TWO UNUSUAL GALL-BLADDER CASES.

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THE two gall-bladder cases which I have the honour of bringing under your notice to-night occurred within a short time of one another in my practice last year, and present such unusual features that I hope they may prove of interest to the Section.

In my first case the chief interest centres round a foreign body found in the gall-bladder, whose origin and route of access to that organ are matters for speculation.

CASE I.—The patient, a well made man, forty-five years of age, was seen by Dr. Hayes, of Rathkeale, and Dr. Kennedy, of Limerick, both of whom advised surgical treatment, and he subsequently came under my care.

For two years previous to the time I first saw him he suffered from well-marked intermittent attacks of biliary colic, three, at least, of which were of very unusual severity as regards the pain, acute vomiting and tenderness over the gall-bladder being present on each occasion.

He had many minor attacks, and in the intervals between these was subject to severe dyspeptic disturbances, associated with considerable gastric pain.

Another remarkable feature of his case was the occurrence of left-sided hemi-cranial headache in the parietal region, which seems difficult to explain, but which has completely disappeared since the operation.

I kept him under close observation for some three weeks before operating, during which period he had one slight attack of biliary colic.

The abdomen on palpation revealed no distinct evidence of tumour, but deep tenderness could always be elicited over the gall-bladder region, and there was always a sense of increased resistance at this spot.

An exploratory laparotomy was advised and agreed to. An oblique incision was made parallel to the costal margin on the right side, two inches from it, and on entering the abdomen the gall-bladder was nowhere to be seen.

The liver appeared small, and its anterior sharp margin was retracted under cover of the ribs. The stomach was small and contracted, and so firmly bound down by adhesions at the pyloric end as to make it impossible to bring that part out of the wound.

A dense mass of hard, fibrous adhesions, about the size of a fist, had glued together the gall-bladder, the liver, and the stomach.

After considerable difficulty the gall-bladder was partially isolated in the middle of this adhesion mass. It was found to be small, contracted, somewhat nodular to the touch, and in the endeavour to separate it from its bed it became opened. Its internal cavity was small, and about the size of the two top joints of the index finger.

On entering the gall-bladder a stone was immediately encountered, and a few drops of bile-stained fluid escaped. This stone was easily removed.

On introducing my finger a second time, I received a smart prick in the tip of my finger, through the glove, like that of a blunt-pointed pin, and on removing this pricking object I found it to be a small bristle, half an inch long, with a piece of fine thread tightly wound round one end, with a loose end, some two inches long, depending from it; the whole thing being stained with bile.

Another smaller stone was then removed from the cystic duct, and no other stones being felt, either in the gall-bladder or by external palpation of the cystic and common bile ducts, a probe was passed without interruption down to the duodenum.

Following the principles laid down by Moynihan and others it is my usual practice to remove every gall-bladder whose

walls show any sign of structural degeneration, more especially on account of the undoubtedly high incidence of malignant change which has been proved to take place in old, chronically inflamed gall-bladders.

Obviously, this gall-bladder was one which should be removed, and a strenuous effort was made to accomplish this, in spite of its inveterate adhesions, the course of which was checked by the onset of a very smart hæmorrhage from the deepest part of the wound in the liver substance.

This was arrested by pressure, and a further effort was made to detach the remains of the gall-bladder from the stomach wall.

This dissection demonstrated the existence of a very peculiar, annular, thick, fleshy, adhesion between the wall of the stomach and the coats of the gall-bladder about the size of a crown piece, in which the muscular tissue of the stomach was undoubtedly incorporated, and it became apparent, that to remove the gall-bladder completely implied the resection of the stomach wall itself.

On consulting with my colleagues at this point it was agreed that the patient's condition would not justify stomach resection, and we were obliged to rest satisfied with the curetting away of as much as possible of the gall-bladder tissue and mucous membrane, which surface was also treated with a light application of pure carbolic acid.

A rubber drainage tube was inserted down to the bottom of the gall-bladder, and the wound was stitched up in the ordinary way.

During the next four days the patient's condition was very precarious, owing to rapid feeble action of the heart.

There was some fever and purulent discharge from the wound, which, however, rapidly disappeared after the fourth day, after which he made an uninterrupted recovery.

