

RICKETTS (E) *Edwin Ricketts*

CHOLECYSTOTOMY.

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CHOLECYSTOTOMY is an operation for a diseased condition. I wish to report the following case :

Mrs. S., a German, aged thirty-four years, married for five years, no children; consulted me in June, 1892. She said that her trouble made its appearance about eighteen months previous, when she suffered from jaundice, tenderness over the region of the liver, loss of flesh, and had clay-colored stools; she then weighed one hundred and eighty pounds; the attacks of pain in the region of the liver were not severe in character, nor was jaundice marked; however, she did have attacks of vomiting.

Her physician made a diagnosis of gall-stones, put her on a restricted diet, and gave her phosphate of soda internally.

There was, for awhile, temporary relief, but never in the whole eighteen months did the patient cease to lose flesh, and when I saw her for the first time she had lost thirty-five pounds in weight. Upon examination there was tenderness over the liver, but no marked distention; upon deep pressure over the region of the gall-bladder through the very thick abdominal wall, no distention of that organ could be felt, but pain was more severe at this point than over the liver proper; I advised an exploratory incision to be made over the gall-bladder as an aid to diagnosis; the same was done, and on exposing the gall-bladder it was found to be very tightly distended and filled with fluid; no nodules of the anterior or posterior surface of the liver could be detected.

Upon placing my index-finger against the duct it could be easily mapped out, owing to its distended condition, and a stone was felt down in the common duct.



Massage was resorted to, hoping that in this way we might be able to force the contents of the gall-bladder through into the duodenum, as I had done in two previous cases. Here, however, I was unsuccessful, wholly so, in fact; and then I resorted to packing the surrounding field of operation with flat sponges wrung out of hot water; after this was done as well and carefully as possible I proceeded to puncture the gall-bladder with a small scalpel; immediately a considerable quantity of clear fluid spurted out, in which there was no trace of bile apparently; the force of the fluid demonstrated the great distention present.

After thoroughly sponging away the fluid I introduced one end of my ten-inch silver coin olive-pointed probe down into the common duct with little difficulty, and succeeded in striking the stone at once; I now carried my left index-finger into the abdominal cavity, placed the palmar surface of it against the common duct at the point through which the stone could be felt; by this I was able to employ bi-manual pressure, and could thus help matters very materially.

After passing the probe at some distance beyond the stone, keeping alongside of the duct wall, I withdrew it (the stone, weighing twenty-three grains) with a pair of Tait alligator forceps, which are ten inches in length; I hoped thus to be able to dislodge the stone, and was finally successful.

Fearing that I might have a stone to contend with in the hepatic duct, and that it might fall into the common duct after the completion of the operation, I passed the probe, already curved, as far into the duct as possible, and satisfied myself that the hepatic duct was free; after this the straightened probe was passed into the common duct to the duodenum, and I was then satisfied that the biliary ducts were all free.

I now stitched the edges of the incised gall-bladder to the edges of the incised peritoneum; transverse stitches of silkworm-gut were put in through all parts, and a long glass drainage-tube of the Price pattern was inserted, the perforated end of which was pushed low down into the common duct, and the wound was stitched up; through this glass tube warm water was forced by means of a syringe; this was done while the patient was turned on her side. Some débris was washed out at the end of the second day; the bowels were moved by means of saline cathartics. Bile began to make its appearance on the

third day, and the tube was removed; the patient made a satisfactory recovery, with the exception of a stitch abscess of the thick abdominal wall; this was treated with injections of peroxide of hydrogen at frequent intervals. The patient has regained her former health and flesh, and attends to her household duties.

I reported this case for the reason that there was no history of marked jaundice or of severe attacks of pain (hepatic colic), so usual in these cases. The main symptoms that prompted me to resort to an exploratory incision as an aid to diagnosis were:

1. The presence of clay-colored stools.
2. Loss of considerable flesh.
3. Tenderness over the liver, most marked over the region of the gall-bladder.

As I said in the beginning, cholecystotomy is an operation for a diseased condition, and I fully agree with Dr. Hal C. Wyman, who, in a recent paper before the Mississippi Valley Medical Association, took the ground that this operation promises much in the relief of certain engorged conditions of the liver by affording free drainage. We cannot compare the experimental work upon the bile-ducts of the lower animals with the operations upon the diseased gall-bladder in the human being.

