felt to harden when it was pressed. The rectum contained a little blood and mucus.

Operation.—An anæsthetic was given and laparotomy performed seven and a half hours after the onset of the symptoms. The opening was made in the right linea semilunaris, immediately over the tumour. The intussusception, which was five inches long, was brought outside the abdomen. It was reduced with difficulty except its last half inch, the reduction of which required considerable care. The ileo-cæcal valve formed the apex of the intussuscepted bowel. The abdomen was closed in the usual manner, the whole operation lasting only nineteen minutes.

After-history.—The patient's recovery was rapid and complete. For a few days after the operation he had a good deal of bronchitis, aggravated by his getting out of bed within a few hours of the operation. The bowels were opened naturally on the fourth day and he passed a hard fecal mass which was covered with blood. The stitches were removed on the eighth day, and he was discharged from the hospital early in May wearing a small abdominal belt to support the operation scar.

CASE III.—ACUTE ILEO-CÆCAL INTUSSUSCEPTION: ABDOMINAL SECTION: REDUCTION: RECOVERY.

History.—A.T., a boy, aged 3 years, was admitted into the General Hospital, Birmingham, on March 29th (just twenty-four hours after the previous patient) suffering from abdominal pain and vomiting. At 4 P.M. on the day of admission, shortly after straining at the closet without any action of the bowels, he was seized with violent pain in the right side of the abdomen. He vomited several times during the afternoon, and had repeated attacks of abdominal colic. About an hour before admission he became profoundly collapsed and convulsed; he afterwards again vomited, and the collapse passed off. He had previously been in good health, though the action of the bowels had been somewhat irregular.

Condition on Admission.—The temperature was 100° F., his pulse 96, small and regular. At times he lay apparently quite comfortable, and would allow firm palpation of the abdomen. But at intervals he was seized with attacks of colic, which produced a good deal of collapse. The abdominal walls were blistered and inflamed, the result of hot turpentine fomentations. In the intervals between the attacks of colic a small sausage-shaped mass could be distinctly felt to the right of and below the umbilicus; the mass was not tender, and was freely movable. The rectum was empty. The bowels had been opened once after the beginning of the illness.

Operation.—The diagnosis of intussusception being fairly clear, the patient was at once anæsthetised, and laparotomy performed seven hours after the commencement of his symptoms. A 3½-inch incision was made in the right linea semilunaris, and the tumour exposed. It was brought outside the abdomen with some difficulty. The tension on its mesentery in order to do this produced a good deal of shock, which passed off when it was relieved. The intussusception was an ileo-cæcal one, and measured 3½ inches. The invaginated bowel was easily reduced except for its last inch. This was swollen and oedematous, and after reduction appeared as a raised oedematous ring on the surface of the intestine. The abdominal wound was closed, and the inflamed and vesicated skin around freely dusted with boracic acid powder.

After-history.—Notwithstanding the raw state of the abdomen the wound healed by first intention, and the stitches were all removed on the eighth day. The bowels were opened on the third day after the operation, and a hard blood-stained fecal mass was passed. They were afterwards kept open regularly by small doses of cascara sagrada. The boy was kept in bed a month to consolidate the operation scar. He was discharged well from the hospital on May 15th, and has remained in good health since.

CASE IV.—ILEO-CÆCAL INTUSSUSCEPTION: ABDOMINAL SECTION: COLOCTOMY: RECOVERY.