I have since learned from Dr. Hayes that his recovery has been complete and permanent; all pain and gastric symptoms having disappeared, and also the severe, hemi-cranial headache from which he had suffered prior to operation.

Now, for the foreign body. What is it? And how did it get there? I would venture to hazard the opinion that the size and character of this bristle, with its attendant, coiled up thread, indicates the domestic tooth-brush as a possible origin; that this was swallowed with food or at some other time, and while in the pyloric end of the stomach it became engaged in some pocket or ruga in the mucous membrane, there setting up irritation and ulceration, which resulted first in an adhesion to the gall-bladder, followed by perforation of the stomach wall through the adhesion, through the wall of the gall-bladder, and so it entered this organ, where its presence would easily account for the formation of the two gall-stones.

This route, I think, must be considered as at least a possible route, having regard to the severe gastric symptoms noted before operation, suggesting gastric ulcer, and, further, in the facts revealed by operation—namely, this peculiar, dense, annular adhesion between the wall of the stomach and that of the gall-bladder.

I, however, prefaced my remarks to-night by stating that the origin of this foreign body and its mode of access were matters of speculation, and I shall feel very much gratified if members of the Section will suggest alternative routes.

The interest of my first case being largely mechanical, we may describe the interest of the second case as pathological, representing as it does a typhoid carrier walking about unsuspected in our midst, and probably voiding at each evacuation of the bowels an unknown quantity of typhoid bacilli, whose possibilities as agents of infection may be infinite.

CASE II.—This patient, a woman aged fifty, was sent to me as a case of abdominal tumour by my gynæcological

colleague, Dr. Purefoy, while acting for Dr. Hastings Tweedy. She was a soldier's wife, and had for some six years previously been suffering from intermittent abdominal attacks, whose symptoms simulated partial intestinal obstruction, associated with marked chronic constipation.

There was no definite history of typhoid in her case, but she had had numerous attacks of malarial fever while abroad on foreign service, some one of which must have been combined with enteric in all probability, or else the enteric fever passed without notice.

On my first examination, a tumour was felt in the right umbilical region, trending towards the right iliac fossa. It was about the size of a small orange, and felt hard, but was considerably masked by the presence of large quantities of fæcal matter in the intestines.

My preliminary diagnosis was probably a malignant tumour of the ascending colon with fæcal lodgment.

A vigorous course of aperient treatment was carried out for six days, by means of purgatives and enemata, with the result that the tumour became more definite, was now felt at the level of the umbilicus, and could be freely moved in a transverse direction for several inches. It did not move very much with respiration. An exploratory laparotomy was advised, and the patient's consent obtained.

This case illustrates very well some of the varieties of diagnosis which may be arrived at after careful examination, all of which proved subsequently incorrect in the light of the exploratory operation, and it is an additional proof of the value of this method of diagnosis, if such be wanting.

In aseptic hands an exploratory abdominal incision possesses very trifling risk, while the benefits accruing to the patient and her neighbours are very considerable.

When anæsthetised on the operating table, her abdominal muscles were, for the first time, fully relaxed, and under these conditions the tumour felt larger, smoother, and of a consistence resembling that of the kidney. It moved considerably more with respiration, and could be made to disappear entirely under cover of the liver with a characteristic slip, and involuntarily the suggestion of a movable kidney

passed through my mind, and I felt some regret that the posterior lumbar region had not been prepared for operation, with a view to fixation of the kidney. She was, however, prepared for an exploratory abdominal incision, which, I need not say, I have no reason to regret, seeing that it led to the discovery of an entirely unsuspected state of affairs.

The abdomen was opened by a vertical incision through the outer part of the right rectus sheath, above the umbilicus, and our tumour proved to be a very large, smooth, tense, pear-shaped gall-bladder, with a long pendulous stalk continuing into the cystic duct. There were practically no adhesions. The gall-bladder was readily delivered out through the abdominal wound, and the remainder of the operation was conducted extra-peritoneally.