The advantages of cholecystotomy over cholecystectomy, or any operations upon the gall-bladder, are to me apparent; I mean over those operations where the gall-bladder is lifted up and dropped back into the abdominal cavity; much debris can be drained from the bladder after the finished operation by syringing through the drainage-tube, and even some stones can be removed through this tube that may have been overlooked and finally have dropped down from the hepatic duct. Or, if the stone is too large for this, the tube can be withdrawn carefully, and then the stone be removed whole or after it has been crushed with forceps. As to the positive relationship of gall-stones to cancer of the liver, beginning in the bile-ducts,

I am quite satisfied that such is true ; in two cases which I opened the abdomen for obstructed gall-duct I found in one case a large stone, in the other five ; cancer was present in both of these. As cancer of the liver usually runs its course within two years, I am satisfied that the presence of the stones antedated the cancerous conditions ; I do not mean to say that all cases of gall-stones must necessarily have cancer to follow ; but undoubtedly in many cases, especially in those above fifty years of age, the presence of gall-stones in the common duct undoubtedly plays an important rôle in the excitation of cancer.

#### DISCUSSION.

DR. JOSEPH EASTMAN, of Indianapolis.—I have been interested in the paper of Dr. Ricketts. I have opened the abdominal cavity for gall-stones nineteen times ; I have sixteen of the specimens with me (here the speaker showed specimens of sixteen cases). The other stones were impacted, and so crushed in their removal that they were hardly worth preserving.

There are one or two points in connection with the surgery of the gall-bladder that I feel constrained to call attention to. I differ with much of the teaching of to-day. I see it constantly reported that surgeons find stones in the common duct. I taught anatomy for seven years, and, I might say, in my anatomical demonstrations I believe I learned to determine where the common, cystic or hepatic duct was, fairly well. I have opened the abdomen 400 times, and why it is I have never found gall-stones in the common duct I cannot say. I have found patients with clay-colored stools, and after removing stones from cystic duct the stools contained gall. I have found that compression of the common duct was due to distention by the pressure from accumulations of gall-stones in the gall-bladder and in the cystic duct. I am not saying that Dr. Ricketts was mistaken in his case. I am ready to concede that in his case there was a stone in the common duct ; but I am at a loss to know why he and others should find something that I have been unable to find.

Within the last few years the operation of cholecystotomy has been made so often that it is quite probable, in my mind, that

much of the literature we have on the subject had better be rewritten, as it has been written from books that were gotten up by the theorist of the closet, or from the book-worm of the library. In other departments of abdominal surgery text-books will have to be rewritten. With reference to detaching stones from the cystic or common duct, it has been suggested, in an article in the *Virginia Medical Monthly*, to cut open the duct to remove the stone. With what little experience I have had, I should say that that is not good practice. I believe it is better to introduce a drainage-tube in the gall-bladder, with the hope of the stone becoming disengaged, and either absorbed or discharged in some way, than to open the duct. I doubt the possibility of a suture that would close the duct nicely, without impairing its function, so that there would be a discharge of gall in the bottom of the cavity. When gall has been in the gall-sac for a considerable length of time, and there has been more or less peritoneal inflammation or cholecystitis, as we find in many of these cases, I doubt whether that gall would be as harmless in the peritoneal cavity as pure gall. I have on two occasions (both patients recovering) crushed a stone in the cystic duct as large as the end of my finger. I have been able to crush with forceps by slipping a piece of rubber tube as large as my finger on the point of forceps. I have on several occasions found fragments of stone that were washed out of the tube in gall-bladder.

When the patient strains, vomits, or retches, there is force enough to send it out through the drainage-tube. A drainage tube inserted into the gall-bladder will relieve a great many chronic conditions of the liver. I have found gall-stones in connection with cancerous diseases of the liver, and have been teaching that obstructed gall-ducts stand in a causative relation to that disease.

DR. ARCH. DIXON, of Henderson, Ky.—I have seen cases of impaction of the common duct with gall-stones. A number of years ago a man fell from an elevator in our town and ruptured the gall-bladder. I did a cholecystectomy on him, and the case was reported in the *Annals of Surgery*. The man did well for a time, but subsequently died of a choleric diarrhœa. Autopsy revealed an impacted gall-stone in the common duct, which precluded the possibility of the passage of bile into the intestines.

DR. J. McFADDEN GASTON, of Atlanta.—I have not had an

extensive experience in connection with operations of the gall-bladder for a diseased condition, but I have investigated the subject very thoroughly, and I will endeavor to enlighten my brethren on obstructions of the gall-bladder by stating that the common duct is not only obstructed in some cases by gall-stones, but that gall-stones have been extracted a number of times from the common duct by incision. Two of these operations have been done in this country, one by Dr. Marcy, and the other by Dr. Vander Veer. There is no question about the matter of gall-stones forming in the common duct and obstructing it.