History.—On September 2nd, 1898, I saw V.W.M., with Dr. Gifford, of Brierley-Hill, to whom I am indebted for the clinical notes of the case. He was a delicate boy, aged 8 years, who had been ill for five days with acute abdominal symptoms. On August 29th, after eating large quantities of fruit two days previously, he was seized with diarrhoea and abdominal pain. Some castor oil was given to clear out the bowels, but the pain persisted. On August 30th he vomited twice, but got up, as he felt better. The stools were watery and offensive, but there was no blood or mucus passed. On August 31st the diarrhoea still continued, with rather more pain. An indefinite swelling could be felt in the right iliac fossa, resembling that of an appendicitis. On September 1st the diarrhoea still continued, and the mass in the iliac region extended upwards into the right loin. In the evening he became much worse, passing watery motions every hour or so, while the lumbar swelling rapidly increased in size. The temperature was 99.6°, and the pulse 120. On September 2nd the abdomen was more tumid and tender on pressure. The tumour had reached the right hypochondrium, and the boy's condition appeared desperate.

Abdominal Section.—At 1 P.M. on September 2nd an incision was made in the right linea semilunaris over the tumour. An intussusception starting at the ileo-cæcal valve, and passing up the ascending colon into the transverse colon, was exposed. There was no peritonitis, but the colon was enormously distended by the intussuscepted bowel, its walls being purplish black in colour, extremely thin, and in one place apparently gangrenous. The intussusception was quite irreducible, and it was found quite impossible, owing to its size and fixity, to bring it outside the abdomen to deal with it. The walls of the colon were therefore united to the edges of the incision in the parietal peritoneum in the upper part of the wound, and an area of apparently gangrenous large intestine thus shut off from the abdominal cavity, as in an ordinary colotomy. The rest of the abdominal wound was closed in the usual way.

After-history.—On recovering consciousness he was given a small morphine hypodermic injection and nourishment given entirely *per rectum*. His temperature that night was 98°, and pulse 140. Some flatus was passed from the gangrenous area in the colon. On September 3rd it was noted that no more vomiting had occurred; he was given morphine for his extreme restlessness. He was passing flatus through the wound and *per anum*. The pulse was 160, and the temperature 97.8°. He made a protracted convalescence. There was a good deal of cellulitis from the upper angle of the wound. Pus tracked across the abdomen and round the left side of

the body, and an abscess was eventually opened and sloughs removed from it on the left side of the spinal column. During all this time his pulse ranged from 125 to 165, and his temperature was as high as 103.5°. He only vomited once or twice during convalescence. The bowels were opened regularly by enemata. They were liquid, but not offensive, and never contained any sloughs. The abdomen remained much distended for twelve days. The wound granulated up slowly, fecal matter and flatus frequently passing through it, and a small fistula still persists through which a little black discharge occasionally finds its way. The emaciation during the first few weeks was alarming in spite of the large quantities of fluid food taken. At the end of four weeks he was given solid food, and then began to put on flesh again. He is at present apparently as well and active as ever, save for the slight discharge from the fistula. The bowels act daily without any trouble or discomfort.

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PERITONITIS AS A CAUSE OF INCREASED PERISTALSIS IN THE RECTUM AND IN OTHER PARTS OF THE INTESTINE.*

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WE are all so familiar with paralysis of the bowel in acute peritonitis, that we are apt to think that increased action of the bowel can hardly be due to the same cause acting under different circumstances. I for one did not realise it till the following case brought it home to me.

CASE I.—PELVIC PERITONITIS.

About five years ago Dr. P. A. Young asked me to see with him, late one night, a married woman, aged 37, who showed certain obscure abdominal symptoms, and was in an anxious condition.

History of Attack.—About midday, while sitting in a tramway car, she had been suddenly seized with intense abdominal pain, and had only with the greatest difficulty dragged herself from where the car left her to the rooms in which she was living. Dr. Young saw her about half an hour after she got home, and found her lying on the top of her bed half undressed, faint and collapsed, and with a bedpan under her. Her bowels were being so frequently moved that she thought she had "dysentery." There was nothing in the bedpan, however, except urine and a little mucus from the bowel. She felt cold and shivery, pulse 100, temperature normal. She had vomited several times, and complained of great pain, felt chiefly about the umbilicus, which came on in severe paroxysms, with intervals of about two minutes. The abdomen was tender to touch. Various palliative measures were adopted, and when I saw her the pain was less, and the tenesmus had diminished. She had an anxious look, and was very nervous about herself. Pulse was then about 108, temperature normal. The abdomen on inspection was not distended; respiratory movements impaired. The muscular wall was resistant all over, especially in the left iliac fossa, and there was a good deal of tenderness over the lower part of the abdominal wall. *Per rectum* there seemed to be a little "ballooning," but nothing definitely abnormal. The walls of the vagina seemed unduly hot, but that was all.