An incision being made through the fundus of the gall-bladder, its walls were found to be more than one quarter inch thick. A large quantity—some 14 or 15 ounces of fluid—escaped. This fluid was milky white, and resembled an emulsion with a somewhat opalescent appearance. It was watery in consistence, and did not appear to contain any mucus, bile, or pus.

A sample was immediately obtained under sterile conditions in a sterile test tube, and sent down to the laboratory for examination by our pathologist, Dr. Crofton, whom I am very pleased to see here to-night, and who has some very interesting remarks to make on the subject of his examination.

Eighteen gall-stones were removed—which I now hand round—and the probe passed freely down to the orifice of the common bile duct.

The walls of the gall-bladder were so tremendously altered by pathological change, I considered it my duty to remove it, and, adopting a tip I learned many years ago from Sir Charles Ball, I made an annular incision through the peritoneal covering, and then, with considerable ease, reflected a tube-like sleeve of peritoneum right away to the termination of the cystic duct, which was duly clamped, ligatured, and the gall-bladder then amputated.

No drain was inserted, and the wound healed by primary

union. The patient made an uninterrupted recovery, and has since been free from all troublesome symptoms, so far as I am aware.

I do not wish to anticipate Dr. Crofton's remarks on this most interesting case, and I wish to record here my personal indebtedness to him for the great trouble he took, and the most interesting results he arrived at, in the examination of the contents of this gall-bladder.

I may, perhaps, however, state that the fluid removed from this patient's gall-bladder was a pure culture of typhoid bacilli in suspension in a watery fluid.

The further details of her blood examination I will ask Dr. Crofton to describe.

Here, then, we have two gall-bladder cases which seem to me to possess extraordinary interest, which I trust will prove sufficient excuse for recording their notes before this Section.

DR. CROFTON said that a pure culture of the typhoid bacillus was obtained from the gall-bladder. The patient's blood, even when diluted to 1 in 500, agglutinated typhoid bacilli. The patient had no history of having had any typhoid, but the fact that she had an anomalous illness with a high temperature, and had come from Cairo, was very suspicious, because Cairo is a hot-bed of typhoid fever. There was no history that she had given typhoid to any one.

MR. PRINGLE inquired from the members had they found the area of tenderness described by Boas behind, opposite the tenth and eleventh dorsal spines on the right side. Boas states, with some authority, that in all cases of gall-stones we get this area of tenderness. He himself had constantly tried for it in all cases, and had only found it once. In such a case as this, where in all probability the gall-bladder would have to be removed in the end, would it not be safer to remove the gall-bladder unopened? It would be simpler, and lessen the risk of sepsis. As

regards the second case of typhoid carrier—from the description of the tumour it would appear that the cystic duct was obstructed, so it is quite possible that this woman was not a source of infection, as one might at first imagine. He did not see any reason why one could not get infection of the gall-bladder without typhoid fever, as the infection might easily occur through the mouth.

DR. STOKES said he would like to ask two questions. First, why there was such difficulty in passing a probe down the common bile duct in the dissecting room, considering that it could be done with ease in the living. The second question was, can the typhoid bacillus live and multiply in a patient who has serum of marked agglutinative power?

MR. BLAYNEY said in reference to the question of tenderness he had examined for this in a number of cases and had never been able to get it. He did not think it could be relied upon from a diagnostic point of view. As regards the operation of cholecystectomy he said in most cases he had removed the gall-bladder. The mucous membrane is always in a state of disease, and, as the operation is a safe one, he thought, in order to prevent recurrence, it was better to remove the gall-bladder. He had often experienced a difficulty in passing a probe from the gall-bladder into the cystic duct in the living. He thought the difficulty was due to the valve-like arrangement of the mucous membrane. It seemed from the high agglutinating power of her serum that the patient had absorbed a considerable amount of typhoid poison. It has been shown experimentally that in order to produce gall-stones the bacilli must be attenuated, otherwise they produce an attack of cholecystitis and not gall-stones. If this be so one would not expect such a high agglutinating power to be produced by absorption from the gall-bladder alone. Consequently, he agreed with Dr. Crofton that the patient probably had an attack of typhoid fever beforehand.

