

ACUTE CHOLECYSTITIS

THE RESULTS OF OPERATION WITHIN FORTY-EIGHT HOURS OF THE
ONSET OF SYMPTOMS

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THERE has been a steadily increasing interest in early operation for acute cholecystitis during the past decade, but the term "early operation" seems to mean anything from early in the disease to soon after admission to the hospital, although the patient may have been previously ill at home for some days. To evaluate results, it is desirable to set a definite time and, for the purpose of this study, we have chosen the first 48 hours from the *onset* of the symptoms of the acute attack.

TABLE I

OPERATIONS FOR ACUTE CHOLECYSTITIS WITHIN 48 HOURS OF THE ONSET

Surgeon	Number	Cholecystectomy	Cholecystostomy	Deaths
Graham ¹	20	18	2	1
Heuer ²	50	49	1	2
Stone ³	2	2	0	0
Walters ⁴	7	6	1	0
Taylor ⁵	19	?	?	1
Graham and Hoefle.....	51	51	0	2
Kunath ⁶	6	0	6	0
Zinninger ⁷	12	?	?	0
Totals.....	167	126	10	6
Mortality Percentage.....				3.59%

Table I shows that in 167 cases which were operated upon within 48 hours of the onset, there occurred six deaths, a mortality rate of 3.59 per cent. We are more concerned with the *promptness* of the operation than with the *type* of procedure, but cholecystectomy was the operation of choice in these cases, while cholecystostomy was reserved for the more critical cases.

There are certain factors that make a cholecystectomy for acute cholecystitis more difficult than one performed in the quiescent period. The gallbladder is often tense and distended. The tissues are more friable and the bleeding is more profuse. There is more swelling around the cystic duct. It may be necessary to aspirate the gallbladder, and we usually prefer in these acute cases to remove it from above downward, controlling the bleeding from the liver bed by the pressure of a gauze pad and a retractor. The cystic duct is carefully ligated, using traction toward the common duct instead of away from it. This prevents the possibility of pulling the cystic duct off accidentally at a lower level than was intended. If, for any reason, the cystic artery escapes and bleeds, it is easy to control this and secure a

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dry field by the use of a small angular retractor or the finger in the foramen of Winslow making pressure on the hepatic artery until the bleeding vessel has been clamped and ligated. An oozing liver bed, that cannot be obliterated, can be quickly peritonealized and rendered dry by a free omental graft lightly tacked in place by a few interrupted sutures. A large percentage of cultures taken during the first 48 hours remain sterile and, therefore, infection is not a major problem at this time.

It has frequently been said that acute cholecystitis is not like acute appendicitis, and that there is not the same necessity for prompt operative interference. The statistics in Table II show the mortality at various periods after the onset of symptoms.

TABLE II
ONE HUNDRED CONSECUTIVE CHOLECYSTECTOMIES FOR ACUTE CHOLECYSTITIS
*From the First Surgical Service of the Methodist Hospital, Brooklyn, N. Y.
January 1, 1929, to October 1, 1937*

Onset of Symptoms to Operation	Edematous		Suppurative		Gangrenous		Perforated	
	No.	Died	No.	Died	No.	Died	No.	Died
Up to 48 hours*	26	0	19	0	3	0	3	2
2 to 5 days†	14	1	8	1	5	0	0	0
5 days or more‡	14	1	3	1	4	2	1	1
Total	54	2	30	2	12	2	4	3

* Acute cholecystitis operated upon within 48 hours—51 cases—2 deaths—3.92 per cent.
 † Acute cholecystitis operated upon 2 to 5 days—27 cases—2 deaths—7.40 per cent.
 ‡ Acute cholecystitis operated upon 5 days or more—22 cases—5 deaths—22.72 per cent.
 Total mortality in 100 cases—9 deaths—9.0 per cent.

A delay of more than five days gives a high operative mortality, and raises the question of whether operation should be performed or delay advised. This must be decided for each individual case. When operation is performed in these cases, the further question of what operation is indicated will arise. Note that there were three patients with gangrenous gallbladders, and there were also three patients with perforated gallbladders, within 48 hours of the onset of the attack; and two of the latter died. Harvey Stone³ cites an instance of a totally gangrenous gallbladder, with autolysis, which he found at operation, seven hours after the first severe pain which marked the onset. Gangrene was also present in another case. In a third patient, who was being studied for obscure digestive symptoms of three months' duration, a perforation of the gallbladder with resultant peritonitis suddenly occurred, necessitating an emergency operation. In Kunath's⁶ six cases, there was one patient with a gallbladder already gangrenous, and two cases in which perforation had occurred. In Taylor's⁵ 19 cases, operated upon within 48 hours, five were already gangrenous. These are not rare or unusual events. Most of the recently published series of cases of acute cholecystitis show an incidence of gangrene of about 20 per cent.

In the last analysis, the greatest emphasis must be placed upon the mor-

tality statistics. Whatever method will save the most lives should be employed. In Pennoyer's⁸ series of 300 cases of acute cholecystitis, treated in the Roosevelt Hospital, where the general policy was to delay whenever possible, the mortality was 10 per cent. This presents a striking contrast to the 3.59 per cent mortality in the cases operated upon within 48 hours of the onset, and is a strong argument in favor of a determined effort to obtain these cases for operation within 48 hours. Consideration must also be given to the other disadvantages of delay; namely, the days of pain, the sleepless nights, the starvation and debility, the long hospitalization and increased expense.

It is difficult to see two sides to this question, when it is so evident that a lowering in mortality could be accomplished so easily by education of the laity and cooperation between the family physician and the surgeon to secure a prompt operation, early in the attack, for every person suffering from acute cholecystitis who is a proper operative risk.

SUMMARY

(1) A series of 167 cases of acute cholecystitis operated upon within 48 hours of the onset of the attack has been collected. The mortality was 3.59 per cent.

(2) The difficulties of operation in the acute stage have been discussed, and also the methods that can be employed to minimize these dangers.

(3) An earnest plea is made for education and effort to secure operation in acute cholecystitis within the first day or two of an attack.

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