Previous History.—She had been married for twenty years, and had two sons aged respectively 18 and 19. Shortly after the birth of the second son she had had a miscarriage, but it did not seem to have left any ill effects, for her menstruation had gone on regularly at three weeks' intervals. It had usually lasted two or three days, and had caused no trouble. She had thought her heart weak on account of shortness of breath on going upstairs, but Dr. Young had been unable to make out anything to account for this. She was on a visit to Edinburgh. A few days before this sudden seizure she had been in bed with a sharp attack of follicular tonsillitis during the progress of a menstrual period. Although recovering from this attack she had not felt well; her tongue had been furred and her liver and stomach had been apparently out of order. On the morning on which she was taken ill her bowels had been moved several times with a powder (rhubarb and grey powder) which Dr. Young had prescribed.

Diagnosis.—We found it very difficult to make up our minds about the case, but thought that fecal impaction in the sigmoid flexure was a feasible and the most probable diagnosis. There was no reason for thinking that the pelvic organs had been diseased; and the region of the vermiform appendix did not seem involved. On the other hand, colic from fecal impaction sometimes causes great collapse, and although she said that her bowels had always been regular, and that they had moved loosely on the morning of the seizure, we could not on that account exclude the possible presence of fecal masses. In the rectum at least they may set up irritation, and cause a loose catarrhal discharge which finds its way past them. There were certainly symptoms pointing to peritonitis, but in the absence of anything to explain its occurrence, and under the belief that colic might simulate such symptoms, we thought it better to treat the case by palliative measures, and watch its further development.

After-history.—During the night the patient sent for Dr. Young on account of a feeling of irritation in the bladder. This was relieved after the use of the catheter, and next morning she did not complain of it. Her general condition in the morning seemed much the same, but her pulse was quicker—that is, 115, and her abdomen was more swollen and tender. Throughout the day she grew weaker, and about 5.30 P.M. took a sudden

* The substance of a paper read before the Medico-Chirurgical Society of Edinburgh, March 1st, 1899.

turn for the worse, became cold and collapsed, and died at 6.30 P.M., about thirty hours after the seizure in the tramcar.

Necropsy.—At the *post-mortem* examination we found the pelvis full of grey grumous fluid, and recent lymph glued together all the coils of intestine there. The ovaries and tubes were healthy, except for the signs of recent inflammation; both tubes, however, contained fluid exactly like that in the pelvis. Mr. Stiles kindly examined for me the fluid from the tubes and that taken from the pelvis, and reported the presence of streptococcus in both. There were no fecal masses in the large intestine.

This was therefore a case of very severe pelvic peritonitis from the streptococcus. The etiology of the disease is very interesting. I do not wish to divert attention from the main purpose of this paper, but in passing let me say that I believe streptococci were carried by the circulation from the throat to the Fallopian tube or tubes; that an accumulation of fermenting fluid formed there, and that its sudden escape into the pelvis was the cause of the attack in the tramcar which so soon ended in death. The marked tenesmus for the first few hours of the illness led us astray, by making us think of the inside rather than of the outside of the bowel as the seat of the lesion.

About a year after this Dr. Young asked me to see another case with him, which, although differing from the last one in some respects, resembles it in others, and has an important bearing on our present subject.

CASE II.—GANGRENOUS PERIRECTAL ABSCESS.

