equipped hospitals, where such a complication as perforation is likely to be recognized at the earliest possible moment, and immediate arrangements made for operation is eminently favourable to surgical success.

2. It is very desirable to operate as rapidly as possible, and to avoid all unnecessary handling and exposure of intestine. These patients are totally unable to bear much manipulation.

3. The quickest way to find the perforation is to go straight for the ileo-caecal valve and trace the ileum upwards. It will rarely be necessary to handle more than 2 to 3 ft. of bowel.

4. All sutures should be of catgut, as silk or linen is almost certain to become infected and give rise to a troublesome sinus. The catgut I use is prepared by boiling in absolute alcohol for thirty minutes, and stored in tincture of iodine one part, proof spirit ten parts.

5. These patients bear the Fowler position and continuous rectal saline quite well.

6. Coliuria being a very likely complication, it appears wise to put these patients at once on alkaline treatment. Whether as a result of this procedure or not, my last two cases showed no sign of this troublesome ailment.

Success in the cases here recorded was chiefly due to the promptness with which Dr. Gardner Robb recognized the complication and made arrangements for operation; and in a very large measure also to the care and attention bestowed on the patients by the resident officers, Drs. Kevin, Glass, and Millar.

OPERATION FOR INTUSSUSCEPTION COMPLICATED BY MEASLES AND BRONCHOPNEUMONIA.

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ABOUT 2 a.m. on February 22nd, 1913, I was asked by Dr. Robert Boyd to operate on an infant which he had just seen.

The patient was a bottle-fed male infant, aged 3 months, previously healthy, living in a small kitchen house in the east end of Belfast. At 3 p.m. on the previous day the child appeared suddenly in pain, vomited, and passed a normal motion. Some time later a little blood-stained mucus came away by the rectum. When Dr. Boyd saw the child just before midnight he found it breathing 40 to the minute, the temperature 101.2° F., the pulse 120, an intermittent cough, and a profuse eruption indicative of measles covering the body. On examination of the chest numerous patches of bronchopneumonia were detected on both sides, but especially on the right. An elongated tumour, easily palpable, lay on the left side of the abdomen opposite the umbilicus. The rash had appeared the previous morning.

The diagnosis was obvious, and the normal course for a purely surgical affection would have been to send the child to the Ulster Hospital. This, however, was precluded by the infective fever; the pneumonia added additional risk to any exposure to night air in view of a general anaesthetic. On the other hand, without operation death must follow. Therefore, though the surroundings were anything but promising either for the operation itself or for the subsequent nursing, it was decided to operate in the house.

Operation.

About an hour later I opened the abdomen, Dr. Boyd administering chloroform. I had taken the precaution to bring all my instruments ready sterilized, in addition to the usual dressings, towels, etc. Disinfection of the skin was carried out by washing with soap and water, spirit, and drying with ether. Tincture of iodine (B.P.) was then twice painted over the front of the abdomen. Rubber gloves were worn. The incision was through the right rectus. An ileo-caecal intussusception of large size was found. Reduction was fairly easy, but the last portion could only be extruded after withdrawal of the tumour outside the abdominal wound. The appendix was removed for two reasons: (1) It was very much swollen, even for such a case, where some swelling is characteristic, and it was kinked in two places at an acute angle; and (2) it was the last part to be reduced, therefore probably the first to enter, and therefore may have had something to do with the causation of the invagination. The abdomen was closed in layers. Van Horn No. 2 thirty-day catgut was used for the buried, and silk-worm gut for the musculo-cutaneous and cutaneous sutures. The child was back in bed in forty-five minutes, and did not seem to have suffered much from the surgical intervention. Ten minims of compound tincture of camphor were given after recovery from the anaesthetic.

After-History.

For three days the temperature remained at 101° F., and there was distressing cough which threatened to tear the wound open, more especially as some suppuration as the result of the rash might have been expected. Neither of these untoward results occurred and the further progress of the case was uneventful. The nursing from first to last was carried out by the mother, and when the silk-worm stitches were removed on the eighth day healing was perfect.

The case illustrates one or two important points—namely: (1) That measles, even with a profuse rash at the operation site, need not deter the surgeon from an otherwise urgent or desirable operation; (2) the value of iodine as an efficient and convenient method of skin disinfection; (3) that successful nursing of cases as serious as abdominal section can be carried out in mean surroundings and without the aid of specially acquired skill—a point lately emphasized by Mr. Andrew Fullerton and others in connexion with operations in the out-patient departments of general and more especially of children's hospitals.

TRUE TOTAL ENUCLEATION OF TWO HYDATID CYSTS FROM THE SAME LIVER.*

BY

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THE following are some notes on a case upon which I operated at the Salford Royal Hospital at the beginning of March, 1912, and which is, I think, of some interest.

I saw A. M., a girl aged 13 years, in the out-patient department. She was complaining of a swelling in the epigastrium, which caused her no discomfort except a slight tenderness over the most prominent part of the swelling, where it came into closest contact with her clothing. She would not have sought medical advice when she did had it not been that the swelling had become evident to casual inspection. On abdominal examination a swelling could be seen and felt in the epigastrium, its most prominent part being situated slightly to the left of the mid-line. The tumour moved slightly with respiration, and could be displaced by the hand for a distance of about three inches from the costal margin, leaving a tympanitic area between tumour and costal margin, and could be retained there quite easily during inspiration and expiration. The tumour was rounded, fluctuant, and intra-abdominal. Careful and systematic abdominal palpation revealed a second tumour, corresponding exactly to the position of the right kidney.

The tumours seemed obviously to be cysts, but one was not quite satisfied as to their exact situation before the operation, since the left was more mobile than one would expect a tumour of the liver to be, and the right one could be so definitely palpated bimanually in the region of the right kidney.

Operation.

The girl was admitted subsequently to the hospital. Under chloroform anaesthesia, after a cystoscopic examination had been made, in order to ascertain whether there was any information to be obtained regarding the nature of the right tumour by a view of the orifice of the right ureter, with negative result, the abdomen was opened by an incision through the left rectus muscle. The left tumour presented in the wound, and was at once seen to be a cyst in the left lobe of the liver, a portion of the fibrous cyst wall being visible, uncovered by liver tissue for an area about the size of a shilling. The left lobe of the liver was much more movable than normal, and this accounted for the somewhat free mobility of the tumour found before opening the abdomen. Passing the hand to the right kidney region, the second tumour was felt, and was found lying directly on the right kidney and embedded in the right lobe of the liver, near its lower free sharp margin. The epigastric tumour was the larger, and after removal was found to be somewhat larger than a tennis ball, while the right tumour was somewhat smaller than a tennis ball. Seeing the moderate size and accessibility of these cysts, I was much tempted to attempt a total enucleation—that is to say, a removal of the fibrous ectocyst as well as of the germinal layer. I decided to make the attempt on the smaller of the two cysts first.

I made a second incision on the right side of the abdomen from the costal margin at the tip of the tenth rib downwards for about three inches. My assistant then passed his hand from the epigastric incision towards the right, and caused the right tumour by pressure to present into the wound on the right side. In the same way as in the case of the left tumour, a portion of the fibrous ectocyst was visible, uncovered by liver substance and showing as a white area about the size of a sixpence. Working with the sharp edge of a scalpel from the uncovered area concentrically, I separated the liver substance from the fibrous cyst wall for a distance of about half an inch

* A paper read before the Manchester Clinical Society.