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THE SURGICAL CRITERIA FOR CHOLECYSTECTOMY

ALLEN O. WHIPPLE

(Delivered before The New York Academy of Medicine, April 1st, 1926)

The surgery of the gall bladder covers a relatively short period of some forty years. For some thirty years the debate as to whether a diseased gall bladder should be drained or removed was a perennial one, and until a sufficient number of surgeons had removed a sufficiently large number of previously drained gall bladders for recurrent gall-stone disease, the operation of cholecystectomy as the operation of choice for a definitely diseased gall bladder was not generally recognized.

With the refinements in diagnosis and due especially to the corrective effect of the follow-up clinic the past ten years have made many of us realize that the results in our cholecystectomies were far better in some patients than in others. One of the soundest lessons of the follow-up clinic has been to teach the clear cut and lasting benefits of cholecystectomy in gall-stone disease where the pathology is limited to the gall bladder. It is in the non-calculus gall bladders, in the cases associated with pancreatic pathology, in those presenting various types of adhesions, congenital or otherwise, between gall bladder and duodenum, in the cases of perihepatitis about the gall bladder, in the cases where one calls on the assistant or a visiting surgeon to pass upon the pathology, it is in these gall bladders that judgment is too often

fallacious and a cholecystectomy is done with no definite pathology to warrant it. The removal of such gall bladders may not and in all probability does not harm the patient except for the fact that in many instances the patient will continue to complain of the same symptoms as before operation. A careful history and physical examination and laboratory study before operation will show atypical symptoms and signs, and, finally, a careful and intelligent search for lesions in the course of an exploratory operation, if conservative therapy has failed to relieve the trouble, will find obvious pathology that will be overlooked if attention is limited to the gall bladder.

The criteria for cholecystectomy must be and can only be determined by a careful comparison of pre-operative data with post-operative data. Such an analysis can best be done by a trained individual who personally and carefully studies the cases before operation, operates upon them himself, studies the live pathology as well as the specimens removed and who actually questions and examines the patients after operation for periods of months and years. I believe collected statistics and letter follow-ups are better than none, but I am convinced that they do not compare in value as data, upon which to base sound conservative judgment, to the information obtained in the above described manner.

It is for this reason that I have selected a group of patients, small though it is, that I have studied personally, many of them with the medical men in our combined consultation clinic, that I have operated upon and whom I have seen by actual follow-up visits for periods of one to ten years. I have taken my cases of cholecystectomy, where the subacute or chronic disease was limited to the gall bladder. That is, of 335 operated cases of biliary tract and pancreatic disease, I have found 227 such consecutive cholecystectomies.

Of these 227 cases, 217, or 96 per cent., were seen in the follow-up clinic or in my office for periods ranging from one year to ten years. Nine were lost to follow-up, that is, 4 per cent. One patient died in the hospital following the operation. That is, the operative mortality was 0.4 per cent.

I have divided these 227 cases into two main groups: those showing stones, those without. There were 170 gall bladders

with stone or stones, 47 without. Of the 170 calculous cases, 152, or 89.4 per cent., were relieved entirely of pain—acute or chronic, and of their interval digestive disturbances. That is, they were relieved of all the symptoms referable to their biliary tract of which they complained before operation and were legitimately considered to be what we call an optimum symptomatic 4. There were 18 cases that had less than a 4, that is, 10.6 per cent. were not entirely relieved. Three were total failures, 1.8 per cent. They had all the symptoms complained of before operation. The majority of the 18 were classed as 2 or 3 symptomatic, their chief trouble being bloating and belching.

There were 47 non-calculous cases. Of these 76.6 per cent. showed a symptomatic 4 on their last follow-up visit; 23.4 per cent. were not entirely relieved. Of these 11 unsuccessful cases, 4 were complete symptomatic failures and were recorded as symptomatic 0.

In analyzing our unsuccessful results in the two groups, a study of the histories, the associated conditions and the lesions explains some of the failure to relieve symptoms. In the calculous group of 18 there were three diabetics, two severe psychoses, one tuberculous case who later developed Addison's disease, one came to the hospital six months after cholecystectomy with suppurative cholangitis and died following choledochostomy. In the non-calculous group of 11, one developed severe jaundice and asthenia three months after operation and lived two years, dying of gastric hemorrhage. The others had recurring belching and bloating and epigastric distress, showed anxiety neurosis or no definite cause for their recurrent symptoms.

