4. Large pelvic abscess; operation tenth day. Symptoms of obstruction eight days later; operation sixth day. Multiple adhesions. Old undrained abscess. Death.

5. Large pelvic abscess; no operation; considered to have subsided. Symptoms of obstruction after sixteen days; operation on fifth day. Multiple adhesions; pyosalpinx. Two abscesses in connexion with appendix. Operation done in two stages; intestine first drained and the disease removed subsequently. Recovery.

6. Gangrenous appendix, advanced peritonitis; operation within thirty-six hours. Symptoms of obstruction seventeen days later; operation third day. Multiple adhesions. Recovery.

These cases are as striking an argument for early and complete operation as the rule of treatment of appendicitis as anything I have yet adduced. They are all cases operated on late, and in the majority a large abscess was situated in the pelvis. Intestinal obstruction used to be not infrequent after late operations for pyosalpinx.

Ventral Hernia.

Ventral hernia does not, I think, occur after the operation in which the rectus is displaced inwards. This operation seems to me far preferable to the MacBurney operation with separation of muscular fibres, for it allows the incision to be readily extended when needful in both directions.

Ventral hernia, if necessary, can be remedied by a subsequent operation.

CERTAIN SPECIFIC DISEASES.

(a) *Septicæmia and the Exanthemata.*

In septicæmia, in which the poison is often eliminated through the intestines, I have on more than one occasion observed irritation of the appendix. In these cases the faeces are usually very fetid. The same slight involvement of the appendix occurs sometimes in the course of the exanthemata, and does not call for operation.

(b) *Cancer.*

During the last few months I have had 2 cases, one male and one female, each of the age of 35 years, of sudden great enlargement of the stomach from pyloric obstruction—in one case certainly, and in the other probably, from early carcinoma. In one I had six months previously drained an appendix abscess and removed the appendix, in the other acute appendicitis occurred during convalescence from removal of the pylorus. The appendix in this case showed chronic inflammatory changes. In neither case was any evidence of malignant disease found in the appendix.

(c) *Tubercle.*

In a man aged 20 numerous miliary tubercles were found scattered over the peritoneal surface of the appendix, and a few on the peritoneal surface of the caecum close to its attachment. The appendix was much thickened and its mucous membrane ulcerated. The patient did well for six months after the operation, but died within the year from pulmonary infection.

CONCLUDING REMARKS.

Lastly, it may be remarked that preventable deaths will still occur, and the prospects and vicissitudes of convalescence will continue to form material for lengthy statistical tables until the twin evils—procrastination and imperfect operation in appendicitis—are abolished from surgical practice.

Only recently I was present at a consultation, when the usual suggestion was made that the consultation should be renewed on the following day. Operation was, however, fortunately done immediately and revealed a spreading peritonitis. The patient, if left till the following day, would have been, if not moribund, without doubt more profoundly infected. "Advice is sporting while infection breeds."

My conclusions are:

1. Every diagnosable inflamed appendix with signs of increasing local or general peritonitis should be removed.
2. Every appendix which has given rise to inflammation or abscess should be removed.
3. In serious acute cases it is unwise to leave the appendix: as the primary site of infection is more likely to cause the continuance of constitutional symptoms than the spreading peritonitis around. Further, if left it requires another operation for its removal.

"While anything remains to be accomplished," said a great statesman, "nothing is done."

The establishment of these rules would do away with most of the vicissitudes to which dubious counsels and halting execution continue to expose these patients.

We are told that in the country of the Brobdingnagians the

laws were expressed in the most plain and simple terms and to write a comment on any law was a capital crime. Certain laws of surgery appear plain and simple. To recommend that an infected appendix should be left in the patient's body is a comment upon one of these laws which to me appears to be a surgical offence.

Bacon says, "Dangers are no more light if they once seem light. Nay, it were better to meet some dangers half way, though they come nothing near, than to keep too long a watch upon their approaches. For if a man watch too long it is odds he will fall asleep."

The true principles of action in the combating of great dangers are alike, whether these dangers have to be fronted in the warfare that destroys men or in that in which we are engaged against disease and death.

Frederick the Great wrote in 1745: "The Saxons and Austrians had formed a design to enter my hereditary dominions to destroy them with fire and sword. I was beforehand with them: I carried the war into the heart of Saxony."

I venture to ask each one of you, if the cocci and bacilli should form a clear design to enter, through your appendix, into your hereditary dominion, namely your peritoneum, to destroy you, would you "keep a long watch upon their approaches," would you "fall asleep" or "wait on Fortune, like a market," or would you promptly desire a Frederick, great in surgery, to be beforehand with them by carrying the war into the heart of your abdomen?