Condition of Patient when First Seen.—A young married woman, about five months pregnant with her first child, had sent for Dr. Young hurriedly on account of symptoms which at first sight had seemed to be those of impending miscarriage. She was suffering from very severe bearing-down spasms, which he found, however, were affecting the rectum and not the uterus. When I saw her late at night the spasms were still going on at intervals of a few minutes. During the spasm she held her breath, and her whole body was strained as in a uterine contraction; the perineum was forced down, and the mucous membrane of the rectum was violently everted. Nothing, however, came by the bowel except a little mucus. Inspection between the spasms showed that the perineum remained swollen, especially on the right side, but the skin over the swelling was not discoloured; on percussion this swelling was distinctly resonant, and it had a soft fluctuating feeling on palpation. When examined from the vagina and rectum, the interior of the pelvis had a soft and boggy feeling.

History of the Attack.—She stated that about a fortnight before I saw her she had been overheated and tired in hurrying to hear a public lecture, and had been chilled while listening to it. Next day she complained of pains in her back and legs, which steadily grew worse, and were aggravated by her going to nurse a friend in a miscarriage a few days later. Afterwards the pain had been felt in the neighbourhood of the anus and down the hips, and, as she had a tendency to piles, Dr. Young had recommended hot fomentations and a sitz bath. She got no relief, however, and micturition became increasingly difficult, until three days before the tenesmus began the catheter had become necessary, and had remained so. On the morning of the day on which I saw her she was straining at stool, as the result of having taken some opening medicine as she thought. Suddenly something seemed to give way about the back passage; the lump appeared in the perineum, and the tenesmus and bearing down began. There had been no vomiting, and except during the spasms there was no abdominal pain.

Diagnosis.—The sudden appearance of the perineal swelling, its marked resonance, and the absence of redness of the skin over it seemed to point to hernia forcing its way through the pelvic floor. The boggy feeling of the interior of the pelvis I thought might also be explained in this way. If a hernia, it was evidently not strangulated, so, as my efforts to reduce it under chloroform were unavailing, she was left over the night with a bandage on the swelling and the pelvis raised. I hoped that gravitation and pressure might do gradually what manipulation had failed to effect.

After-history: Recovery.—By next morning her urgent symptoms had disappeared. During the night a large collection of foetid fluid and gas had burst through the vagina, and she had felt instant relief. The perineum had to be freely incised, and extensive sloughs were removed. The abscess had completely surrounded the rectum as far as the finger could reach. Dr. Young attended her through a miscarriage which occurred within a week, and by vigilant care and watchfulness prevented any contamination of the uterus from the abscess, which was discharging in the perineum and through the vagina. She is now in excellent health, with the affected parts soundly healed.

This was a case of gangrenous perirectal abscess. The extreme tenesmus must have been due as in the first case to irritation round the outside of the rectum, only it was in the cellular tissue instead of on the surface of the peritoneum.

Having been forced by these two cases to recognise that increased action of the rectum may sometimes be associated with inflammatory conditions outside and not inside the bowel, I was on the look-out for further illustrations of this symptom. The condition of the anus in perirectal cellulitis secondary to acute prostatic inflammation seemed to be one. Not only is there increased frequency of micturition, and straining at stool in such cases, but the anal sphincter seems unable to regain its tone. The anus becomes quite patulous and relaxed and allows the finger to be inserted without resistance. A condition like this has also been observed in advanced

cases of senile enlargement of the prostate, but in the light of the cases just narrated the explanation usually offered for that condition does not seem adequate. It is said that the very frequent straining to empty the bladder, during which the anal sphincter is also relaxed, lead to a continuous relaxation of the latter. This may be partly true, but does it not seem also probable that irritation from the wall of the rectum acting reflexly may be another factor in the condition, especially since in many of such cases inflammation in and round the prostate is superadded to the senile enlargement? On the other hand, frequent micturition, due to irritation of the vesical mucous membrane alone is not accompanied with anal relaxation, or if at all, to a much less extent.

These considerations were present in my mind when I was asked to deal with the following case last summer:

CASE III.—PELVIC ABSCESS.

