from the middle and lower lobe bronchi on the right side.

The T tube was not removed until September, 1943 when the old upper abdominal incision was reopened. The T tube was found kinked. The opening of the anastomosis was closed with a purse string suture. The 11th and 12th ribs were resected and the opening in the liver enlarged. All the adhesions between the liver and the diaphragm were separated. These steps were taken to eliminate the vicious circle causing the broncho-biliary fistula. The attempt was unsuccessful. A bronchogram taken in October, 1943 revealed a broncho-biliary pulmonary fistula, notwithstanding the fact that the choledochogastrostomy was patent. Fig. 2. The most distressing symptom continued to be the expectoration of great volumes of bile stained sputum.

Another attempt was made to close the fistula in October, 1943. After removal of a portion of the 19th rib, a piece of muscle was transplanted into the fistula. The wound was closed without drainage. The cough still persisted with the usual expectoration of bile tinged sputum.

The important problem seemed to be the closure of the fistulous tract. Accordingly, in January 1944, the wound in the chest was reopened and an attached piece of the diaphragm was transplanted into the fistulous tract. The wound was closed again without drainage.

Evidently our premise that closure of the fistulous tract was all important was wrong. It was apparent that bile was flowing through the place of least resistance, namely, the broncho-biliary fistula. It was also noted that the jaundice gradually disappeared when the expectoration of bile stained sputum began. Therefore, it was decided because of the absence of bile in the feces, that the choledochogastrostomy was not functioning properly.

In March 1944, the abdomen was opened again. The anastomosis was isolated and the stomach opened. No bile exuded because the anastomosis had closed. The pancreas had increased in size, completely closing the common duct. The common duct was dissected from its bed and isolated. It was bisected and the proximal end was anastomosed to the stomach over a T tube which remained in situ about a year. The former opening in the stomach was utilized. The T tube was removed on account of obstructive symptoms due to calcareous deposits of bile. Fig. 3.

The expectoration of bile stained sputum almost immediately ceased. The patient gained in weight and there was a steady improvement in health. She is well today.

**Summary**

It is unusual for chronic pancreatitis to cause complete obstruction of the common bile duct. The case here reported, however, illustrates this phenomenon. The symptoms were those of carcinoma of the head of the pancreas or chronic pancreatitis. Two biopsies dispelled any doubt about the cause of the jaundice. The primary operation for the relief of jaundice became infected. This was no doubt the cause of a series of eight additional operations that had to be performed. The most harassing and unusual symptom was the profuse expectoration of bile stained sputum. Following this, jaundice gradually disappeared. All efforts were concentrated then on closing the broncho-biliary fistula by means of transplantation of muscle and a portion of attached diaphragm, but they failed. Our premise was wrong. It seemed necessary to relieve the obstruction of the common duct to cure the bile tinged expectoration. The abdomen was finally opened again followed by an end to side anastomosis of the common duct to the stomach with the aid of a T tube which remained for one year. This procedure cured the patient. Stools have been normal in color since the