to the lower part of the sigmoid flexure. I divided the abdominal wall as if operating for recurrent appendicitis, so as to weaken it as little as possible. The external oblique was divided in the course of its fibres, and the internal oblique and transversalis at right angles to this, that is, in the direction of their fibres. The peritoneum was divided in the line of the skin incision. The sigmoid flexure, loop after loop, was drawn up out of the pelvis, and then as the lower loop was drawn on the prolapse disappeared. The upper part of the rectum was now on the stretch, and with the bowel in this position the meso-sigmoid at its lowest part was stitched with fine silk to the parietal peritoneum at the top of the wound in the following manner: Two silk threads were passed through the meso-sigmoid, at a distance of about an inch. By pulling on these a fold of meso-sigmoid was drawn forwards, and at the same time the bowel pushed back under the abdominal wall. The upper thread was then passed through the two edges of parietal peritoneum in the upper angle of the wound and tied, thus fixing the meso-sigmoid, and at the same time closing the upper angle of the wound. The lower thread was tied in the same way about the middle of the wound. Two or three other sutures were then passed through the edges of the parietal peritoneum, and the fold of meso-sigmoid in the centre, and tied. The lower part of the opening in the parietal peritoneum was closed by a few more sutures, and then the muscular layers of the abdominal wall carefully sutured together.

After-History.—She made an uninterrupted recovery, and when she left the hospital there was no sign of the prolapse. I examined her again a few days ago, and I found no more prolapse than one does in the prolapse of one moderate-sized internal pile; but she said that for some weeks there had been rather more prolapse than this during defæcation. The case could not therefore be regarded as cured, but as very greatly benefited by the operation.

Fig. 1.—Carcinoma of the cæcum; the excised portion of bowel. The small portion of bowel at the top of the specimen is the ileum, the large portion at the bottom the ascending colon. The cæcum is infiltrated by nodular growth. An inch measure is photographed by the side of the specimen.

EXCISION OF CÆCUM FOR MALIGNANT DISEASE.

The second case about which I shall speak to you to-day is of interest on account of the difficulty it presented in diagnosis, and the encouraging results of operation. It is sometimes very difficult to distinguish between a distended gall bladder and a movable kidney, but it is not often that a tumour of the cæcum gives rise to the same difficulty in diagnosis. This tumour could be pushed well back into the loin, and when the patient was under the anæsthetic, just before the operation was commenced, I could push it right under the umbilicus. It did not feel like a kidney in shape, but such free mobility was very suggestive of movable kidney, especially the way in which it seemed to fall back into the loin. Inflation of the colon with hydrogen gas would not have aided us in diagnosis, for the production of greater resonance in the position of the swelling would have seemed to indicate an overlying colon, and would therefore have favoured the view that the swelling was renal, whereas the increased resonance would have been within the swelling itself. This case shows the good results that may be obtained by excision of such a large mass of malignant growth within the abdomen, together with several affected glands.

A Case in which a Malignant Tumour of the Cæcum Simulated Movable Kidney: Excision of the Cæcum and Glands in Mesentery: No Recurrence Two Years after Operation.

The patient was a woman, aged 49.

Symptoms and Diagnosis.—Her symptoms were pain in the right loin and right side of the abdomen with occasional vomiting, but no symptoms of intestinal obstruction were present. The swelling was hard, not tender, and lay between the right anterior superior spine and the umbilicus, but rather nearer the former than the latter. It was about the size of the kidney, but not quite that shape, being broader at the top than below. It was not thought possible to make out the colon lying over it, and therefore it was not very resonant, if resonant at all.

Operation and After-History.—I operated in November, 1898, and first explored the loin to determine if it was a movable kidney. It was so movable that one of my colleagues even suggested that it must be a floating kidney with a meso-nephron. I will not give you details of the operation and after-treatment, further than to say that some glands in the meso-cæcum had to be removed with the cæcum, and that the ileum was united to the ascending colon with a Murphy's button. The growth in the cæcum was very extensive, as the photograph of the specimen shows* (Fig. 1). Microscopic section shows the structure of carcinoma. The patient is now (two years after the operation) in good health, and has no sign of recurrence. She is, indeed, far too fat, for she has actually doubled her weight since the operation.

