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AFFECTIONS OF THE GALL-BLADDER,

TENDING TO RESULT IN CUTANEOUS BILIARY FISTULA.

BY

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AFFECTIONS OF THE GALL-BLADDER,

TENDING TO RESULT IN CUTANEOUS BILIARY FISTULA.

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External biliary fistula is a rare complication, and many physicians in a life-long practice have failed to meet with a single case. Medical literature records but few cases even as a contribution from the many. Neale's Digest of the chief English medical journals for a period of thirty years refers to less than one dozen cases, and a moderately careful search through a large number of files of our own journals has convinced me of their rarity. The fact, however, that such cases do occasionally occur, and that the earlier symptoms are often obscure and calculated to deceive the practitioner, should prompt us to collect all the information we can concerning them.

During the past few months it has been my good fortune to observe a patient who suffered from a distended gall-bladder which eventually terminated in an abscess in the right inguinal region and the evacuation of a number of biliary calculi. This case led me to look up the literature of the subject, and hoping that the result of my studies might prove of interest and profit to others, I submit for consideration the facts I have been able to gather from personal experience as well as observations gleaned from others.

CASE 1—Mrs. H., aged fifty-three years. During the months of April and May, 1878, she had several "bilious attacks," alternating diarrhea and constipation. About the first of June

following she noticed a considerable enlargement over the right side on a line and to the right of the umbilicus. It was painful and necessitated a loosening of her clothing around her body. About the first of August I saw her with my partner, Dr. Winton. She thought the tumor had gradually descended in the abdominal cavity. We found the greatest prominence on a line with the spinous process of the ilium and midway between that point and the median line. It had a rather hard and doughy feeling and showed but little tenderness on pressure. It was about half the size of a fetal head, and its borders were well defined. The skin above it was unchanged in color. The liver was tender on pressure and its lower border extended about two and a half centimeters below the ribs. She had a "sallow" color; was weak and walked about with much difficulty on account of pain in the tumor occasioned by motion, and leaned forward to relax the abdominal wall. We regarded it as an ovarian tumor.

No farther examination was made until the fourteenth of October. She had constantly suffered more or less pain. The tumor had decreased some in size and also descended yet lower in the abdominal cavity—into the right inguinal region. The skin was a reddish brown and studded with little nodules. The tumor was pointing and indicative of approaching suppuration. I directed poultices.

October 16—I called again, expecting to incise an abscess. The tumor was still quite hard to the touch, except for a depth of six millimeters, whence a thin, yellowish-colored fluid was oozing from two or three sinuses, but no indications of pus. The skin was purple. I now suspected malignant disease, and concluded to await further developments, rather than make an incision. Zinc ointment dressings were applied.

November first—Was called in great haste, and was accompanied by Dr. Winton. Two hard bodies had just been expelled from the tumor, and occasioned the alarm. They proved to be gall-stones, and so explained the mystery. With a silver probe and dressing forceps I removed twelve more from the bottom of the abscess, the sizes varying from seven cen-

tigrams to eight and a half decigrams, and marked by facets. The opening was a ragged slit situated in the right inguinal region. No pus escaped, simply a brownish-yellow colored fluid. The relief was at once marked, and she rapidly gained in strength. On the twentieth of November two more calculi passed, making sixteen in all. The fistula healed in March last. Her health is now better than usual.

Case 2—A woman, aged forty-two, began in November, 1874, to feel a severe pain in the right side. On examination there was found a somewhat diffused tumor about the size of a child's head, which extended from the umbilicus to the spinous process of the ilium. Fever being also a symptom, the case was diagnosed one of suppurative ovaritis. In December, it was determined to open the tumor, and for this purpose the Vienna paste was applied. The skin was destroyed in three days and the aponeuroses in seven, and from the exploratory puncture then made a little fluid escaped, but the needle came in contact with numerous hard bodies which on removal proved to be gall-stones. Forty of these were then taken out. A very large one was then found almost encapsulated; it was broken down and then extracted without much difficulty, when some bile was also discharged. This biliary fistula soon closed, and in March, 1875, the patient had entirely recovered.*[1]

Case 3—M. P., male, aged sixty-nine years. Had been subject at times to severe pain in the region of the liver for years, and in the latter part of the year 1869 an abscess formed in the right hypochondrium. An opening was made without waiting for a thinning of the integuments. There was an immediate discharge of pus, yellow bile, and small black specks, which were easily rubbed up and became of a bright yellow color. He was somewhat relieved, and continued to improve with the discharge of similar matter, with now and then a clogging up of the aperture, till in about a month gall stones of various sizes up to that of a cranberry began to issue, and continued with volcanic irregularity of rest and activity, till December

* This and the following cases are abridged from the authorities named.