History.—It was that of a student in the students' ward of the Edinburgh Royal Infirmary. Mr. Caird had opened a foetid appendicular abscess in the right side about ten days before, and being out of town for a day or two had asked me to take charge of the case in his absence. For about ten days after the operation progress had been satisfactory, but for a few days latterly the patient had not been so well. He had been duller, less inclined for food, pulse somewhat more rapid, and temperature inclined to rise. On the morning when I saw him a decided change for the worse had set in. His face was flushed, and his conjunctivae had a tinge of yellow; he was very drowsy and stupid. His temperature and pulse, if I remember rightly, were about 100. His abdomen was distended and tympanitic, but not tender. The nurse casually mentioned that he had had some diarrhoea, gradually increasing for the last day or two, and that he did not seem able to control the evacuations. She thought it due to increasing weakness.

Diagnosis.—On examination I found the anus patulous and a boggy feeling in the pouch of Douglas, which on bimanual examination amounted to indistinct fluctuation. Here, then, the symptoms seemed those of septic poisoning rather than of peritonitis; and the diarrhoea, patulous anus, and result of anal examination made it highly probable that an accumulation of foetid pus had occurred in the pelvis. Possibly an examination without the rectal symptoms ought to have been sufficient. They might, however, have been interpreted differently, and it was a great comfort to feel in urging an immediate operation that they strengthened the view one took instead of weakening it.

Operation.—He was put under chloroform without delay. I worked down in the middle line just above the bladder, and after separating coils of adherent intestine, I had the pleasure of reaching in the pelvis a small collection of most offensive pus. After this the patient made an uninterrupted recovery.

On referring to some of our textbooks I find sufficient notice of such symptoms to confirm these observations, but a sufficient absence also of notice to justify this attempt to bring them more prominently into notice. Thus as regards pelvic perirectal abscess, there is no allusion to tenesmus as a symptom in Allingham's, Ball's, Cripps's, or Matthew and Smith's works on the rectum. In some of the older books, however, there is. Thus Percival Pott¹ alludes clearly to the straining and tenesmus which accompany such abscesses, and so does Ashton.²

In the account of pelvic peritonitis, moreover, no mention is made of accompanying rectal symptoms in Zweifel's *Cyclopaedia*, nor in Hart and Barbour's *Manual*. In Pozzi's work on *Gynaecology* (translated by Wells, 1892), however, there is a passing reference to this symptom, but it is mentioned along with others, and no especial importance is attached to it.

But if peripheral irritation is able to excite the action of the rectum and simulate diarrhoea or dysentery, we may naturally ask if a similar phenomenon may not be found in connection with other parts of the intestine. On examination we find that it is so. In the first place it has been definitely proved by experiment. In 1896 A. S. Grünbaum read a paper at the meeting of the British Association on the effect of peritonitis on peristalsis. Only extracts of the paper have been as yet published,³ but Dr. Grünbaum writes in answer to my inquiry that "The gist of the whole point investigated can be put in a few words. In rabbits the introduction of irritants, whether chemical like turpentine, or bacterial like cultures of bacillus coli communis, cause increased peristalsis for about twenty-four hours. All portions were not equally affected, but the rectum was very decidedly. The inquiry was undertaken at Professor Nothnagel's request at Vienna." In the abstract which appeared in the *BRITISH MEDICAL JOURNAL* it was said that:

In the first twenty-four hours the peristalsis of both large and small intestine was increased; it then gradually diminished in about four days. The large intestine became paralysed before the small.

