gastrectomy from a woman of 32, in whom carcinoma developed after thirteen years' medical treatment for gastric ulcer.⁵

The death-rate of this operation should not be more than 15 per cent. In the 17 that I have done 3 have died—one in whom also I removed a portion of liver to which the pyloric end of the stomach was adherent died two months later as the result of a biliary fistula; one died from shock; and in the other the wound had to be hurriedly sutured with one layer of stitches; on the fourth day these gave way and he died from bronchopneumonia developed after the second anaesthetic.

The results of this operation are encouraging. The average duration of life, if recurrence takes place, is eighteen months. This is a considerable gain, as the duration of life from the first onset of symptoms in untreated cases is rarely more than twelve months. The quality of life is good; as a rule, no indigestion or vomiting, and the recurrence usually does not affect the stomach. At the present time about 65 per cent. of those who have survived the operation died of recurrences within three years. We must, however, remember that these were all "late" cases.

There may be difficulty in diagnosing the condition even when the belly is opened, but this will rarely arise in this second group of case. If it occurs, a rapid microscopic examination of a portion of the edge of the ulcer should be made while gastro-jejunostomy suitable for use after partial gastrectomy is being carried out. If the growth is found to be irremovable, gastro-jejunostomy should be done only if obstruction is present; if it is not, the operation entirely fails to relieve.

The death-rate of exploration is negligible.

I must now pass on to the second part of my subject—the prevention of carcinoma of the stomach. Earlier this evening I made the statement that at least one-third of all cases of carcinoma of the stomach arose in connexion with gastric ulcer. These cases I believe could be prevented. There is little doubt that acute gastric and duodenal ulceration is a septic disease. Acute ulcers of the stomach and duodenum are frequently found *post mortem* in cases of appendicitis, urinary sepsis, burns, etc. Cell poisons circulating in the blood lower the resistance of the gastric cells so that auto-digestion takes place,⁶ or minute suppurative foci occur in the lymphatic follicles along the lesser curvature.⁷ Oral sepsis is, I believe, a fertile cause of gastric ulcer, and hence one of the predisposing causes of cancer of the stomach. It is no uncommon thing for me to have to delay operation on patients with undoubted organic gastric disease of long standing until carious stumps have been removed.

It is not known with certainty why many acute ulcers heal and others do not; it may be that oral sepsis has something to do with it. Every acute ulcer, whether of the type found in the disease called gastrosaxis or not, should be treated by rest in bed and suitable medical measures after all carious teeth have been dealt with.

Chronic gastric ulcer should be treated in the same way unless signs of pyloric stenosis or hour-glass stomach are present, or haematemesis occur, when the surgeon should be called in. If rest fails to relieve or symptoms recur on resuming work, surgical treatment should be adopted. Chronic simple ulcers of any part of the stomach or duodenum will heal after a well-planned gastro-jejunostomy and efficient after-treatment. I have had the opportunity of proving this in several cases.⁸

If the ulcer is large, or markedly indurated, or if there is any suspicion of malignancy, it should be excised in addition.

Attention to the hygiene of the mouth, thorough treatment of acute and early chronic gastric ulcer, handing over to the surgeon those in the latter group that fail to respond to or relapse after treatment, would, I am sure, greatly diminish the incidence of carcinoma of the stomach.

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ACUTE JEJUNAL OBSTRUCTION IN A CASE OF ADVANCED PREGNANCY: OPERATION: RECOVERY.

BY

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The following case is unusual and interesting.

The patient, an extremely healthy young married lady of 20 years of age, had been attended by Dr. E. A. Roberts during her pregnancy. The confinement was expected on November 15th, 1910.

When seen on October 25th she complained of extreme pain in the lower abdomen. On examination there were no signs of commencing labour, and the bowels had acted on the previous day. There had been a similar attack two days before, which had lasted two or three hours. On October 26th the pain shifted from the pelvis and became epigastric and severe, and the vomiting, which had commenced on October 25th, now became continuous.

Notwithstanding all forms of treatment these symptoms continued until October 28th, when she was seen by Dr. R. A. Gibbons and Dr. Herman, and the opinion was formed that the patient had intestinal obstruction high up in the small intestine. It was thought that induction of labour was not justified, and laparotomy was advised. Later Mr. Warrington Haward saw the patient and concurred with this view.

The patient was removed to a nursing home that night late, and was operated on at 4 a.m. on October 29th, Dr. Gibbons and Mr. Haward being present.

Notes by Mr. Wallis.