In regard to catheterization of these ducts from the gall-bladder, through the cystic duct and into the common duct, I will say that if Dr. Ricketts has succeeded in doing what he describes, he has done what has never been done before. If he has passed a forceps from the gall-bladder through the cystic duct into the common duct, and extracted a stone from the lower part of that duct, he is entitled to priority in that line of operation. It has not been done in the history of gall-bladder surgery prior to this time. Catheterization of these ducts is regarded as one of the most difficult things in connection with gall-bladder surgery. The passage of a curved sound from the gall-bladder through the cystic duct into the common duct, which we know is almost an acute angle, is attended with a great deal of difficulty. Dr. Ricketts' statement, that he has succeeded in passing a glass drainage-tube from the gall-bladder through the cystic duct into the common duct, is remarkable. I do not intend to throw any discredit upon what he has said, but there must have been some remarkable anatomical or pathological condition for him to have been able to accomplish this result. The practicability of catheterization of the common duct through the cystic duct is one of the problems to be solved.

The operation of cholecystotomy is one that has been very frequently performed. We are aware that this is Mr. Tait's famous mode of relieving all obstructions connected with the gall-bladder. He claims to have secured very remarkable results, and no doubt has, where the common duct was obstructed, by removal of the gall-stones. Dr. Ricketts tells me that the gall-stone in his case was removed without crushing. Obstruction in the common duct is the great difficulty which Mr. Tait's operation cannot relieve. The simple attachment of the gall-bladder to the



external parietes is not likely to relieve a stone where you have agglutination of the walls of the common duct. I had the misfortune to operate on a case of this kind where the agglutination of the common duct was such that no relief was given. Bile poured out freely through the opening in the external wall. Another case of a similar character, under my observation, had the same termination. The obstruction continued, and the only relief given in these cases is to bring about direct communication of the gall-bladder with the intestinal canal, either with the duodenum or small intestine.

DR. W. E. B. DAVIS, of Birmingham, Ala.—I regard the case reported by Dr. Ricketts as an extraordinary one. I cannot see how it is possible to introduce a tube as Dr. Ricketts has done, unless there are very marked pathological changes. The obstruction must have existed for a long time in order to produce such an extreme dilatation of the duct.

As to the treatment of these cases, I think the crushing of these stones through the duct with a forceps is a risky procedure. In doing this you cause such injury to the duct that you are liable to have sloughing afterward, and escape of the contents of the duct into the abdominal cavity. The method of puncturing with needles is also a risky procedure. Unless the stone can be dislodged either into the intestine or back into the gall-bladder, to my mind it is much wiser to incise the duct and remove the stone. Of course, all operations for stones in the common or hepatic duct are serious. The patient is suffering from cholæmia, and is in an unfavorable condition for an operation. These operations do not compare with those for stone in the gall-bladder. They are operations of much greater mortality. Returning to the operation, it seems to me that the better plan would be to incise the duct, and clean it out thoroughly, and if you cannot stitch it satisfactorily, to pack around it with iodoform gauze.

I have conducted some experiments to test the value of gauze in draining bile from the gall-bladder and ducts. I have removed the gall-bladder without tying the duct, by packing with iodoform gauze, which was removed on the third day; the animal got well without serious trouble. I have also incised the gall-bladder, packed gauze around the opening, no stitches being used, and the animal did well. Similar experiments have been conducted by others, and from them we learn that if an animal

can get well by packing with gauze, without any stitches, it is safe to rely upon the gauze in opening the duct and removing the obstruction. A glass tube might be used with the gauze.

DR. EASTMAN.—In one case I crushed the stone with my fingers; in another, with forceps, and recovery was everything that could be asked for.

DR. RICKETTS.—I said in the beginning of my remarks that cholecystotomy was an operation for a diseased condition, and experiments upon dogs that have healthy gall-bladders, healthy common ducts, I do not think should be taken into consideration with an operation of this kind upon the human being. In the removal of small cystic ovaries, are they to be compared with an ovarian tumor weighing fifteen or twenty pounds? An ovarian tumor weighing fifteen or twenty pounds goes on to greater distention than a cyst containing three or four ounces. That is just the condition found in the cases under consideration. When the ducts are distended they are put upon a stretch, and when you come to make a comparison of healthy common ducts with distended ducts, you fall short. We are operating for a diseased condition.

As to inability to force stones through the common duct, I will say in one case, in which I removed twenty-eight stones, I found the same in the common duct. I forced six smaller stones down through the common duct into the duodenum, and got them afterward in the stools.

As to the method of crushing stones in the cystic or common duct, I have never resorted to it, for the reason I have been able to remove the obstruction without it.

I selected the case I have reported for the reason that it was unique. Symptoms of hepatic colic were not present; there was no marked condition of jaundice. For a long time, however, there were clay- or putty-colored stools, and with it a loss of flesh.