TWO CASES OF DUODENAL ULCER TREATED BY GASTRO-ENTEROSTOMY.

By FREDERIC EVE, F.R.C.S.,

Surgeon to the London Hospital, etc.

In the two following cases an exploratory gastrostomy was performed for the purpose of ascertaining the cause of the patients' symptoms. In each case, however, duodenal ulcer was tentatively diagnosed.

CASE I.

History.—J. H., aged 68, a mechanical engineer, was seen with Dr. T. Power. For upwards of thirty years he had suffered occasionally with attacks of pain, at times very severe, referred to the lower and right part of the epigastric region. For nine years a narrow cicatricial stricture of the rectum, resulting from proctitis and periproctitis following inflamed hæmorrhoids, had been a source of great trouble to him. About two years before the operation the pain became much more constant and severe. It came on two to three hours after meals, and was worse about 3 a.m.; so much so, that he took a sedative every night. He vomited occasionally. During the same period he had three or four attacks of melaena. The last, occurring in September, 1904, was profuse, associated with very severe pain, and the appearance of a transient swelling over the duodenal area. For five weeks prior to the operation he was too ill to leave his bed. Vomiting had now become constant. He vomited usually three times a day two to three hours after food. The vomit was like "coffee grounds," and small in quantity, but a few times he emitted two pints.

Operation.—In October, 1904. Median incision. The gall bladder and bile ducts were first examined with a negative result. Some enlargement of the head of the pancreas from chronic pancreatitis was noticed. The stomach and transverse colon were turned upwards, and an incision made in the posterior wall of the stomach, as near the greater curvature as possible. An examination of the interior of the stomach with a speculum and head-lamp showed nothing abnormal. A hand was inserted into the stomach and the forefinger passed through the pylorus of which the orifice was patulous. About an inch and a half beyond the pylorus was a smooth, ring-like stricture, just admitting the tip of the index finger. The operation was completed by uniting the upper part of the jejunum to the incision in the stomach.

After History.—The patient made a good recovery; and a fortnight later a left inguinal colotomy was performed for the intractable stricture of the rectum. He has, since the operation, been quite free from pain, and has gained in strength and weight.

The condition found at the operation and the onset of vomiting latterly indicate that a chronic duodenal ulcer was gradually contracting.

That the ulceration still persisted is shown by the melaena about a month before the operation and by the character of the vomit. The diagnosis was rendered more difficult by recurring attacks of pain and extreme constipation due to the stricture of the rectum.

CASE II.

A. C., a coachman, aged 33, was admitted under my care at the London Hospital.

History.—For three years he had suffered with dyspepsia and pain in the epigastrium, coming on one or two hours after meals, and lasting until the next meal, which relieved it. The pain continued with short

intermissions, the longest period of freedom from pain being three to four weeks. The pain had been worse since January, 1905; and two weeks before admission to the hospital in April, so severe as to compel him to give up work. About six weeks before admission he had a sudden attack of faintness; the next day the motions were black and tarry. For some time he had taken nothing but milk and Benger's food. The pain was referred to the epigastrium, and occasionally extended round to the right scapular region. No vomiting. Physical examination gave negative results, and there was no tenderness on pressure over the duodenum. Examination of a test meal gave a good percentage of hydrochloric acid. During the month of April the patient was under the care of my colleague Dr. Bertrand Dawson, who made a diagnosis of "duodenal ulcer." Relief followed rest and dieting, but the pain returned soon after his discharge, and he was admitted under my care with a request from Dr. Dawson that I would consider the advisability of performing an exploratory gastrotomy.

Operation.—On June 6th, 1905. Median incision. The stomach, which was somewhat distended, was turned upwards and the transverse mesocolon divided. A horizontal incision sufficiently large to admit the whole hand was made in the posterior wall of the stomach. Nothing abnormal having been found on the cardiac side, the forefinger was passed through the pylorus, when a large ulcer was found occupying the whole of the posterior wall of the duodenum, its upper edge being about $\frac{1}{2}$ in. from the pylorus. The base of the ulcer was very soft, irregular, and ragged, and seemed to be partly formed by the eroded head of the pancreas. Part of the incision in the stomach was sewn up, the remainder being united to an opening in the jejunum in the usual way.

After-History.—The patient took the anaesthetic badly, and was very sick after the operation, but the subsequent course of the case was uninterrupted by any incident.