The patient was carried straight on to the operation table, where I first saw her. She was much distressed and in a nervous and excited condition. She was violently sick when on the operation table. After this had passed off she was anaesthetized by Mr. Bellamy Gardner and the abdomen was painted over with iodine solution. The abdomen was opened by an incision in the mid-line above the umbilicus 5 in. in length. The uterus presented itself at the opening and was gently held forwards. The stomach was found to be much distended, as was also the duodenum. The small intestine was collapsed and empty.

The uterus was held still further forward to enable the commencement of the jejunum to be seen, and it was at once obvious where the obstruction lay. About 6 in. from the commencement of the jejunum the gut was seen to be pressed on by the uterus—there was no suggestion of volvulus, but there was a definite line where the bowel ceased to act and where it was flat and contracted. This contracted portion and the bowel above were pulled out of the abdomen and the intestinal contents gradually pushed on. After a minute the collapsed bowel was seen to begin to be active, and as this was watched it was seen that the intestinal contents gradually passed on and on down the intestine which was quite healthy apart from the contraction.

It was not thought necessary to do anything further, and the wound was closed in layers, and finally by interrupted silk worm gut sutures. The stomach was washed out before the patient left the table.

Notes by Dr. A. E. Roberts.

Labour pains began six hours after the operation—that is, at 10.30 a.m. on October 29th. The first stage was complete at 1 o'clock. At 1.30 a stillborn fully-developed male child was born quite naturally and without assistance; fifteen minutes later the placenta and membranes came away naturally. Uterine pains were very strong throughout and contraction after delivery quite normal.

The patient appeared to suffer no additional discomfort from the operation wound, and was quite free from pain or discomfort after delivery. The puerperal period passed without any feature calling for remark, and was quite normal throughout.

The fetus was well nourished, weighing 8 lb., fully developed, but dead. Fetal movements had not been noticed by the patient for three days previously.

The patient made a perfect and uninterrupted recovery. The temperature at the time of the operation was 100.2°, and during parturition rose to 101.6°; pulse 130. Both dropped to normal the next morning, and remained so. The stitches were removed on the tenth day after operation, and the wound had healed well.

The rapid recovery of this patient was remarkable, and was in large measure due to her wonderful physique.

This case is unique in our experience of acute intestinal obstruction. The main points of interest are:

1. *The Seat of the Obstruction.*—This was unusually high up, and no doubt accounted for the almost continuous vomiting, and in many ways the symptoms were more like

those of duodenal obstruction. The fact of this obstruction being so high up was probably a factor in the excellent recovery made, as there was little chance of any septic absorption occurring.

2. *The Character of the Obstruction*.—This was also unusual, as there was no volvulus or twist, band or adhesion, but merely a flattened piece of intestine, which was not inflamed or kinked.

3. *The Cause of the Obstruction*.—As to this we can give no opinion, and it would be interesting to know from gynaecologists whether the uterus could be a factor in producing the obstruction.

TREATMENT OF APPENDICITIS IN CHILDREN.

BY
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FROM time to time one sees letters in your columns on appendicitis, and the various opinions expressed show how divided the profession is as to the line of treatment in acute cases—I mean especially as to the time to operate and how much should be done. I wish it were possible to get an expression of opinion from general practitioners on the question; the surgeons are practically all agreed that operation at once is necessary as soon as the diagnosis is certain, and the appendix must be removed if possible.

With regard to adults this may be the correct course, but in children (under 7 years of age, for example) I feel most strongly this is wrong, and have lately come across two cases that confirm my opinion—namely, that the less done in abscess cases the better. Children, especially of the better class, with excessive sensibility of the nervous centres, will not stand a long abdominal operation; even swabbing out an appendicular abscess is harmful, and removing a difficult appendix will be sufficient to turn the scale from life to death in many cases at this early age. Opening and simply draining an abscess cavity can often be done in ten minutes, while if a difficult appendectomy is done at the same time the operation is often prolonged to fifty minutes or so, with, I am sure, in the majority of cases, a fatal result. Surgeons may say that the case ought not to have been left to form an abscess, that it ought to have been operated on in the first twenty-four hours, but the fact is the majority of cases are not seen till after twenty-four hours have elapsed since the initial symptoms, and then it is best to wait till an abscess forms and simply drain. We hear a great deal about the necessity of removing the appendix in abscess cases, for fear of getting a recurrence, such recurrence being estimated at about 10 per cent.; but what is the danger of recurrence when compared with the danger of an immediately fatal result following the longer operation? Simple drainage of the abscess cavity is all that is required to relieve the little patient, and the appendix, in the great majority of cases destroyed by the inflammatory process, never gives any further trouble. This, I am sure, would be found to be the experience of the vast majority of general practitioners, who would be in the best position to know the after-history of their cases over a long course of years.

