difficult to understand what he said, as he was so hoarse. He had another restless night. On the seventeenth day the wound was dressed and was looking well. On the eighteenth day he was very restless. He had become delirious the previous night, and was difficult to manage. He had some bromidia, which soothed him. The wound was dressed and all the stitches were removed. He had champagne in the evening, but the delirium continued and morphia was administered, which made him sleep all night. On the nineteenth day he was fairly clear in the head till the afternoon, when the delirium returned. He called on people, whom he expected to see round the foot of the bed, and wandered about looking for things. He had morphia at night and slept fairly well. On the twentieth day he was in much the same condition, and little change was noticed till the thirtieth day. He had been having oatmeal gruel made with milk up to this time, but from the twentieth to the thirtieth day he had only two quarts of milk in the twenty-four hours. What sleep he obtained was from morphia or bromidia. During the delirium which was worst at night, he kept looking for things in the bed or about the room. When spoken to quietly he forgot his fancies, but if thwarted he became violent. On the thirty-first day he complained of pain just below the right mastoid process, and there was pain on pressure over this spot. The breath had a disagreeable smell. He was very restless all day, put on his clothes and went downstairs, and was outside for a few minutes. His eyes had a vacant look, and he moved about in a state of excitement. On the thirty-second day a rounded, very tender swelling was visible at the angle of the jaw on the right side, and swallowing was very painful. He would not have the throat examined, but I saw that the soft palate looked red and glazed. He had whisky at night instead of morphia, and had no sleep. On the thirty-third day the swelling in the neck had increased. The anterior wall of the auditory meatus was much swollen and the skin was very red just below the right ear. The upper part of the mastoid was quite normal and not tender. The tonsil, seen inside, was larger than usual, but it did not look as if it was the cause of the swelling. All the throat inside was red and dry. At night he swallowed with less pain. He had a hypodermic injection of morphia and slept all night. On the thirty-fourth day there was oedema of the skin on the left side of the throat, as if hypostatic, for he had lain on his left side all night. The swelling on the right side looked like pointing just below the ear. The delirium had been in abeyance since the throat began to be sore. On the thirty-fifth day he could swallow freely. The right tonsil inside was seen to be large and the whole right side was swollen, extending to the middle line. He expectorated some greyish-looking matter and some streaks of bright red blood. The swelling on the right side externally was less, but there was an extension of the cedematous state of the skin from the left side of the neck to under the chin. He was fairly quiet all day, but the delirium returned at night. On the thirty-sixth day the swelling on the right side had extended towards the malar bone, and the skin was red and shining behind the ear. His mind still wandered, though he answered sensibly when spoken to. At night he thought that there were lizards and rabbits in the bed. We endeavoured to give him a hypodermic injection of morphia, but he resisted, declared that we were going to stab him and called for the police. On the thirty-seventh day the neck was much better, and he could open his mouth as usual. He was dressed and went downstairs in the afternoon and drank a cupful of tea, sitting at the table among the rest. His voice was still hoarse. At night the delirium returned. He was talking to people he had known at one time and was frightening crows at another. He had morphia, and slept well. On the thirty-eighth day he said that his neck was much better, and that his head was sore only when the centre of the cicatrix was pressed upon. The delirium continued. On the thirty-ninth day the neck was almost free from swelling, and it was decided to discontinue the use of the morphia, but to get him into the fresh air and so try to induce sleep. At 12.30 P.M. he was driven for six miles among the hills to a sulphur well, but he would not drink any of the water. He had a walk at the well. While in the trap, he kept looking for something in the bottom and paid no attention to anything on the way. On his return he had some soup, mutton, and potatoes, and then lay down on the sofa and slept for an hour. He was fairly quiet till 7 P.M., when delirium began again. He thought that folks were after him. He had no morphia, but fell asleep at 4 A.M. and slept till 7 A.M. On the fortieth day he was again driven to the sulphur well and drank a tumblerful and a

half of the water, which acted freely on the kidneys before he got home. Some of the water was taken home in bottles, which he drank, and thus kept up the diuresis. He slept after dinner and walked with me in the evening, talking quite sensibly and taking notice of things as we passed them. A lady came to tea whom he had not seen for a long time. He knew her, but rambled as he sat at tea. Going to bed at 11 P.M. he asked where his wife was; and on learning that she was in bed in another room he sent a message to her to come to her own bed, which she did. He kept sitting up in bed as if seeing something, but only once got out of bed. He slept from 4 A.M. to 8 A.M. On the forty-first day, on waking, he told his wife that during the night he thought that something was coming down the chimney; also that he saw a man sitting in the corner of the room, and on getting up to look he found another at the foot of the bed. He seemed to be puzzled, and asked her whether "she was ever that way." On questioning him he said that he remembered seeing the lady who was at tea on the previous night, but that he could not remember anything before that since his accident. He passed a large quantity of urine in the night. He was again driven to the well, and drank freely. He noticed things as we drove along during the day, and talked and was quite like himself, with the exception of a strange look about the eyes and the hoarseness. He gradually improved. His hoarseness was found to depend upon paralysis of the left vocal cord, the only trace of paralysis that remained. On the forty-sixth day he went to stay with some friends among the hills and returned in a week still hoarse, but all right as regarded the eyes and feeling well in every way.

