REPORT OF AN INSTANCE OF SUPPURATIVE CHOLANGO-HEPATITIS WITH OBSTRUCTIVE JAUNDICE*

THE VALUE OF DUODENAL-TUBE DRAINAGE OF THE BILIARY TRACT IN DIAGNOSIS AND IN THE ALTERATION OF SYMPTOMS AND SIGNS

By

B. B. VINCENT LYON, M.D., DAMON B. PFEIFFER, M.D.

and

JOHN EIMAN, M.D.

PHILADELPHIA, PENNSYLVANIA

The patient, R. S., male, was 59 years old when first seen by one of us (B. B. V. L.) on April 4, 1930. His chief complaints were chronic obstructive jaundice of over two years' duration, chilliness, feverishness, nausea and vomiting, loss of weight.

In 1921, he had had three gall stones removed and a cholecystostomy performed. This yielded a satisfactory result until September 1927 when gall stone colic recurred. At his second operation, a long stone was found tightly impacted in the cystic duct. Its removal, together with the gall bladder, probably required a low cystic duct ligation, thereby injuring the common duct, since, three days later, the patient became obstructively jaundiced and remained so until September 1929. The jaundice gradually assumed the greenish-bronze type suggestive of malignancy involving the head of the pancreas. Such was the diagnosis rendered by the surgeon who did the first and second operations. In September 1929 the patient was re-explored by one of us (D. B. P.) but no evidence of cancer of the pancreas, of the liver or adjacent organs was found. However, the common bile duct could not be identified in the mass of adhesions. The liver was found enlarged due to gross evidence of cirrhosis. The pancreas was hard but not greatly enlarged.

A catheter-anastomosis between the right hepatic duct and the duodenum was accomplished. This procedure promptly re-established liver drainage and in three or four weeks' time the jaundice had greatly decreased. However, a few weeks later the subject contracted an upper-respiratory cold and promptly became re-jaundiced. He was re-admitted to the Methodist Hospital where the usual measures, supplemented by several unsuccessful attempts at duodenal-biliary drainage, failed to relieve the situation. He continued with obstructive jaundice to April 4, 1930.

Examinations: Then, the patient was intensely jaundiced, to a greenish-bronze color; the skin was exoriated from scratching; the weight was 97 pounds, representing 53 pounds below normal average; temperature range was 97° to 99.5°F.; pulse range 85 to 100; blood pressure, 120/85, despite pronounced arteriosclerosis; the tongue was coated; pyorrhea; gingivitis and sordes were marked.

The lungs relatively were normal; the heart, exhibited diminished myocardial reserve. Abdomen: retracted, scarred; visible enlargement of liver, palpable to 12 cm. below tip of ninth rib, with right and left liver lobes enlarged, and palpable Riedel's lobe. Over the mass of the liver presenting below the costal margin, was a rounded, dome-like area, somewhat roughened to palpation and quite hard.

The edge of the liver was more sharp than rounded. There were very slight supracostal margin telangiectases. The edge of the spleen could be felt and its area of dullness was enlarged. No other abdominal masses were palpable. There was no evidence of nucitis. The leg veins were not varicosed.

Laboratory observations: The feces were clay colored; negative for urobilin and for occult blood; and microscopically showed poor fat conversion. The urine contained faint traces of albumin; urobilinogen 1-160; Gmelin test +4 and occasional bile-stained pus cells. The van den Bergh test yielded positive, i.e., there were recovered several score, whitish-gray worm-like casts, apparently derived from the dilated intrahepatic ducts (see Figures 1 to 3). Many of these casts were branched and varied in length from 1 to 5 cm.; along their edges could be detected a faint, bile-tinge. Microscopically, these were demonstrated to be mucopus casts (see Figures 4 and 5) with numerous numbers of polymorphonuclear leukocytes and a high bacterial flora of bacilli and cocci, culturally identified as B. coli communis and non-hemolytic streptococci. The total amount of this material secured on first drainage covered the bottom of an eight-ounce bottle of a diameter of 2 1/2 inches to a height of 1 1/2 inches. (See Figure 1.) Following the recovery of these multiple casts, a small amount of dirty-appearing, turbid bile was secured; it was deep greenish-black in color, very thick, and contained much slimy, flocculent ma-
Figure 2—Showing irregularity in size, shape and diameter of casts.

material, microscopically showing bile-stained pus-cells in abundance, much necrotic debris, many broken-down, "shadow cells" of columnar epithelium and many black pigment particles. This black or greenish-black bile—like "B. bile" of a routine duodenal drainage—in a cholecystectomized patient is pathognomonic of dilated intra- or extra-hepatic ducts, as described by Counsellor and McIndoe. (see Figures 6 and 7.)

The patient was transferred to Jefferson Hospital on April 7th. There he was given biliary drainages over a period of three or four hours every day or every second day, until his discharge on May 2nd. Injections of an autogenous vaccine of B. coli and streptococci also were exhibited.

During this time, bile flow became fairly well established; a total of 6,490 mils (1½ gals.) was recovered. Bile reappeared in the feces and diminished in the urine, and the skin jaundice and its expression by icterus index and quantitative van den Bergh diminished. The bile drained by duodenal-tube gradually decreased in viscosity, the color improved from greenish-black to greenish-yellow; decreasing quantities of biliary casts were recovered, but we secured large amounts of dense, slimy, flocculent material, with pronounced oleaginous degeneration, but of a lighter yellow than usually seen in cystic duct catarrh.

The drainages then were continued at the patient's home at intervals decreasing from twice a week to once in ten days. Altogether, several gallons of bile admixtures were recovered. He was given occasional over-night drainages, these yielded from 1,500 to 2,000 mils each. This, however, apparently decompressed the liver too rapidly and the patient would temporarily become more icteric, so that weekly, short drainages appeared to be more effective. With this schedule he became less jaundiced and, as noted above, the icterus index and blood chemistry improved; the enlargement of the liver gradually decreased by half, and the surface became less dome-shaped and irregular. The patient gained in strength, in appetite and digestion and increased 20 pounds in weight.

Although the outlook for this patient was distinctly problematical in view of a badly damaged and structurally altered liver, the improvement secured was encouraging. The problem was to keep the duct-system as free as possible of casts and flocculent material which otherwise would obstruct bile flow and return him to obstructive jaundice. At this time, it seemed obvious to us that the anastomosis between the hepatic duct and the duodenum was still patent, and it was questionable whether further surgical intervention could improve the situation.

Figure 3—Casts, selected and teased to show length.
The longest measured 3.9 cm.

Figure 4—Low power of muco-pus casts.

Figure 5—Oil immersion of muco-pus casts.