Reviewing these two cases after the nature of the disease has been made known the symptoms may appear fairly conclusive of duodenal ulcer, but the diagnosis was at best a conjecture. Both had dyspepsia, pain two to three hours after meals, and melaena, and both were males; but there was no point of deep tenderness over the region of the duodenum. The absence of haematemesis also favoured the diagnosis of duodenal ulcer. Vomiting was absent in the second case, and only occurred late in the first.

Obviously any operative procedure in cases such as these must include a preliminary examination of the stomach and pylorus, and in view of gastro-enterostomy being required, this I invariably do through the posterior wall of the stomach unless this step is contraindicated by adhesions.

Gastro-enterostomy for duodenal ulcer may be indicated, as in the cases above related, for irremediable and persistent pain and dyspepsia; for constriction, which was commencing in the first case; for recurring haemorrhage; or as a second step after closure of a perforated ulcer.

This operation will act in precisely the same manner as when performed for ulceration of the pylorus; that is, by setting at rest the affected portion of intestine and by freeing it from the passage of acid gastric contents, and, in the case of constriction, by permitting the stomach to empty itself.

Regarding the actual operation it is advisable to make the incision as low as possible in the posterior wall, in order to admit of good drainage; to leave no "slack" of jejunum; to employ anchoring stitches on the distal side to prevent kinking; and finally to stitch the edges of the opening in the transverse meso-colon to the posterior wall of the stomach.

After passing the finger or even the whole hand into the stomach some difficulty may be experienced in finding the pylorus. This arose in Case II. The hand passed up into the cardia, and on being carried to the right was prevented from reaching the pylorus by a vertical folding of the lesser curvature, running from before backwards, which had to be dipped under before the pylorus could be found.

ACUTE SALPINGITIS

CAUSED BY AN INFLAMED APPENDIX BURSTING INTO THE MOUTH OF THE FALLOPIAN TUBE.

By J. BLAND-SUTTON, F.R.C.S.,

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THE recognized complications of appendicitis are many and various; so are the routes by which an appendix-abscess finds a vent. This communication refers to a case in which an inflamed vermiform appendix perforated, and the inflammatory products were discharged into the right Fallopian tube through its coelomic ostium. In February, 1905, I saw, with Dr. R. Ironside, an unmarried lady, 30 years of age, suffering from pelvic pain accompanied with acute febrile signs clearly indicating the existence of acute inflammation. On careful examination a tender swelling was felt on the right side of

the uterus and we felt some difficulty in deciding whether it was a tubal swelling (acute salpingitis) or an abscess connected with the vermiform appendix.

A few days later an operation was performed. The abdomen being opened by a median subumbilical incision, the vermiform appendix could be seen adherent to the fimbriated end of the right Fallopian tube; the tube itself was distended and adherent to adjacent structures. I successfully excised the appendix, the tube, and ovary without disturbing their relationship (see Fig. 1). When the parts had been

Fig. 1.—An inflamed vermiform appendix adherent to the coelomic ostium of the right Fallopian tube.

carefully hardened I made a section through them, as shown in Fig. 2. The lumen of the tube was filled with pus; its coelomic ostium had been firmly occluded and the fimbriae were withdrawn into the lumen of the tube; a narrow channel led from the interior of the appendix through its wall, near the tip, directly into the lumen of the tube.

Fig. 2.—The parts represented in the preceding figure shown in section. The vermiform appendix has a perforation near its tip communicating with the lumen of the tube. The fimbriae curled up in the tube are well shown. The tube was distended with pus.

The course of events in this case seems clear. The appendix, as so often happens, occupied the true pelvis, its tip lying in contact with the tubal fimbriae. The appendix became the seat of inflammation which involved the Fallopian tube and led to occlusion (salpingitic) of its coelomic ostium; finally, the appendix perforated and the morbid matter inundated and distended the Fallopian tube. Adhesion between an inflamed vermiform appendix and the Fallopian tube is common, but this is the first example which has come under my observation in which perforation occurred directly into the mouth of the tube. The patient recovered without difficulty or drawback.

CASE OF CUTANEOUS ANTHRAX TREATED WITHOUT EXCISION WITH SOLAVO'S ANTI-ANTHRAX SERUM: RECOVERY.*

By WILLIAM MITCHELL, M.B., C.M. EDIN.

SINCE Dr. T. M. Legge, H.M. Medical Inspector of Factories, brought the subject of the serum treatment of anthrax in man before this Society last June there has been a small epidemic of anthrax in Bradford, and several opportunities of testing the value of this method of treatment have arisen.

As I have had the opportunity of using the serum on what, it appears, has been the third case in England, where it was

* Read before the Bradford Medico-Chirurgical Society.