The temperature, which was normal on the day of operation, rose to 100° F. next morning, but from that day until Aug. 21st it ranged for the most part between 98° and 99°. On the 22nd it rose to 100°, but by the 24th it was again normal. The pulse varied from 80 to 100, except on a few occasions, when it was only 60; and on Aug. 22nd it was 120.

Remarks.—The points of interest in this case seem to me to be: (1) the fact that the patient could, at the outset, with such a lesion go about and argue as to his condition; (2) the success of the operation; (3) the peculiar delirium, which disappeared with the onset of diuresis; (4) the swelling in the right side of the neck, as to the nature of which there may be some difference of opinion; and (5) that the paralysis of the left vocal cord was the only trouble left. The moral surely is that a surgeon who can trephine with impunity need never hesitate to do so where there is any doubt.

Canonbie, N.B.

A CASE OF INTESTINAL OBSTRUCTION. PRECEDED BY THE PASSAGE OF AIR AND FÆCES IN THE URINE FOR FOURTEEN YEARS.

BY J. CLELLAND CLARKE, M.B. EDIN.;

AND

F. A. SOUTHAM, F.R.C.S. ENG.

As the passage of air and fæces in the urine is a somewhat uncommon condition, particulars of only sixty-three cases having been collected in the valuable monograph on this subject by Mr. Harrison Cripps,¹ the following account of a case which was under observation for a period of fourteen years is perhaps worthy of record.

THE HISTORY OF THE CASE, BY DR. CLARKE.

In 1879 a gentleman forty-seven years of age suffered from dull continuous pain in the loins and lower part of the back and abdomen; this continued for two months, then became acute, and finally terminated suddenly, after which there was a discharge of pus with the urine. He then regained his usual state of health, but noticed from time to time a sputtering and explosive discharge of air in micturition; he also had occasional mild attacks of cystitis and irritability of the bladder. At this time he was attended by Sir W. Roberts and the late Mr. R. A. Clarke of Farnworth. I first saw him professionally on Aug. 4th, 1887, for an attack of bilious vertigo, which soon passed off. At this time he suffered occasionally from cystitis, irritability of the bladder, passage

¹ The Passage of Air and Fæces from the Urethra. By W. Harrison Cripps, F.R.C.S. Eng. London, 1888.

of air with urine, and a discharge of fluid before defecation in the morning. In the intervals of his attacks of cystitis his general health was good. In 1888, by my advice, he consulted Mr. Reginald Harrison, who found débris of muscular and vegetable tissues in the urine and diagnosed recto-vesical fistula. In June, 1889, while travelling in Germany he had an attack of constipation which lasted for a week, and from this time he suffered more or less from a constipated habit. In July, 1890, while at Harrogate, he had a more severe attack of cystitis, and for the first time matter distinctly faecal in colour and odour appeared in the urine. With rest in the recumbent position this gradually passed off, and he regained his usual state of health. In March, 1893, after another attack of cystitis, faecal matter passed freely into the bladder and was discharged per urethram without difficulty. No urine was discharged per rectum, the bowels were habitually constipated, and the evacuations were small in quantity, but properly formed. He did not feel comfortable unless the bowels acted at least twice daily; in other respects his condition was good. On Aug. 11th, after the bowels had been confined for four days, he was seized with severe pain in the lower part of the abdomen, accompanied by distension. On the administration of saline purgatives with occasional enemata the bowels acted slightly on the 12th, freely on the 13th, and partially up to and including the 19th; the pain almost subsided, but the distension continued. On the 20th the bowels did not act, and the distension increased. On the 21st I called in consultation Dr. D. J. Leech of Manchester, and the treatment was continued as before. On the 23rd the distension had further increased, there was no relief to the bowels, and there was occasional vomiting. A full dose of calomel was given, and an enema by means of a long gum-elastic tube was tried; the tube passed easily for a distance of two feet; there was a discharge of flatus by the tube, and a small quantity of faeces was passed after its removal. This caused no pain or discomfort, but there was no relief to the distension or obstruction. On Aug. 24th, after consultation with Dr. Leech and myself, Mr. Southam performed right inguinal colotomy, as the symptoms were becoming urgent, and it was hoped that an opening into the caecum would be above the obstruction, which was believed to be situated in the large intestine, though it was impossible to determine either its nature or its exact position.

DESCRIPTION OF THE OPERATION, AND REMARKS, BY MR. SOUTHAM.