OBSTRUCTION FROM MALIGNANT GROWTH OF COLON.

I will now call your attention to a common result of malignant growth in the large bowel, and the case is a good example of what should, if possible, be done in a condition of this kind. Excision of the growth and immediate union of the bowel is not a proceeding to be undertaken in cases of obstruction, for the patient is not in a condition to stand such an operation, and moreover the passage of enormous quantities of retained fæces through the intestinal junction will add greatly to the risk of leakage. It is wiser not even to excise the growth until the obstruction has been relieved. The less we do in the way of operation the better until the bowels have freely emptied themselves, and the patient's general condition has improved.

A Case of Intestinal Obstruction from Malignant Growth in the Colon: Colotomy and Fixation of the Tumour outside the Peritoneum: Subsequent removal of Tumour.

Mrs. M. M., aged 51, was seen by me in consultation with Dr. Maddison on June 1st, 1898.

History and Symptoms.—The symptoms of chronic intestinal obstruction had been present; the abdomen was much distended, and occasionally one particular coil would distend and harden with peristalsis. No growth could be felt, but from her age and the history malignant growth seemed the most probable cause of the obstruction.

Operations.—She came into the hospital on June 2nd, and on June 3rd I opened the abdomen over the descending colon, and found a constricting growth there. This I brought outside the abdomen, and fixed there with silk sutures. The following day I opened the protruding bowel above the growth, and thus relieved the obstruction; a fortnight later I excised the growth. No anæsthetic was required for this excision of the tumour. Two months later I closed the artificial anus by separating the ends of the bowel from the surrounding parts and sewing them together. At this time I discovered a nodule of growth on the left lobe of the liver. She left the hospital in October, and had not any serious difficulty with the bowels until December, and then obstruction at the bowel juncture was present and I had to form an artificial anus again. I believe this was due to kinking at the seat of junction. She never had obstruction after this, but the growth eventually recurred around the artificial anus, and she died in the spring of this year, one year and nine months after the removal of the primary growth.

REFERENCES AND NOTE.

¹ *Lancet*, 1890, vol. ii, p. 117. ² *Annals of Surgery*, 1897, vol. xxvi, p. 165. ³ *Bull. et Mem. de la Soc. Chir. de Paris*, t. xv, p. 754; and *Annals of Surgery*, 1891, vol. xiii, p. 218. ⁴ This specimen was shown at a meeting of the Bristol Medico-Chirurgical Society in the spring of 1899.

CHOLECYSTECTOMY: PARTIAL HEPATECTOMY AND PYLORECTOMY: RECOVERY.

By BERTRAM C. STEVENS, M.B., M.R.C.S.,
Leeds.

THE following case of cholelithiasis associated with malignant disease involving the liver, gall bladder, and pylorus, and complicated by an abscess in the abdominal wall, is, I think, of sufficient interest to report separately, and not in a group of cases. The case was under the care of Mr. Mayo Robson, whom I desire to thank for permission to record it.

Mrs. S., aged 54, was sent by her medical attendant, Dr. Fry, to consult Mr. Mayo Robson on July 28th, 1900.

History.—The previous history was rather indefinite, as the patient did not think it necessary to seek medical advice before April, 1900. She considered that she had been in excellent health until November, 1898, then for six months she suffered every month or six weeks from what was probably hepatic colic, though she said she was never jaundiced after the attacks. She also had pain at the epigastrium like indigestion. She had had on several occasions previously attacks of so-called spasms.