(1) Gazette des Hop. Clinic, vol. ix, p. 120.

28, 1873. He is now robust and able to attend to his business, in better health than for many years.[1]

Case 4—A female between the age of fifty and sixty years, presented a biliary calculus to Dr. Dalton, and gave the following history: An abscess first showed itself just at the right of the umbilicus, and shortly opened spontaneously. Five months afterward the first gall-stone was discharged. The fistula then remained open for six years, at the end of which time a second gall-stone came away, and after that the sinus readily healed. It was this second calculus which was presented for examination. It consisted almost entirely of cholesterine, with a very small amount of coloring matter and salts. When whole it was about the size of a large walnut and weighed eight grams, six and a half decigrams.[2]

Case 5—Mr. Peter Marshall exhibited a patient aged forty-six years, who had had abdominal pain with occasional jaundice ever since he was seventeen years old. Fourteen years ago a large abscess occurred in the right lumbar region which discharged blood and afterwards thin watery fluid. After nine years the abscess healed, but a short time afterward three small abscesses were observed in the groin, from the lowermost of which was obtained a biliary calculus, weighing one gram, six decigrams. Dr. Thudichum thought that in this case the cystic duct had been obliterated long before the abscess formed and that the man had no gall-bladder now.[3]

Case 6—Mrs. W., aged forty-one years. In January, 1865, the skin about the naval began hardening and swelling. After lasting about three months, increasing in size, but with little or no discomfort, it burst at the umbilicus, and some glairy fluid with a small quantity of pus escaped, followed by small concretions consisting of cholesterine, and continued to pass small gall-stones for two months—the largest the size of a pea, and afterward passed one weighing one decagram, seven and a half grams. There was no jaundice in this case.[4]

(1) Daniel Perly, M. D., Boston Medical and Surgical Journal, June 22, 1876.
(2) J. C. Dalton, jr., M. D., American Journal Medical Science, vol. xx, p. 48.
(3) Proceedings Medical Society of London—Lancet, December 12, 1868.
(4) Dr. Westfield, Lancet, January 29, 1870.

Case 7—Dr. Anderson reports a case of abscess in a female encircling the umbilicus, discharging unhealthy pus. She was ordered a poultice to the umbilicus and tonics internally. About a week after she called on me and produced two large white gall-stones which had just been discharged from the abscess. Three months she suffered from severe pain in right side, attended with violent sickness. The supposition is, that these stones, somewhat larger than usual, in endeavoring to pass the duct into the intestine, became lodged, set up inflammation, perforation resulted, adhesions formed between the duct and abdominal walls and hence the abscess and gravitation to the umbilicus.[1]

In the "Lancet," August 21, 1865, reference is made to the above case and a similar one reported, in which a cholesterine calculus was discharged from the umbilicus of a young lady. The weight of the stone being two decagrams, five and a third grams. It is supposed that the calculus had been three years in making its way to the surface.

Case 8—M. Bronson, of Nimes, describes the following case: A female patient was suffering from a painful, ill-defined tumor, situated in the right flank, between the spine of the ilium and umbilicus. The tumor was taken to be a suppurating ovary and was opened with the caustic Vienna paste. The tumor was found to be due to an accumulation of biliary calculi, of which no less than forty were removed. In three months the patient had recovered.[2]

Case 9—L. M., aged sixty one years, spinster. Florid complexion. Tolerably healthy, although since the age of twenty-five, has had repeated attacks of liver complaint, presenting symptoms of the passage of gall-stones. Dr. Welch, a partner of Dr. Watmaugh, saw the patient in April, 1865. He found a tumor larger than an orange in the right hypochondrium. It was extremely hard, circumscribed and movable. The acute symptoms were relieved, but the tumor increased slowly in size until by the middle of July it had occupied part of the right