I think we are all agreed as to the treatment of these cases by starvation, avoidance of purgatives, and keeping the patient absolutely at rest in the recumbent position, using the rectal tube or glycerine suppository to help the expulsion of flatus, but in most cases avoiding enemata. Personally I generally allow small doses of laudanum to be given when the pain is bad, but not in big enough doses to mask symptoms. One correspondent who wrote a short time ago stated that in children appendicitis generally subsided with simple medical means; but my experience is that, given the same degree of acuteness of onset, in a child the case is more likely to go on to form an abscess than in the adult.

I believe Mr. Moynihan is quite right in his statement that in all these cases in which the appendix perforates and abscess results in children there will be found to be a history of a purgative having been given. To illustrate my point as to the treatment of these cases I will give notes of the last case seen.

A boy of 4½ years complained of pains in the stomach, but got about and took his food; in the evening he was given a purgative; he had rather a restless night, and the next day the pains were worse, and he was sick, but was still able to be up for a few hours. Later in the day he returned to bed, and was seen for the first time the same evening. He was then crying with pain, the temperature was 101° F., and the pulse 130; the abdomen was distended and tender everywhere, especially on the right side, and there was some rigidity of the right rectus muscle. He was put on the regimen stated above. He had a restless night, dropping off to sleep, but waking up with pains every half-hour or so. Next morning (third day of the attack) the temperature had come down to 99° F., and the pulse to 100, and he had had no more sickness; the abdomen was still distended, but he was able to pass some flatus and he micturated naturally. On the fourth day the pulse was still 100, and the temperature varied between 98.0° and 99°, tenderness was now present only in right iliac region, extending across to the left side of the middle line. On the fifth day there was no change; on the sixth day there was some dullness in the right iliac region and rigidity there was more marked; the temperature kept very near the normal. On the seventh day the temperature in the morning was still normal, but a definite lump was to be felt in the right iliac region, the size of half a cricket ball, very tender and dull to percussion.

Operation was decided on. The lump was cut down on, and an abscess opened directly under the abdominal wall, and in contact with it; it was well shut off; it contained thick, stinking pus. The abscess cavity was swabbed out and the appendix searched for, and after some difficulty found to the outer side behind the caecum; it was freed from adhesions, ligatured and cut off, and, with further difficulty, the peritoneum sutured over the stump. A large drainage tube was inserted into the cavity and some gauze plugs; afterwards a stitch or two was passed through the abdominal parietes. Before the operation the pulse was 103, and the temperature 100° F. After the operation, which took fifty minutes, the pulse was 130 to the minute, and he was very restless. Six hours later the pulse became very feeble, and in spite of transfusion, strychnine, brandy, infundibular extract, etc., it went from bad to worse, and the patient died three hours later, that is, nine hours after the operation, bringing up "coffee ground" vomit at the last.

I say that this result is alarmingly frequent, and I feel sure might be avoided in many cases if simple drainage of the abscess was alone employed, thus shortening the operation to the least possible time, and doing away with all shock. The practitioner, in charge of a case like this, can manage to get his wishes carried out in the matter by advising the parent beforehand to give his consent to the operation being performed on condition that the abscess is only opened and drained, and that nothing further in the way of an appendectomy shall be done.

PYOCYANEUS INFECTION IN DOGS AND ITS SIMILARITY TO RABIES.

BY
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AND
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SEVERAL variations from typical rabies have been described both in animals and in man. These have received such names as "chronic rabies," "abortive rabies," and so on. The question of the possible spontaneous cure of rabies has also received attention. Some authors in discussing these conditions have suggested the possibility of incorrect diagnosis and the idea of a bacterial causation. We do not directly deal with any one of the conditions mentioned above, but our own experience leads us to believe that the bacterial causation hypothesis is worthy of attention. In this paper we consider that we make out something of a case for the existence of a *B. pyocyaneus* infection occurring naturally in dogs, and that such infection may, both as regards symptoms produced and tests applied, lead to confusion with rabies. Of course, we are aware that *B. pyocyaneus* is a very ubiquitous organism, and we must therefore leave to our readers the judgement as to whether contamination has or has not been excluded in the case which we present to them. The diagnosis of rabies by animal experiment is often the only test at our disposal, and may be summed up as depending on the subdural inoculation in a rabbit of an emulsion of the brain of the suspected animal with subsequent onset of paralysis and death within a given period. Only exceptionally do