Right Hepatic Lobectomy for Carcinoma of the Gallbladder: *

A Five-Year Cure

RICHARD D. BRASFIELD, M.D.

From the Memorial Hospital, New York City

INVASIVE carcinoma of the gallbladder is incurable when treated by the usual surgical attack.[1, 3] In March 1955, a more aggressive approach was tried by using a modified technic of Lortat-Jacob and Robert.[4] Total right hepatic lobectomy was performed following cholecystectomy for unsuspected invasive adenocarcinoma of the gallbladder. This is the first reported five-year cure of gallbladder cancer, by right hepatic lobectomy.

Case Report

L. L., a 53-year-old white woman, was admitted to the Memorial Hospital on March 22, 1955, complaining of vague intermittent right upper quadrant pain of six months' duration. There was an associated 27 pound weight loss which was due primarily to her diet. Two weeks before admission the pain in the right upper quadrant became more severe and required morphine for relief. There was some nausea without vomiting, chills or fever. Three days before admission two tarry stools were passed. There had been no hematemesis, jaundice or abdominal distention. A cholecystogram revealed a non-functioning gallbladder without calculi. A barium enema revealed numerous small diverticula of the ascending and descending colon. No polyps were seen. Barium meal was normal.

The patient's general health had been good; she used no alcohol, tobacco or drugs. In 1945 she had pneumonia without sequelae. A cervical polyp had been excised in 1949. Review of systems was unremarkable.

The family history revealed the patient's mother died at age 65 from pneumonia. Her father died at age 72 from a cerebral hemorrhage. One sister died of colon carcinoma and another sister died of liver carcinoma.

On physical examination the patient was a well-developed, well-nourished 53-year-old white woman who was in no distress. There was no jaundice, eruption or petechia of the skin. No palpable nodes were found. Slight pallor of the mucous membranes was noted. The teeth were in good repair. The trachea was in the midline and there was no enlargement of the thyroid. No mass, tenderness, discharge or dimpling was found in the breasts. The lungs were clear to percussion and auscultation. There was no enlargement, arrhythmia or murmur of the heart. The abdomen was flat. The umbilicus appeared normal. There was no spasm or tenderness. The right lobe of the liver was palpated 2 fingerbreadths below the right costal margin. No ascites was detected. The kidneys and spleen were not felt. There was no hernia. The genital outlet was marital. The cervix was clean and the uterus was not enlarged. The adnexae were free of masses or tenderness. There was no clubbing, deformity or limitation of motion in the extremities. Clinical Impression: 1) chronic cholecystitis; 2) melena of unknown etiology.

On admission to the hospital the hemoglobin was 14.8 Gm. with 46 per cent hematocrit. The serum bilirubin was 0.35 mg. per 100 cc. The serum amylase was 11 units. A stool guaiac test was negative.

The etiology of the melena was not apparent; however, the symptoms and laboratory findings did justify laparotomy, which was performed on March 25. Careful examination of the intra-abdominal viscera did not reveal any adequate explanation for the melena. The liver appeared normal except for slight blunting of the free edge of the right lobe. The gallbladder was in normal position and of normal size and shape. The serosa was glistening with minimal thickening of the wall. Palpation of the fundus revealed multiple small faceted stones. The cystic and common ducts appeared normal. There was

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TABLE 1. *Laboratory Studies of Patient L. L.*

Postoperative Day	Bilirubin (mg./100 cc.)	Cephalin Flocculation (48 hr.)	Thymol Turbidity (Units)	Cholesterol		Proteins (Gm./100 cc.)	Albumin (Gm./100 cc.)	Glucose (mg./100 cc.)	Prothrombin Time (sec.)
				Total	Free				
3/28/55	0.33	Negative	0	157	53	6.0	4.2	69	12.4
1st	1.92	+	..	104	..	5.2	3.8	394	17.5
2nd	2.41	++++	..	110	..	5.0	3.6	192	18.1
4th	3.66	......	..	..	..	5.0	3.4	..	16.5
6th	3.04		0.84	76	35	5.0	3.2	68	..
9th	1.98	Negative	0.92	..	..	4.8	3.1	69	15.8
14th	1.14	Negative	0.61	101	39	5.3	3.3	79	15.7
22nd	0.84	Negative	0.80	140	49	5.9	3.9	70	14.2

a small, soft 0.5-cm. lymph node located at the junction of the cystic and common ducts.

Cholecystectomy was performed. On dissection of the gallbladder from its bed, a 1-mm. vessel near the fundus was noted to contain a small, fresh thrombus. There was adherence of the fundus to the liver bed, however no definite tumor was visualized. On opening the specimen the surgeon was surprised to find a 1.5-cm. papillary adenocarcinoma of the fundus which was covered with a fresh clot embedded with multiple small calcium stones (Fig. 1).

