brane had been sloughed, but section proved this was not the case. On May 20 immobility of the palate was noticed. On May 22 he had attacks of vomiting, the pulse rate was very slow, and there were occasional extrasystoles. These attacks continued until May 24, when the pulse rate was about 30 and the blood pressure 85/60. The patient died on May 24—a typical case of early cardiac failure.

DISCUSSION

Had we had only the first case under treatment we should have been inclined to think that penicillin had had a dramatic effect. The appearance of petechiae is usually regarded as an ominous sign. There is a high mortality in such cases, and those that recover usually have a hazardous passage: in this boy the striking features were the rapidity with which the membrane cleared and the almost complete absence of complications.

On the other hand, we have occasionally seen patients quite as ill, including one with haemorrhages from nose, throat, and rectum, who have recovered with very few complications on antitoxin and vitamin therapy. Also against too ready an acceptance of the effect of penicillin is the complete failure in our second case. It is possible that increased dosage might have helped. Symons (1945) gave almost double the dose in his successful case. He was convinced on clinical grounds, by the "most unusual, unexpected, and *rapid* disappearance of the extent of gelatinous membrane," that penicillin saved his case of bull-neck diphtheria. His description corresponds fairly well with our first case.

We are indebted to Dr. J. S. B. Penfold, who carried out the bacteriology, and to the medical officer of health for Southend-on-Sea for permission to publish.

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REFERENCE

Symmons, A. D. (1945). *Med. Off.*, **73**, 101.

Sigmoidoscopy: Perforation of the Rectum

In view of the many cases which to-day require sigmoidoscopic examination, the following notes may perhaps be useful, since they emphasize one risk of this procedure which is so well known as to be almost ignored.

CASE RECORD

An Italian prisoner of war aged 28 was admitted to a British military hospital with a history of having had amoebic dysentery in 1941. Since then he suffered from bowel irregularity, which had recently become more troublesome. A routine sigmoidoscopy was done at 9 a.m. by the Italian medical officer in charge of the case. This medical officer, who is experienced and competent in this form of investigation, noted that no blood or mucus was visible, but that at 8 in. (20 cm.) there were "two small superficial ulcers." It was recorded that at 6 p.m. the patient complained of some abdominal pain and his temperature was 99.8° F.

The surgeon specialist was called to see the patient the next day at 1 a.m., and found him very ill—pulse 130, respirations 60, and temperature 100.6° F.—and in considerable distress. The abdomen was much distended, tympanitic in all parts, generally tender and rigid, and silent to auscultation. Laparotomy was done at 11 a.m. under general anaesthesia. On incising the peritoneum a large volume of gas whistled out and the distended parietes collapsed like a pricked balloon. The peritoneum of the small gut and parietes was dark red and injected. The pelvic contents were bathed in thin grey foul-smelling pus and the depths were sealed off by plastic adhesions of bowel and omentum. About 2 in. (5 cm.) above the recto-vesical fold the anterior wall of the rectum showed a narrow darkly stained area of peritoneum extending horizontally half-way around the circumference of the bowel. Patches of similar appearance were seen in the caecum and lower sigmoid; in these two places the wall of the bowel did not appear to be thinned, but that in the rectum was actually perforated by a small tear near its centre; through this gas and liquid faecal contents bubbled on any manipulation. This tear was closed by three Lembert sutures, and these were buried by a flap of oversewn omentum. A colostomy would have been difficult without freeing the bowel and exposing extraperitoneal tissues, so a caecostomy was carried out; a large drainage-tube was put into the pelvis, and after the patient had returned to bed a tube was passed through the sphincter and secured by a stitch.

The patient's convalescence was stormy and precarious. Collapse of the left lung became manifest after 24 hours. Immediately after operation an intravenous glucose-saline drip and stomach suction were instituted. He was given 18 ml. of multivalent anti-gas-gangrene serum at once. Sulphathiazole therapy was started after 24 hours. 36 g. in all being given. The abdominal tube discharged foul-smelling pus profusely, but the wound itself united well. Cysts of *Entamoeba histolytica* were found in the caecostomy fluid on the fourth day. The abdominal drainage-tube was removed on the fifth day, but discharge continued through the sinus for 21 days. The caecostomy tube came away on the sixth day and the stoma healed without further discharge. The bowels moved normally on the eleventh day, when the patient became, and remained, afebrile. The routine treatment of the amoebic infestation was begun on the sixth day after operation, and from the eleventh to the fourteenth day 10 g. of sulphaguanidine was given daily by mouth.