(1) Lancet, August 14, 1875.
(2) Journal de Medecine, August, 1875, and Medical Record, vol. ix, p. 632.

lumbar and hypochondriac regions. The center of the tumor was on a line with, and twelve and a half centimeters from the umbilicus. She experienced no pain, and presented no symptoms of the formation of pus, although considerable emaciation and loss of strength. The diagnosis was doubtful, but the prevailing opinion was, that it was malignant, although there was no history of cancer in her family, but she continued to lose flesh and strength, which seemed to confirm such a diagnosis. On the fourth of January, a blister was applied over the center of the tumor, which was now found to be firmly adherent to the abdominal wall. The blister gave exit to a large quantity of pus and blood, which caused a diminution in the size of the tumor. The discharge was finally stopped by a hard substance in the orifice, which the patient picked out with a hair pin, and this was followed by twelve smaller ones of the same character. This led to a more copious discharge of pus and blood, with a farther decrease of the tumor. From this time she improved rapidly. A discharge of pus continued until the first week in September, when it was again arrested by one of these calculi. It was extracted and twenty more escaped, and about the middle of November again twenty more exactly like the former ones. A slight discharge of pus continued to annoy her for some time, but gradually she became perfectly restored and resumed her household duties. The stones were of a fawn color and composed of carbonate of lime and biliary pigment. They ranged in size from a pea to a hazel-nut, with well marked facets on each.[1]

Case 10—R. K., aged sixty-four years, was admitted into the Liverpool workhouse hospital, August 4, 1875. He had been a healthy man up to the beginning of the year, when he felt a "coldness" in the right hypochondriac region—a feeling that was at first more unpleasant than painful, and not confined to any particular spot. A month after, a pain began, which gradually increased in severity and was soon followed by a "swelling" at the junction of the last two or three ribs with the sternum on the right side. This swelling rapidly increased in

(1) Dr. Watmaugh, Medical Times and Gazette, vol. ii, 1865, p. 628.

size, and extended to the right and left, forming a hard, painful ridge across the upper part of the epigastric region. In June, last, an opening formed a little to the right of the tip of the ensiform cartilage, whence to his great relief, a whitish fetid matter was discharged. A few days after, a persistent and troublesome pyrosis commenced—the fluid regurgitated being hot, glairy and sometimes semi-flocculent.

When admitted, the patient was very much emaciated and debilitated, with yellowish cachetic appearance, but no jaundice; appetite good. There was a ragged opening at the ensiform cartilage, with a ridge to the left and right, as above described. The discharge from the abscess is variable in quantity and character, being sometimes thick, at other times thin and watery. Considerable pyrosis.

There was no change in his state until August twenty-first, when a gall-stone, two centimeters by a half centimeter, and oval in shape, was found jammed in the opening; after its removal, small quantities of food were seen to return by the opening for the first two days; on the third day all his food was so returned immediately after swallowing, and so continued until his death, on the sixth day of October.

At the autopsy, the stomach was found dilated to twice its natural size; the cardiac region healthy; the pyloric region, for five centimeters above the pylorus, presented several excavated ulcers. The pyloric ring was firm and prominent; its mucous membrane ulcerated. The first part of the duodenum was much dilated, its right extremity adherent to the liver, completely concealing the site of the gall-bladder, its mucous membrane ulcerated and thickened, and its cavity full of a mixture of pus and food. At the place where the duodenum had become applied to the liver an opening existed, whence the finger could be passed from the duodenum into a large irregular cavity bounded by indurated hepatic substance and extending at one point to the upper surface of the liver, whence a fistula ran to the left, between the upper surface of the liver and the abdominal wall to reach the external opening. No trace of the gall-bladder could be found. The hepatic as well as the com-

mon bile duct were normal, and a small portion of the cystic duct still pervious, extended to where the liver and duodenum adhered to each other.[1]

Case 11—H. E., a widow, aged fifty-nine years. Has been subject to occasional attacks of pain in the right side. After an attack of unusual severity, there remained great tenderness and swelling at her right side. Over this the skin became red and inflamed and in less than a week after it burst, and a quantity of green matter escaped with about fourteen calculi, apparently composed of cholesterine with striæ of pigment matter and of angular shape. In the subsequent poultices three more calculi escaped. The redness of the skin and tenderness now rapidly abated, leaving an opening the size of a crow's quill, situate about five centimeters in a slightly oblique line below the umbilicus. From the orifice was a constant oozing of nearly colorless mucus, which was somewhat increased upon pressure from above. A probe introduced readily passed obliquely upward for nearly six centimeters, when it came in contact with a solid body. After several ineffectual attempts to extract it with the dilating forceps, I was compelled to slit up the sinus as far as the stone and readily removed it.