Since the patient, family and surgeon were not adequately apprised of the pathologic findings, right hepatic lobectomy was deferred. On March 28 a total right hepatic lobectomy (Fig. 2) and node dissection were performed. The previous right rectus scar was excised and a thoracic extension added through the sixth interspace. The technic used has been described by Lortat-Jacob and Robert [4] with these minor variations. (A de Petz clamp was placed on the diaphragm prior to its section. Thin rubber tubing was placed around the common hepatic artery, the portal vein, the inferior vena cava caudad and cephalad to the liver for complete control of the blood supply, if needed, during ligation of the hepatic veins. The hepatic flexure and omentum were used to fill the dead space in the right upper quadrant and served as a hemostatic agent by suture to the raw surface of the liver.)

Endotracheal ether anesthesia was used. (Although 6,000 cc. of blood was given, the most recent patient required only one pint.)

The pathologic report, reviewed in 1960 by Doctor Frank Foote, is as follows: "Infiltrating, partly papillary, adenocarcinoma of gallbladder with invasion of the right lobe of the liver (Fig. 3, 4). Regional lymph nodes are negative." The right lobe weighed 950 Gm.

The postoperative changes in the blood chemistries and liver function tests are noted in Table 1.

Postoperatively, an intragastric Levine tube was inserted for 72 hours. Minimal quantities of demerol, namely 25 to 50 mg., were given every three to four hours for relief of pain. 500 to 750 cc. of plasma were given daily for the first

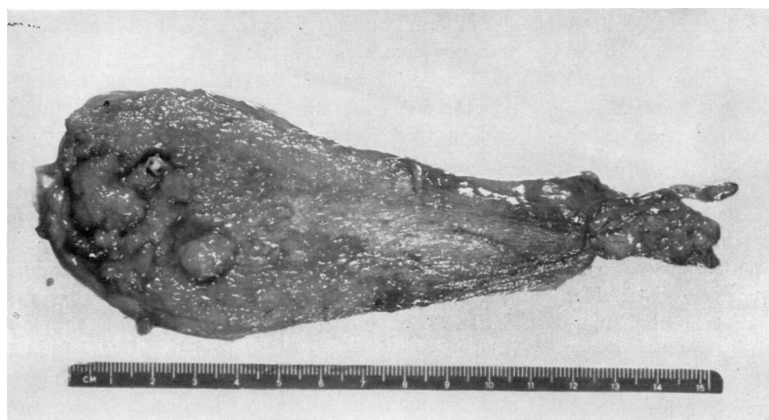

FIG. 1. Infiltrating papillary adenocarcinoma of gallbladder. (Note: calcium calculus, fresh clot removed.)

(At 6 mos., 1 yr., and 5 yrs. All tests were normal)

Alkaline Phosphatase (Bodansky Units)	Calcium (mg./100 cc.)	Phosphorus (mg./100 cc.)	CO_2 Content (mEq./L.)	Sodium (mEq./L.)	Potassium (mEq./L.)	Chlorides (mEq./L.)	Blood Urea Nitrogen (mg./100 cc.)	Transaminase (Units)
4.4	8.8	3.1	22	138	3.8	104	8.2	24
5.0	9.2	2.8	..	..	..	..	14.8	400
..	..	..	28	135	..	104	14.8	40
..	..	..	29	140	3.18	94	17.3	35
6.5	9.2	2.3	22	135	4.16	102	10.4	..
8.5	8.4	4.4	20	134	4.9	100	..	40
..	..	..	..	..	..	..	9.2	40
8.7	8.5	3.9	..	..	..	106	..	..

five days. The patient received terramycin 250 mg. every six hours, penicillin 500,000 units every eight hours and streptomycin—0.5 mg.—every eight hours. Liquids were given on the third day. The rectal temperature reached its peak of 38.6 C. on the fourth day. Also, on that day the patient became ambulatory. On the eighteenth day the drains in the right upper quadrant were removed. The patient was discharged on the twenty-third postoperative day, at which time she was on a regular diet and was taking no medication. Ten weeks following her operation she had gained 25 pounds and had returned to her duties as a telephone operator. Within one year she had gained 50 pounds. At present she is asymptomatic and clinically free of disease.

Comments

Since total right hepatic lobectomy will have only limited value for advanced carcinoma of the gallbladder,[2,5] it seems reasonable that a more aggressive attempt should be made to remove gallstones in all patients over 35, unless there is some distinct medical contraindication. By doing this we would undoubtedly prevent the formation of a number of carcinomas and have the added advantage of diagnosing carcinoma in an early stage when a real opportunity for cure can be offered by total right hepatic lobectomy and node dissection.