The patient having been anaesthetised, the caecum was readily exposed by an incision, two inches and a half in length, made about an inch internally to the anterior superior spine of the ilium, and as it was found to be distended it was evident that the obstruction was situated lower down. The bowel was attached to the margins of the wound in the skin and parietal peritoneum by numerous fine silk sutures, which included the serous and a portion of the thickness of the muscular coat of the intestine. Additional sutures were also passed through the angles of the incision, so as to completely close the general peritoneal cavity, a small portion of the caecum, about the size of a shilling, being left exposed in the wound. The urgency of the symptoms and the distension of the abdomen being too great to admit of performing the operation in two stages, an incision was made into the exposed portion of the caecum, and this was at once followed by a free discharge of gas and faecal matter. The subsequent treatment consisted in keeping the wound as clean as possible by frequently irrigating it with boric lotion. The operation was followed by complete relief, the distension gradually disappearing, and the abdomen becoming soft and flaccid. On the third day there was a natural action of the bowels, and after this date until the termination of the case gas and faecal matter escaped freely by the rectum as well as through the wound. For the first week the progress of the patient was in every way satisfactory; he took nourishment well, the pulse and temperature were normal, and his abdominal symptoms were quite relieved. On the evening of the eighth day he was suddenly seized with a severe rigor, the temperature rising to 104° F. This was repeated early the following morning, and, symptoms of collapse setting in, he gradually sank, death taking place on the tenth day after the operation.

The chief points of interest in connexion with the case are as follows: 1. The probable origin of the fistulae in an abscess in the cellular tissue between the rectum and bladder, over 70 per cent. of the recorded cases being of inflammatory origin. 2. The long period—viz., fourteen

years—during which air and faecal matter escaped in the urine without causing any great inconvenience. 3. The subsequent formation of a fibrous stricture immediately above the communications between the rectum and bladder, as the result of chronic inflammatory changes set up in the wall of the bowel by the long-continued irritation. 4. The sudden occlusion of the stricture by the prolapse of a polypoid fold of mucous membrane, which acted like a ball-valve, preventing the passage onwards of faeces, but allowing the introduction of an enema-tube in the opposite direction. 5. The restoration of the natural route after the distension of the bowel had been relieved, and the pressure on the proximal side of the stricture removed by the performance of colotomy. 6. The supervention of gangrene of the wall of the bowel above the stricture, owing to interference with its circulation from pressure and distension by retained faeces previously to the operation.

REPORT OF POST-MORTEM EXAMINATION, BY DR. KELYNACK.

On opening the abdomen—the only part examined—the union between the caecum and abdominal wall at the seat of operation was found to be perfect; there was no evidence anywhere of peritonitis. The lower part of the sigmoid flexure, with the upper part of the rectum, was dark in colour, soft in consistency, and evidently in a necrotic condition; there was no intra-peritoneal perforation of the bowel. On laying open the lower part of the intestinal canal a distinct fibrous stricture nearly two inches in length was found about eight inches from the anus. It admitted the tip of the forefinger on gentle pressure. The mucous membrane was somewhat thickened and forced downwards into the lumen of the stenosed gut in polypoidal projections. One of these, which was distinctly larger than the others, almost blocked the narrowed canal and, when engorged with blood during life, doubtless played an important mechanical part in the production of the final obstruction. There was very little inflammatory thickening around the gut, but the stenosed portion, with the part immediately beneath it, was firmly adherent to the left side of the posterior wall of the bladder. Almost immediately below the stricture there was a fistulous opening sufficiently large to admit a full-sized catheter. The fistulous tract passed downwards, inwards, and forwards between the coats of the bladder, communicating with that viscus by four small irregular openings with thickened and rounded edges, situated nearly in the middle line at the base and lower part of its posterior wall. The bladder contained faecal matter mixed with urine, but presented no distinct evidence of cystitis. The fistulous tract also burrowed upwards in the wall of the bowel, extensively separating its mucous lining and opening into the intestinal canal at several points both within the strictured portion and above it. At several places the walls were so thinned and necrotic as to be readily lacerable upon gentle traction. There was no evidence of any pelvic abscess or localised peritonitis, and no growth could anywhere be detected. The adhesion between the rectum and bladder was so limited that the recto-vesical pouch presented no evidence of any inflammatory matting. The remaining portion of the intestinal tract presented no important features. The kidneys were somewhat granular, but neither they nor their ureters showed any traces of either recent or old suppurative mischief.

ON THE EFFICACY OF CHLORAL HYDRATE IN LABOUR.

BY JOHN E. GARNER, M.D. ABERD.,
HONORARY MEDICAL OFFICER TO THE PRESTON INFIRMARY.

HAVING recently attended three primiparae under the following circumstances, I think they are worthy of report and may be useful examples of the great good that attends the use of chloral hydrate.

CASE 1.—This case was that of a strong muscular woman thirty-eight years of age, to whom I was called on April 1st, 1892, at 7 A.M. She had been restless all night, suffering from frequent pains and general uneasiness. On vaginal examination I found that the os uteri had made no progress to dilatation. Accordingly I gave her one grain of opium in order to allay this irritability. At 2 P.M. she continued to be much in the same way; the opium had not done any good so far as I could judge. My next visit was at 9 P.M. At