Appropos of this inquiry Professor Nothnagel⁴ says:

We have just been speaking of paralysis of the bowel in acute diffuse peritonitis. It would be a mistake to describe that as a necessary sym-

ptom. The relations of peristalsis are rather the following. Numerous clinical observations show that in acute diffuse peritonitis normal evacuation, that is, a normal degree of peristalsis, is found in individual cases. In puerperal peritonitis peristalsis may be even increased. To this one might fairly reply that the cause of diarrhoea was not the anatomical process of inflammation as such, but other causes acting indirectly. However, clinical observation and the results of experiments upon animals which Grünbaum undertook at my suggestion, teach us that in other forms of peritonitis also a distinct increase of peristalsis may be present at the beginning. Hence paralysis of the bowel can in no way be described as an invariable symptom of acute diffuse peritonitis.

Such clinical observations as Professor Nothnagel refers to may be found in Treves's well-known lectures on peritonitis.⁵ He says:

In 100 cases of peritonitis from the London Hospital the bowels were classed as "loose" in 28 instances. In some of these 28 cases there was actual diarrhoea, in other the bowels acted with frequency and without artificial aid; while in a third series of cases a free action was maintained by enemata or by aperients. In two cases of peritonitis in which diarrhoea was met with it was noteworthy that the peritonitis did not appear until after the diarrhoea had set in, a circumstance which suggests the action of the colon bacillus.

By this he seems to indicate that the diarrhoea might have led to the diffusion of the colon bacillus, and thus might have caused the peritonitis, but Grünbaum's experiments make it quite possible to suppose that the peritonitis caused the diarrhoea.

But there seems to be still another way in which experiment and clinical observation mutually throw light on one another. In the Bradshaw Lecture for 1892 upon the Signs of Acute Peritoneal Disease, Dr. Gee makes the very interesting suggestion that the pain of early acute peritonitis is really due in great measure to colic. Thus, after having pointed out how difficult it sometimes is to distinguish colic from peritonitis, he continues:

But it may be that in contrasting thus the pain of peritonitis with the pain of colic, we are seeking for a distinction where there is no real difference. Indeed, it is highly probable that the earlier physicians were often right, and that much of the spontaneous and paroxysmal pain of peritonitis is due to colic, that is to say, to vermicular contractions of the intestines much more powerful than usual. Surgeons tell us that when they open the abdomen in order to remove an ovary, the intestines are seen to be at first in very active movement; and that these movements may be painful is proved by what we sometimes observe in intestinal tympanites, when the peristaltic contractions of the bowels can be seen through the abdominal walls, each contraction being attended by an unnatural sensation or by actual pain.

From some remarks in other parts of this lecture, it would appear that Dr. Gee did not consider that peritonitis might cause an increase of ordinary peristalsis. Had he done so, however, it would only have increased the probability that his suggestion as to colic was correct.

We are now, I think, justified in believing that as the result of irritation round the intestine (produced most frequently by peritonitis), the following symptoms may be produced, that is, increased peristalsis amounting sometimes to severe spasm in the small and greater portion of the large intestine, and relaxation of the sphincter, frequent evacuations, and, in severe cases, intense straining and tenesmus, when the walls of the rectum are involved.

It is not, however, necessary to suppose that such symptoms will be prominent or even recognisable in every case of peritonitis or of perirectal irritation. If we take into account the following considerations this will not be difficult to understand. The peristalsis of the small intestine may be so irregular or so transient that it may not show itself as diarrhoea. Grünbaum found that the large intestine became paralysed before the small; hence the effect of the increased peristalsis might only be to fill the large intestine with an accumulation of faeces and gas. Again, in relation to the rectum it might be that certain forms of organism which often produce pelvic abscesses such as the gonococcus do not cause an irritation which is sufficiently intense to give rise to the symptoms in question. Or, again, it may be necessary that a certain area of the rectal wall should be affected in order that a perceptible result should be produced, and pre-existing adhesions may prevent this.

But, on the other hand, it seems not unreasonable to extend our view of the possibilities of reflex effects upon the intestine. If the afferent nerves of the intestine (whether of the mucous or peritoneal surfaces) can reflexly stimulate the intestinal muscular coat, why not afferent nerves belonging to the same splanchnic system but coming from other viscera in the abdomen, pelvis, or even thorax? This would explain the presence of colic from renal or biliary calculus, or from a severe onset of pneumonia, as in such cases as Mr. Symonds

has recently referred to.⁶ Already we know that the walls of the stomach are reflexly affected by such irritation, for vomiting is a common symptom in such cases.