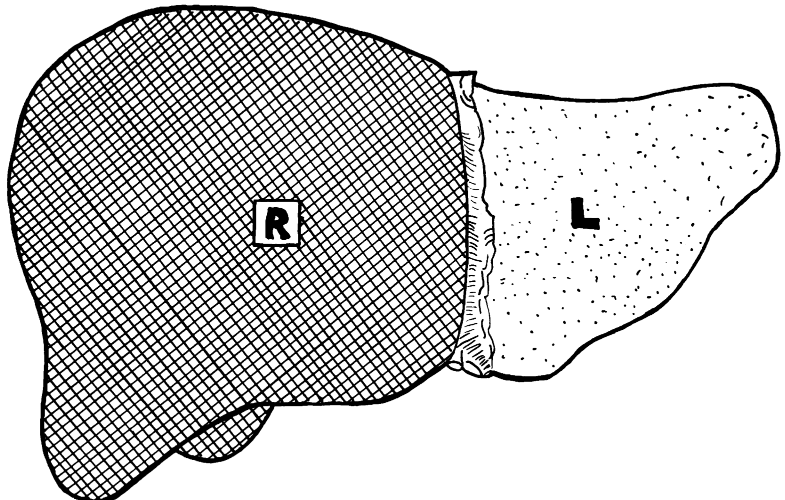

FIG. 2. Shaded area represents liver removed for cancer of the gallbladder. Weight of right lobe 950 Gm.

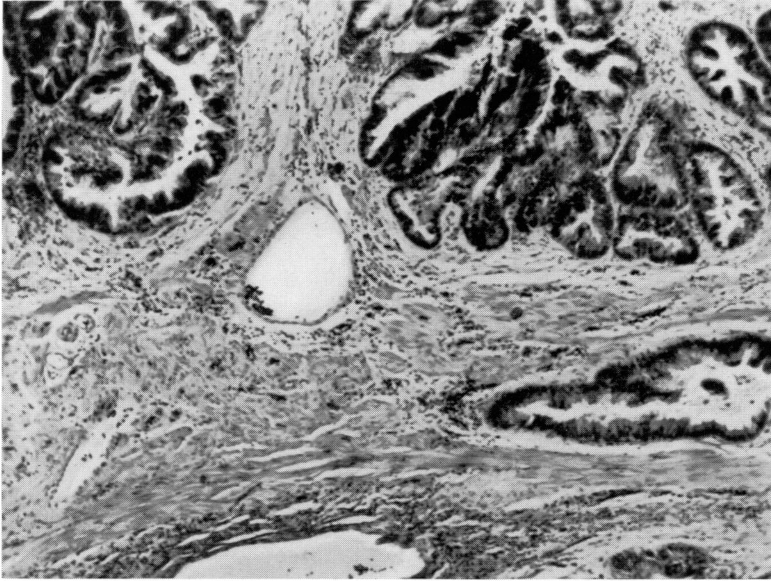

FIG. 3. Infiltrating papillary adenocarcinoma of gallbladder. Note invasion of gallbladder. (× 90)

Summary

The first five-year cure of carcinoma of the gallbladder invading the liver by total right hepatic lobectomy is reported.

References

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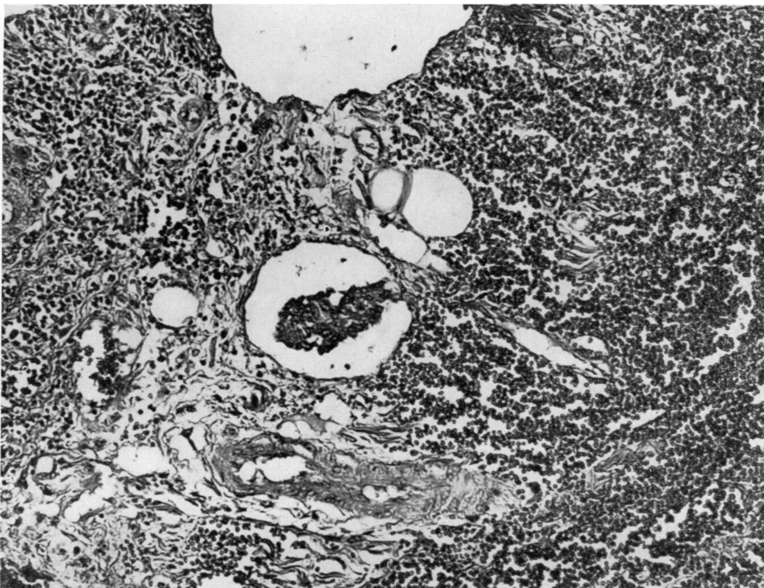

FIG. 4. Gallbladder fossa three days after cholecystectomy. (Note: carcinoma in liver and inflammation in gallbladder bed.)