At the end of two or three weeks a second calculus was removed in the same manner. At the present time the fistula has again relapsed into its former indolent state, discharging nearly colorless mucus. There can be no doubt that the sinus will again open from time to time, as many calculi are still in the bladder.

Considering the difficulty of determining the amount of adhesion existing in such cases, we must be extremely careful to use only the gentlest means in endeavoring to extract a calculus when high in the fistulous canal, whatever the amount of irritation present. In a similar case under the care of M. Robert, at the Hotel Dieu, the attempt of extraction brought about disturbance of the adhesions and fatal peritonitis. In the case of H. E., the fluid obtained by pressure from the parts exhibited, under the microscope, numerous mucous or pus cor-

(1) Drs. Alexander and Irwine, Medical Times and Gazette, vol. ii, 1876, p. 202.

puscles, but no bile cells or cylinder epithelium; and on using the ordinary test of nitric acid, no evidence of bile existed, or at least biliverdin—corroborative evidence of the entire closure of the cystic duct.[1]

Analyzing the foregoing eleven cases the following conclusions are reached:

As regards the *sex*, eight were females, and three males; a ratio of nearly three to one.

The *age* of the youngest patient is forty-one, and the oldest sixty-nine; showing that the class of affections we are considering is generally confined to middle or advanced life.

From a study of the first symptoms of the cases it will be noticed that the usual ones were pain in the right side, hard and ill-defined tumor in right hypochondriac or iliac regions, and in some cases the pain so trifling that the formation of an abscess in the abdominal wall was the first prominent departure from health to prompt the patient to seek medical counsel. A mistake in the early diagnosis of the cases was quite common: for instance, ovarion tumor, suppurative ovaritis and malignant disease.

The time that elapsed from the first discovery of the tumor until an external discharge occurred, is not stated in all the cases. In one it is stated "shortly;" in one, two months; two, at three months; one at five months, and one at nine months.

In six of the cases a spontaneous ulceration and discharge of the contents of the gall-bladder took place; in one case a blister was used to hasten suppuration; in one Vienna paste, and in another Vienna paste and the knife combined, were used to render assistance.

The duration of time from the opening of the abscess to recovery is not always stated. In two cases it was two months; in three it was three months; in one a discharge occurred at intervals for four years; in case four, the discharge did not cease for six years, when the expulsion of the second calculus had occurred, and in case five, a discharge of fluid continued for fourteen years.

(1) J. Cockle, M. D., Medical Times and Gazette, vol. i, 1862, p. 477.

The usual site of the external opening of the abscess was near the umbilicus, and in the right groin. The number of calculi discharged varied from one to fifty-two.

All but one recovered or reached a comparative degree of comfort. In the fatal case—number ten—death was caused by complications producing ulceration and adhesions of the pyloric orifice and duodenum.

Pathological Changes—Obstruction of the cystic duct, when long continued, leads to its obliteration and resulting disuse of the gall-bladder. In the course of time the nutrition of the gall-bladder becomes affected, and prone to inflammation and ulceration, with a tendency to expel its contents through some of the surrounding tissues. In other cases it remains indefinitely hypertrophied and proves a source of constant uneasiness and distress, which may eventually wear out the patient without the intervention of suppuration.

In still another class of cases, the bile is gradually absorbed and replaced by a thin, glairy mucus, which Dr. Bobbs describes as "pellucid and watery," and this appearance of the fluid contents of the gall-bladder will be found in most cases where the obstruction has existed for some length of time. This form of fluid may continue to be secreted by the mucous membrane in more or less abundance, or gradually cease altogether, and the gall-bladder eventually contract and shrivel to a small mass of tissue, or complete obliteration, as in case ten.