Although we have confined our attention to reflex excitement of the intestinal muscular coat from irritation, we must not forget the possibility of a reflex paralysis coming on at a later stage, and thus increasing the paralysis due to involvement of the muscular coat itself.

In conclusion we may briefly consider some of the advantages to be derived from the knowledge gained from this study of a few symptoms:

1. Such cases as the first two which I have just described will be clearly understood, and therefore promptly and efficiently treated when they present themselves.

2. The possibility that increased action of other parts of the intestine may be due to a cause outside and not inside the walls of the bowel may often help us to account for otherwise obscure symptoms in ways perhaps that we cannot as yet realise.

3. The probability that colic may in like manner be caused by irritation outside as well as inside the bowel may be most valuable in helping us to form a diagnosis in a difficult case. Hitherto most of us have only recognised that many of the symptoms of peritonitis and of colic (intestinal, renal, or biliary) are often very much alike. Now we may be prepared to believe that some of them are identical. This, instead of discouraging us, should have the opposite effect. We shall know what symptoms to accept as possibly common to several causes, and we shall not put too much stress upon them. This will make us seek more eagerly for points in differential diagnosis. Thus perhaps symptoms which otherwise might have been missed or passed over as unimportant will be found lying ready to our hand as invaluable guides when we understand how to look for and use them.

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TWO CASES OF OPERATION FOR PERFORATING GASTRIC ULCER.

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THE first case of perforating gastric ulcer I saw in 1896, in consultation with Dr. Bennett, who, having made the diagnosis, telegraphed me to bring instruments.

CASE I.

Previous History.—The patient was a girl of 19, well developed, and exhibiting no obvious signs of anaemia. She was a shop-girl, and had been accustomed to long hours and hurried meals. When 9 years old she had been treated for a tuberculous elbow, and later for a tuberculous dactylitis. For the last seven years she had enjoyed the best of health. Until a fortnight previously to her present illness, apart from a very occasional dyspepsia generally due to some dietetic indiscretion, she had exhibited no signs of ulcer. She admitted being treated for palpitation two years before, and that she had been ordered to take iron pills.

History of Attack.—A fortnight before I saw her she had returned from her summer holiday, and after an attack of sea sickness had complained of pain after every meal. From its severity, the ease with which it could be localised, and the tenderness on pressure, the doctor diagnosed a gastric ulcer, and gave full instructions as to diet. A few days later the urgent symptoms arose, and Dr. Bennett hurriedly attended. He found the girl in very great pain, extremely tender over the abdomen, with rapid pulse and drawn face.

Operation.—I was sent for, and in less than 3 hours after the onset of acute symptoms the operation was begun. A median incision was employed, and the stomach explored, when a small opening was found about large enough to admit a crow quill. Through this some food had travelled, consisting of partially digested milk. There were no adhesions, and barely any signs of even local peritonitis; a little lymph surrounded the orifice, which could be removed with the finger. The edges of the ulcer were not indurated. There had been some escape of gas into the abdomen. The ulcer was situated on the anterior surface of the stomach, a little below the lesser curvature and quite at the pyloric end. There was nothing, therefore, to prevent a rapid inversion of the ulcer, and having roughened the parts around, a row of Lembert sutures completed the occlusion. The abdomen was irrigated, and the wound was closed without drainage.

After-history.—The patient vomited twice during the night, and complained of great pain over the abdomen, and the temperature the following day was 101° and the pulse 115. Two days after the operation there was no pain, the tongue was moist, the pulse 66, the temperature normal, and the patient evinced but little desire for food or water. On the third day she was fed on small quantities of peptonised milk, which gave her no incon-