It was considered that in all probability air inflation during the sigmoidoscopy, and not direct injury with the instrument, caused the above lesion.

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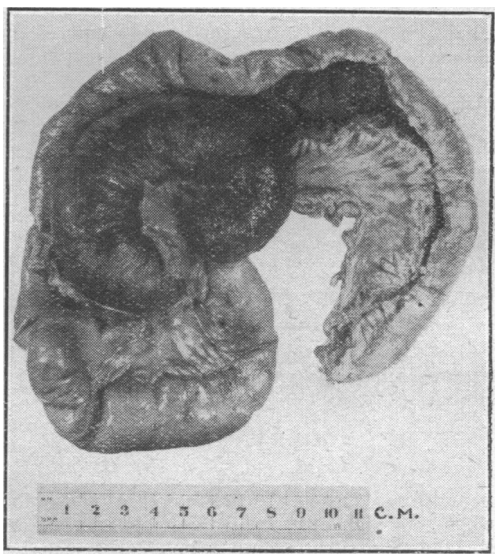
Volvulus of Small Intestine

In view of the recent communications on cases of intussusception and volvulus, I feel that the following case is worthy of note.

CASE RECORD

Mrs. A., a Jewess aged 39, was admitted here on Nov. 26, 1945, at 4.15 p.m., having collapsed in a shop about half an hour previously. She had already been seen by a general practitioner, who had administered 1/3 gr. (22 mg.) of omnopon to allay her severe abdominal pain, which had started suddenly and gradually increased for about half an hour previous to her collapse. On questioning, the patient stated that she had a constant sharp pain in the upper and middle abdomen which passed through to the back at the same level and was unrelieved by the injection. She had had no other similar attacks. The bowels were constipated and micturition was normal; she was nauseated but had no vomiting. In 1938 she had undergone Caesarean section, and during the past month had been treated with antuitrin-S for menorrhagia, but her last injection in this course had been nearly one week before admission.



On examination areas of tenderness to palpation were elicited in the epigastrium, in both iliac fossae, and in the left costo-vertebral area. There was no rigidity, guarding, or palpable masses. Heart and lungs, N.A.D.; T. 101.6° F.; P. 80; R. 24; B.P. 175/80; urine normal. A pelvic examination was abandoned because of severe shivering. Four hours later her pulse rate had increased to 90 and her B.P. was 160/80. There had been no more shivering, but the patient had vomited twice. The abdomen was tender below the xiphisternum and in both iliac fossae. A bulky uterus was the only abnormality noted on vaginal examination.

Laparotomy was decided upon, and the abdomen was opened in the right paramedian line under spinal analgesia after an intravenous drip had been started. By this time the B.P. was 140/70. Some blood-stained fluid was found in the peritoneal cavity and several enlarged tense black coils of twisted small gut were delivered. A volvulus of the small intestine was diagnosed and the gut was untwisted through almost a complete circle. The remaining part of the twist could not be undone, and the cause was found to be an irreducible intussusception involving the distal ileum to within 6 in. (15 cm.) of the ileo-caecal valve. Nearly two feet (60 cm.) of small gut was resected and enough terminal ileum remained to perform a side-to-side anastomosis. The peritoneum was closed without drainage and the patient returned to the ward. Intravenous therapy and gastric aspiration were continued for four days. The patient made an uneventful recovery, and was discharged 18 days later to complete her convalescence at home.

On examination of the specimen after operation no cause for the intussusception was found, although a Meckel's diverticulum had been confidently sought. (See accompanying photograph.)

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The Minister of Labour has made regulations entitled the Patent Fuel Manufacture (Health and Welfare) Special Regulations, 1946, which provide for the observance, in patent fuel works, of various specified requirements with regard to ventilation, the suppression of dust, washing facilities and clothing accommodation, medical supervision and examination, the protection of the eyes and skin of workpeople, and messrooms.