It is very evident in studying these two groups of cholecystectomies that the calculous cases give far better results. It seems to me that there are two very good reasons for this. First, the patients have more striking symptoms, usually severe gall-stone colic. Their sense of relief far outweighs any minor complaint such as belching. Many of the symptomatic "3" cases acknowledged this symptom only after definite questioning. The second reason is the fact that gall stones establish tangible pathology and connote preexisting inflammation in the majority of cases.

To my mind calculous cholecystitis offers in the great majority of cases such a definite, clear cut history and easy diagnosis, such

brilliant results following cholecystectomy, such a low risk if operated upon before the disease passes beyond the cystic duct and such dire results when common duct and pancreatic involvement makes surgery urgent, that any other therapy than surgical removal in the interval is bad therapy. I am particularly opposed to the advice so frequently quoted by these patients, "The doctor said he would dissolve the gall stones with medicine and that an operation is not necessary." I have yet to have demonstrated to me this sovereign solvent.

The non-calculous cholecystitis cases offer a far different problem. First, the establishing of a diagnosis. Secondly, determining the pathology on the operating table. Thirdly, when to leave the gall bladder intact. With regard to the diagnosis: These patients do not give clear-cut typical gall-stone colic histories. They are more frequently the ptotic, nulliparous women or the spare, narrow-chested men. They are easily confused with the ulcer group. Their chief complaint is epigastric distress of one sort or another without definite time relation to food intake. It is in these cases that careful gastro-intestinal barium fluoroscopic and X-ray studies are of real help in ruling out gastro-intestinal disease. The newer method of cholecystography is of distinct value in this group. And I should like to emphasize my feeling that it is in this group only that the test is of any real importance. There is a tendency to consider it as essential in the diagnosis of gall-stone disease. A failure of the dye to concentrate in the gall bladder by the intravenous method is in these non-calculous cases of very real value. Concentration and emptying of the dye does not by any means rule out the presence of gall stones. The determining of pathology in a non-calculous gall bladder is not at all easy in many cases. The first essential is to make sure there are no stones which are easily overlooked in a tense apparently innocuous appearing and feeling gall bladder. If the gall bladder does not easily empty on gentle steady pressure, aspirate the bile. It is remarkable how many stones will be palpable after this procedure, in some of these gall bladders. If the gall bladder easily empties but is definitely thickened, not pliable and shows glands enlarged at the cystic duct and along the common duct, the gall bladder is better out, especially if there is induration over head of the pancreas.

When to leave in the gall bladder: If it is not clearly and definitely diseased, as discussed, *i.e.*, thin walled with no stones, easily collapsible.

Drain the gall bladder: 1. If there is severe acute inflammation with edema of the ducts and gastrohepatic omentum and pancreas.

2. If there is edema and lymphangitis of the entire pancreas.

3. If there is a question of carcinoma of the common duct below the cystic duct or of the pancreas, do a cholecystduodenostomy or a cholecystgastrostomy.

In closing, I should like to say that I believe it is poor surgery to remove a gall bladder without pathology simply because it is in the field of operation. Such a cholecystectomy will not relieve the symptoms for which the patient was explored.

Summary of Papers Delivered Before the Academy at the Stated Meeting of April 1, 1926

THE TREATMENT OF CHRONIC GALL BLADDER DISEASE

ALBERT F. R. ANDRESEN

1. Chronic cholecystitis is due to focal infection—removal of all infective foci is therefore the first requisite in treatment.
2. The diseased gall-bladder, with thickened wall, cannot empty itself efficiently. Reflex irritation and gastro-duodenal disease produce anorexia. Food in the duodenum is the stimulant to gall-bladder emptying. Insufficient food therefore increases biliary stasis. Frequent feedings produce efficient biliary drainage and are necessary in treatment of chronic cholecystitis.
3. Surgical treatment is necessary in complicated cases—many cases of stones, adhesions and deformities. Ten per cent. of cases may require operation.
4. Thorough and prolonged post-operative treatment is necessary to prevent the complications due to biliary stasis.