It has been known since the days of Haller that no serious inconvenience was caused in cases of congenital absence of the gall-bladder. That organ was recognized as a reservoir for the bile, where it might accumulate until a stimulus applied to the intestinal wall and thence along the ductus communis choledochus should excite the periodical flow. The absence of such a reservoir would cause a more constant flow of bile into the duodenum. Blackman quotes a statement from Baillie's "Morbid Anatomy," 1807, page 251, as follows: "The gall-bladder has also been known to be wanting, from a defect in the original formation. It has never occurred to me to see an

example of this kind of monstrosity, but it may be the more readily believed sometimes to happen, as the gall-bladder does not serve any necessary purpose in the body. There are many cases of animals that are naturally without a gall-bladder.'

Mr. Canton,[1] demonstrator of anatomy, records an interesting case of congenital absence of the gall-bladder in a female patient, aged sixty-five years, who died in St. Martin's workhouse from disease of the brain. The liver was two-thirds its natural size. Another case is recorded (age not stated) where the subject of this rare deficiency enjoyed perfect health, and died in consequence of a fall.[2] There was found to be no trace of a gall-bladder, or of the cystic duct. The yellow tinge commonly observed on the transverse arch of the colon was not present, nor was such color observed in the usual situation of the gall-bladder. The hepatic duct was carefully examined and found to be double the usual size.

At a meeting of the New York Pathological Society, January 25, 1865, Dr. Sands exhibited an anatomical curiosity, in the shape of a liver without a gall-bladder, which was removed from an emaciated, male phthisical dissecting-room subject, aged about twenty years.[3] The liver was very small, and weighed but six and a half hectograms. The hepatic duct was present and of considerable size, as in the case mentioned above, and as is stated to be a rule in such cases.

At the same meeting, Dr. Clark remarked that he had a specimen of what would seem to be almost equivalent to the one just shown, in which the cystic duct was entirely occluded, and the gall-bladder shriveled to little more than a mass of connective tissue. Dr. Gilliam[4] reports a similar case where the gall-bladder was found on post-mortem examination to be wanting—apparently due to former obstruction of the cystic duct. It is stated that the liver was slightly enlarged. In Dr. Clark's case the liver had attained an enormous size. It would be interesting to ascertain if the liver is constantly enlarged in

(1) Lancet, October 16, 1847.
(2) Jour. des Sc. Med., in Phil. Jour. Med. and Phys. Sci., May, 1827, page 143.
(3) New York Medical Journal, vol. i, p. 222.
(4) Clinic, vol. xi, p. 89.

cases where the gall-bladder is destroyed after it has for a time performed its function, as in these two cases. The reverse seems to be true in cases of congenital absence, as shown in Dr. Sand's case, where the liver weighed but six and a half hectograms, and in Dr. Canton's case, where the liver was only two-thirds of its natural size.

A *diagnosis* of enlarged gall-bladder from over-distension by bile and calculi, is quite often a perplexing problem. In some cases a general impairment of the patient's health, and severe local pain, may accompany such a pathological condition. On the contrary, a post-mortem examination has revealed a gall-bladder distended to an extreme degree with bile and gall-stones, and yet the person during life was unconscious of such a condition. This is due to the fact that that organ is not indued with a high degree of sensitiveness, as in the case of vital organs. In my own case (number one) I first mistook the enlarged gall-bladder for an ovarian tumor, and at a later stage I was led to regard it as malignant. In a remarkable case of hypertrophied gall-bladder which fell under the care of the late Prof. J. S. Bobbs, and published in the "Transactions of the Indiana State Medical Society" for 1868, pages 68–73, that eminent surgeon, with a number of other competent medical men of Indianapolis, mistook the nature of an enlarged gall-bladder. It was thought to be an ovarian tumor, as the patient had been informed also by other physicians, but no positive assurances were given, and the mystery was not solved until an exploratory incision was made in the abdominal wall from the umbilicus to the pubes. Two of the cases I have detailed were mistaken for suppurative ovaritis, and another, though doubtful, was thought to be a malignant tumor.