DR. KIRKPATRICK said a typhoid carrier is a person who excretes typhoid bacilli, and there is no evidence that this patient did excrete these typhoid bacilli. In view of the fact that the bacillus was never discovered in the stools he

thought it very doubtful whether, without further elucidation, Dr. Haughton should describe this patient as a typhoid carrier.

DR. PEARSON said he thought, with regard to the removal or not, the points which should be borne in mind were:— (1) If we do not remove the gall-bladder, is it a source of danger to the patient? (2) Is there anything to be gained by leaving it behind? Is it a useless organ or has it any function? The gall-bladder which is chronically inflamed is undoubtedly liable to develop cancerous changes. Therefore, a contracted gall-bladder should be removed; it should also be removed if there is a stricture of the cystic duct. In cases of cholecystitis, where the changes are not very marked, one can hope that by drainage alone the mucous membrane of the gall-bladder will return to its normal condition, and one might in that case leave the gall-bladder behind. From statistics it appears that cholecystostomy is less serious than cholecystectomy, so that we should always in suitable cases leave the gall-bladder rather than remove it.

MR. GUNN said he was not at all certain that it was a sound thing to remove the gall-bladder in every case. He had a very unpleasant experience about eighteen months ago, when he operated on a gentleman with a diseased-looking gall-bladder containing calculi. He removed the gall-bladder because it seemed very diseased. A fistula formed and persisted for a long time, but closed eventually. Just a year afterwards his symptoms returned, and he again got a good deal of trouble and a good deal of jaundice. His abdomen was re-opened and it was found that the cystic duct was shrivelled up and atrophied. The communication between the hepatic ducts and the duodenum was reduced to a very narrow track. He regretted very much that the gall-bladder was removed because an anastomosis between it and the duodenum could have been made. He said he would like to ask Dr. Haughton whether he considers it safe to entirely close the abdomen and not leave in a drain.

MR. STONEY said that with regard to the passing of a probe he quite agreed with Mr. Stokes that there is a great difficulty in the way. In the most cases he had operated

on there had been adhesions present which probably have increased the difficulty. Even in cases where there were no adhesions he had also encountered a difficulty in passing probe from the gall-bladder to the duodenum. He thought it was due to the irregular and tortuous course of the cystic duct into the common bile duct. When the gall-bladder appears more or less normal it is better to leave it, especially in younger patients. In cases where there are well-marked changes, either thickening of the wall of the gall-bladder or any tendency to destruction of the cystic duct, or in ulceration of the entire gall-bladder, it should be removed. Statistics are not to be relied upon, as cholecystostomy is done in the simpler cases, whilst cholecystectomy is adopted in the severer cases where there is sepsis, where the organs are considerably diseased, where there is malignant disease, or where the cystic or common bile ducts have to be opened. So, as we cannot rely upon statistics it must be admitted that cholecystectomy is as free from mortality as cholecystostomy.

MR. HAUGHTON said he quite agreed that the removal of the unopened gall-bladder would have been a safer course than the one he adopted. Mr. Stokes had asked the reason of the difficulty in passing a probe. He thought it was due to the tone of the muscle, which disappears after death. He thought that the gall-bladder should be removed where there is any definite evidence of change rather than leave it there as a future source of malignancy. With regard to Mr. Gunn's question, he thought that in the vast majority of cases it was inadvisable to close the abdomen without drainage.

MR. CROFTON said that he had no doubt whatever that typhoid bacilli could not live in the blood stream or in the tissue fluids of this patient. Those in the gall-bladder were in a position that was cut off from the blood stream owing to the thickening and infiltration of the walls, and so antibodies could not soak through. Another point is that it is quite possible, owing to their position of partial protection, that these typhoid bacilli have developed a strain which is more or less resistant. As to the question whether the patient had typhoid fever, she certainly came from a place where this fever was very prevalent. As regards the

question of removal of gall-bladders, he thought many of them might be saved by vaccine therapy, and that if the microbe could be discovered many of the gall-bladders would be able to return to their normal condition. It is very difficult to immunise a patient and to destroy the living typhoid bacilli in the typhoid carrier. He knew of only one successful case which had been reported. There was one patient in whom he was able to increase her agglutinative power very much, but she was still excreting typhoid bacilli in her urine.