History of Present Illness.—The patient first presented herself for treatment in April, 1900. She was then suffering from a very severe attack of pain in the right hypochondrium, with much vomiting, cold perspiration, and general collapse. Her general condition was unsatisfactory, she was in failing health, she had lost considerably in weight, and there was swelling of the legs and abdomen. The skin was sallow, with a slight tinge of jaundice. Her condition of general debility was steadily getting worse. A physical examination showed the liver to be enlarged, and the gall bladder could be felt as a hard mass well defined, about 2 inches wide and 3 inches long, trending towards the umbilicus. The mass was tender on palpation, and painful after any exertion. In June and July the swelling gradually increased, and the mass extended over a larger area, approaching nearer to the umbilicus. A little later the tumour gave a sensation of fluctuation, and became less definite in outline, but more obvious on inspection. The diagnosis arrived at by Dr. Fry was gall stones, with malignant disease of the gall bladder and surrounding parts. His diagnosis was strengthened by the fact that the patient was steadily losing ground. About the middle of July there seemed to be a sudden and considerable decrease in size of the tumour, with some relief and temporary improvement. Dr. Fry then advised the patient to see Mr. Mayo Robson, with a view to operation.

Anamnesis.—On examination on July 28th, a very distinct tumour could be felt beneath the right costal margin adherent to the parietes, which was thought to be the distended gall bladder acutely inflamed and suppurating. As it could not be said definitely that there was malignant disease operation was advised without delay. Since the stomach was dilated stenosis of the pylorus was thought to be present, due either to adhesions or to independent growth.

Operation.—On August 9th, a vertical incision through the upper part of the right rectus was made down to the gall bladder, and a dense mass of adhesions was at once encountered. An abscess was found in the sheath of the rectus; this was cleared out and purified as far as possible. The gall bladder, which was very much thickened and bound down to the liver, was opened, and some thick purulent discharge escaped, general soiling of the peritoneum being prevented by packing sponges all round the site of operation. A large stone was removed from the gall bladder and another from the cystic duct. A fistula was found between the gall bladder and the pyloric end of the stomach, through which the empyema was discharging itself into the stomach. The pylorus was found much thickened, and was evidently attacked by growth which was also involving the gall bladder and adjoining portion of the liver. A V-shaped portion of the margin of the liver and most of the gall bladder were removed, only a small portion of apparently healthy gall bladder being left. The V-shaped gap in the liver was sewn up with deep sutures of chromicised catgut; the hæmorrhage in the meantime being controlled by sponge pressure. A tube was placed in the cystic duct, and what was left of the gall bladder was sewn firmly round the tube. Attention was now turned to the pylorus. The stomach and duodenum were grasped, while the pylorus was cut away. The peritoneal margins of the openings in the stomach and duodenum were united by a continuous silk suture, and the mucous margins by a continuous chromicised catgut suture, around a bone bobbin which preserved the lumen of the passage. An omental graft was then sewn over the junction to afford additional security. As the disease proved to be malignant, the affected part of the rectus muscle and peritoneum adjoining were excised, and in order to repair the gap a further transverse incision was necessary. The peritoneum, aponeurosis, and muscular wall were then all securely closed. The whole operation was completed within the hour. The patient rallied well, and convalescence was uninterrupted.

Progress.—Bile flowed freely through the tube, which was removed on August 22nd, and then gauze was used as a drain, and bile continued to flow for three weeks after the operation. The faces were of normal appearance, and the icteric tinge soon cleared up. After the first week a small dose of strychnine was given thrice daily up to the time the patient left the home on September 7th. Microscopic section showed the growth to be columnar-celled carcinoma. Two months after operation the patient was progressing favourably and gaining strength. There had been no return of symptoms or any discomfort, and her general health had much improved. There was a very small sinus where the drainage tube had been, but no biliary fistula.

REMARKS.

The case is of interest in several respects: (1) In the association of abscess and cancer both being dependent on the irritation of gall stones; (2) in the occurrence of a fistulous track between the gall bladder and stomach; (3) in showing how difficult it is sometimes to make an exact diagnosis before abdominal section; (4) in demonstrating how the surgeon must be prepared for any contingency when operating for gall stones.