In some cases of enlarged gall-bladder it may be detected by observing its movements as influenced by respiration. The attachment of the liver to the diaphragm causes a certain up and down movement in inspiration and expiration, and the gall-bladder being attached to the liver will, likewise, partake of the same movements. Murchison and Sims lay stress on an intolerable itchiness that accompanies jaundice caused by obstruction of the biliary ducts, as a diagnostic point to distinguish it from

ordinary jaundice. It is proper to state that in the class of cases we are considering, jaundice may be wholly absent, or it may be present to a less or greater degree.

In serious cases, where doubt prevailed, there could be no objection, under antiseptic precautions, to making an incision through the abdominal wall in order to make sure of a correct diagnosis.

The *treatment* of this class of affections consists in expectation, and in operative measures. A large number of such cases tend to spontaneous recovery. In six of the eleven cases I have given, the abscess opened spontaneously, and all recovered but one. There can be no doubt that in all cases where the symptoms present no threatening complications or imminent danger, that the safest plan is to trust the case to nature. In some cases, where the tendency is to recovery, the process may be hastened by using Vienna paste, or, in advanced cases, by resorting to the knife, although it must be well ascertained that adhesions have formed between the gall-bladder and abdominal wall, before any incision is made. Aspiration of the gall-bladder has been recommended and successfully executed, but the results have not been as yet very satisfactory. This may be due to the fact that only the fluid contents are removed, while the solid bodies are left behind. In a case of echinococcus of the liver, complicated with a distended gall-bladder, Dr. Bartholow[1] tapped the latter organ and drew off "one deciliter, seven and a half centiliters of dark green and very thin bile. This operation gave rise to very little distress, and was followed by no symptoms." Sims, in a case which will be referred to again, aspirated the gall-bladder, and removed one liter of a dark brown fluid, which was thought to be bile, until disproved by an analysis. In both cases only temporary relief was gained, and the patients died from the primary disease shortly afterwards.

There remains for consideration yet another operative procedure—cholecystotomy.[2] I am indebted to Dr. Keen[3] for the

(1) Clinic, April 7, 1877, page 158.

(2) A word coined and introduced by Dr. Sims, and derived as follows: χολή, gall; κίστις, bladder; τομή incision.

(3) Am. Jour. of Med. Sci., April, 1879, page 575.

following historical statement concerning Petit, whose name has been so intimately connected with the class of diseases under consideration: "The earliest reference I have found to the operation is in Petit.[1] Though published in 1790, he states that he read his paper in 1733, and it was already published in the 'Mem. de l'Acad. Roy. de Chir.,' for 1743, i, 255. He quotes four cases operated on, generally for a supposed abscess, in one of which he began the operation, but abandoned it. Two of them died; his own case recovered; the fourth recovered with a fistula, through which a calculus was removed at a later period."

Dr. Thudichum,[2] in 1859, suggested the feasibility of making an incision into the abdominal cavity, seizing the gall-bladder and attaching it to the abdominal wall to secure adhesions between their surfaces and then incising and emptying the contents of the gall-bladder. The operation was thought to be a proper one by a number of English medical men. Notwithstanding these suggestions no one seemed disposed to carry the proposition into execution until the year 1878, when Dr. Marion Sims performed the operation.

The patient was a lady aged forty-five years. The last of November, 1877, she began to suffer from pain in right side, and marked jaundice. Soon afterward the gall-bladder was found to be enlarged, and gradually it increased in size until March 17, when it extended thirteen and three-quarter centimeters below the umbilicus. Its transverse diameter was eleven and a quarter centimeters. At this date it was tapped, as already mentioned. Only temporary relief followed this operation and her general health continuing to decline, cholecystotomy was resorted to on the eighteenth of April.

Dr. Sims,[3] after the patient was etherized, made an incision, seven and a half centimeters long, parallel with the linea alba, over the most prominent portion of the tumor, about seven and a half centimeters to the right of the umbilicus. It was begun two and a half centimeters above the level of the umbilicus and extended five centimeters below it. Considerable hemorrhage

(1) Maladies Chirurg., i, 232.
(2) British Medical Journal, November 19, 1859, p. 935.
(3) Abridged from his reprint on cholecystotomy, British Medical Journal, June 8, 1878.

was present and was controlled by torsion of the vessels. No adhesions were discovered. After the hemorrhage was arrested, a trocar was thrust into the tumor and the fourth of a liter of a dark brown fluid withdrawn. The gall-bladder—drawn out—was then incised with scissors, to the extent of five centimeters, and cleaned out with sponge probangs. Two more centiliters of a thicker fluid than the preceding, and sixty gall-stones were removed.

As the gall-bladder was drawn out beyond the edges of the incision, this projecting portion was amputated. Here, Dr. Sims admits a mistake, and says were he called to operate again, he would amputate no portion of the gall-bladder, but simply incise it and attach it by sutures to the edges of the abdominal incision.

She survived the operation eight days and six hours. Death resulted "from passive internal hemorrhage, the result of the poisonous effects of the biliary salts on the blood." It is proper to state that the patient was reduced to an extreme degree of physical prostration before the operation was attempted, so that the chances were reduced to a minimum.

On November 4, 1878, Dr. Keen,[1] of Philadelphia, performed cholecystotomy on a female aged sixty years. In the main the operation was the same as Sims' except that no portion of the gall-bladder was removed. In this case also, the operation held out the last and only chance for life, but was delayed too long for success. The patient survived the operation but thirty-six hours. According to Dr. Keen, the causes of death were three-fold: "First, shock; second, secondary hemorrhage; and third, her generally deteriorated condition, due to persistent vomiting and the far advanced disintegration of the liver."

The cases of Drs. Sims and Keen impress the reader with the extreme vascularity of the tissues of the gall-bladder and the consequent extreme necessity for care in all operative measures involving that organ. A simple puncture with a hypodermic syringe for diagnostic purposes in the case of Dr. Keen, led to a considerable hemorrhage into the gall-bladder.

(3) American Journal Medical Science, January, 1879, p. 1349.

Mr. George Brown[1] read before the British Medical Association, for 1878, a paper entitled "On the Treatment of Dropsy of the Gall-Bladder, by Operation, with notes of a Successful Case." A reprint of this paper has been published in pamphlet form, in which the case is termed one of cholecystotomy. While the case is a remarkable one in many respects, I am not disposed to admit that it deserves such a dignified name. If I read correctly the report of the case, it was rather an exploratory incision *to* the gall-bladder, and not *through* its wall, *i. e.*, simply exposing the organ to view. The night following the operation the contents of the gall-bladder escaped through the abdominal wound, and although the process is not stated, it is reasonable to conclude, by ulceration.

I deem it proper to give a fuller detail of the remarkable and successful case—already referred to—of the late Dr. Bobbs. His patient was a lady aged thirty years. The growth of the gall-bladder had been gradual for about four years. The true nature of the enlargement was in doubt prior to the operation, but the patient insisting upon operative measures, accordingly on the fifteenth of June, 1867, assisted by a number of medical gentlemen, Dr. Bobbs[2] made the operation. An exploratory incision was made through the abdominal wall, extending from the umbilicus to the pubes. This revealed extensive adhesions of the omentum to the adjacent tissues. The incision was then extended two and a half centimeters above the umbilicus and laterly over the most prominent point of the tumor. Tearing through the adhesions with his fingers he reached a sac about thirteen centimeters long and five centimeters in diameter, evidently containing a pellucid fluid. As no pedicle could be discovered, the lower point of the sac was incised, "when a perfectly limpid fluid escaped, propelling, with considerable force, several solid bodies about the size of ordinary rifle bullets." The gall-bladder was thus emptied, the incisions in its walls stitched and the ends cut closely and returned into the abdominal cavity. The external wound was properly closed.

(1) British Med. Jour., Dec. 21, 1878, also Monthly Abstract, March, 1879, p. 129.
(2) Trans. Ind. State Med. Soc., for 1868, p. 68, also Wes. Jour. of Med., vol. 4, p. 217.

Her recovery was rapid, without an untoward symptom. In four weeks she was able to ride out.

It is a pleasing duty to pay this small tribute to the memory of our departed fellow and brother. While several European and American surgeons are discussing the feasibility and priority of the operation of cholecystotomy, with as yet no complete results, but only the promise of success for the future, they are astonished to learn that the operation was successfully performed by a surgeon of Indiana, twelve years ago. And so, when the operation of cholecystotomy shall have been placed on a firm and scientific basis, and recognized and acknowledged by our profession—as it assuredly will—and its literature fully considered, the lustre of no name on its role shall exceed that of Dr. Bobbs.

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