When cancer attacks the gall bladder it is usually secondary to gall stones, and less frequently to extension of cancer from adjoining organs. Extension of the growth from the gall bladder is usually by continuity, the liver as a rule being the first viscus to be attacked. When the growth has begun at the fundus of the gall bladder the colon is frequently attacked, but when the growth arises at the neck of the gall bladder the pylorus and duodenum are more often affected. In this case, however, the fundus of the gall bladder was the site of origin of the disease, and the pylorus was invaded secondarily.

Where the gall bladder becomes attached to any hollow viscus a fistula may form, and fistulae in connection with the bile passages are in fact not uncommon. They result from

operation or disease. If from disease they are due to ulceration resulting from gall stone or cancer. The fistulous channel may either be direct or indirect; the direct variety is caused by an ulcer setting up local peritonitis, with consequent adhesions, which bind the gall bladder or ducts to a neighbouring hollow viscus or to the parietal peritoneum. In the indirect variety the perforation occurs slowly, and an abscess is formed which may burrow into a hollow viscus or out on to the surface of the body at some point. The commonest fistula is between the biliary passages and the abdominal wall, the next in frequency occurs between the gall bladder and the duodenum, the next in order between the biliary passages and the colon. Pathological surface fistulae usually open at the umbilicus, the abscess following the course of the obliterated umbilical vein.

The jaundice in malignant cases, apart from the obstruction produced by stones in the common duct, is caused by extension of the catarrh along the mucous membrane of the bile ducts. The frequent association between gall stones and malignant disease is due probably to the irritation caused by the stones. Zenker found gall stones in 85 per cent. of cases of cancer of the gall bladder. Musser gives the proportion as 69 per cent., and Courvoisier found gall stones in 74 out of 84 cases of primary cancer of the gall bladder. According to Schroeder 14 per cent. of all cases of gall-stone patients suffer from cancer of the biliary passages at some time. Naunyn is of opinion that half the cases of chronic jaundice diagnosed as cholelithiasis are complicated with cancer or are due to cancer alone.

With regard to partial hepatectomy, 5 cases have been recorded by Mr. Mayo Robson, with 4 recoveries. Since this record he has performed 4 more operations of this nature, with 3 recoveries, making 9 in all, with 7 recoveries. In 5 cases there has been complete restoration to health.

In conclusion I wish to thank Dr. Fry for his account of the patient prior to her coming to Leeds.

A CASE OF SARCOMA OF THE BRAIN REMOVED BY OPERATION: SUBSEQUENT OPERATION FOR REMOVAL OF A SECOND TUMOUR: RECOVERY.*

BY
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THE features of interest in this case were the presence of symptoms unmistakably pointing to an intracranial neoplasm, and with one exception being entirely "general" symptoms. The only positive indication for localisation of the growth was an alteration in the percussion note over an area in the parieto-occipital region of the skull, and the recognition of this sign led to the trephine opening being made directly over the tumour. At the first operation a firm rounded growth about 1½ inch in diameter and ½ inch in thickness, and distinctly encapsuled, was easily shelled out. About six weeks later signs of a second tumour in the same region appeared, and another operation resulted in the removal of a very large tumour. This could not be removed as a whole, but was divided into two or three large pieces, which weighed altogether 6½ ounces. No recurrence up to January 30th, 1901, has taken place, the operation has relieved the patient of his symptoms, the hemiplegia which resulted from the last operation has cleared up, the mental condition is nearly normal, but the sight, greatly impaired at the time of operation, has very little improved.

History.—J. A. W., aged 28, a clerk, was first seen with Mr. H. T. Rudge on April 5th, 1900. Although he had never been strong, he had had no bad illness, or suffered particularly from headache; he had never had any discharge from the ears, and had not had syphilis. In January, 1898, he had a severe cold, and afterwards found that on carrying out some gymnastic exercises, to which he was accustomed, he became giddy. His health remained fairly good until July, 1899, when he was seized with intense, agonising pain in the head, especially in the left temple, and in the occipital region; this was almost constant, and prevented sleep. He did not vomit. This headache has continued with more or less inter-

*Read before the Bath and Bristol Branch of the British Medical Association.