tumour in the iliac fossa, over which the abdominal walls can be freely moved, at once establishes the true nature of the affection; but when the inflammation and swelling have extended to the abdominal walls, it becomes doubtful whether the disease is simple abscess of the iliac fossa, or whether the suppurative is the result of caries and necrosis of the bodies of the lumbar vertebrae (*Charlestown Med. Journ.*, No. vi, 1848: Ranking's *Half-Yearly Abstract*, vol. x, p. 106). Some excellent remarks on the diagnosis of pelvic abscess were given by Mr. Erichsen in a clinical lecture, delivered at the University College Hospital (*Medical Times and Gazette*, Nov. 3, 1860, p. 484.)

One circumstance was somewhat puzzling. Whence came the air, which had evidently gained access to the cavity of the abscess before my visit, on the 5th of May? The splashing sound on succussion was most marked, and the foetid condition of the pus, when it was discharged, indicated the contact of air. It was our impression that, when our patient felt the 'burning' sensation over the abdomen at stool, the abscess burst into some part of the track of intestine. We had not then an opportunity of examining what passed the bowels, and afterwards saw nothing like purulent fluid with the faeces, although careful examination was made for some time. Nevertheless, we thought it probable that a portion of the contents had escaped into the intestine, which produced the comparative flaccidity of the swelling, and led to the subsequent admixture of air with the pus. Copland cites cases in which abscess had burst into the intestine, and pointed, at the same time or soon afterwards, externally (*Diet. Pract. Med.*, Art. *Cæcum*).

The treatment of the case claims a few observations. Valuable as must be regarded the surgical axiom, that the sooner an abscess, especially if beneath a fascial membrane, is opened the better; there are cases where this axiom cannot early be acted upon, and I believe that this case was one of them. Until the collection had contracted some adhesion to the abdominal walls in the iliac region, it would be difficult to decide upon the correct spot for introducing a bistoury. The depth at which the fluctuation could be felt in the lumbar region would preclude the choice of that spot; and the fear of involving the peritoneum would deter one from plunging a bistoury into the tumour in the iliac region, if the walls of the abdomen could be loosely pinched over it in that direction. In this case, too, the laxness of the swelling caused by the probable escape of a portion of its contents into some part of the intestinal canal, diminished the urgency of opening it, at the same time that it rendered it more difficult to fix upon a spot for opening it, until it had shown some disposition to point. Perhaps the safest and most practicable mode of opening it would have been the plan recommended by Abernethy in chronic abscess; to have made an opening in the most depending part of the swelling below Poupart's ligament, and gradually to have discharged the contents at intervals, as it could have been borne by the patient. We decided upon not doing this; in the first place, because it was not clear that the abscess showed any disposition to point in this direction; and in the second place, and for the same reason which would apply with equal force to opening it in any direction, the effects of the discharge were specially to be dreaded however and wherever brought about. The constitutional disturbance was so extreme that we feared that the vital powers would give way upon the establishment of this extensive drain, and that the patient's only chance consisted in gaining time, and in fortifying the system to the utmost possible extent. The fortunate result of leaving to nature the choice of the spot for emptying the contents of the abscess, I think, amply justifies the course which was pursued. An earlier indication of this spot by adhesion to the cutaneous tissues, and the appearance of an incipient redness of the skin, would perhaps have justified the use of the bistoury; but under no other circumstance can I come to the conclusion that we should have given the patient a better chance of recovery by opening the abscess. As to the possibility of producing resolution of the inflammation and preventing suppuration, it is obvious that means to bring about this effect can only be resorted to in the earlier stages of the case. I was recently consulted in two cases where there was every threatening of abscess in the iliac region; and in one case, indeed, we could distinctly feel deep fluctuation. We decided to push on vigorously with those measures, both local and constitutional, which were most likely to produce resolution and absorption; and we did so with the most marked success.

Before concluding these remarks, I would allude to a plan of opening abscess in the iliac fossa, first proposed by Dr. Gurdon Buck of New York, and suggested by a

careful study of the surgical anatomy of the parts involved. It has been very successful. The following is the mode of proceeding in one of his seven cases, as related by Dr. Buck: "An incision, one inch in length, was made at a finger's breadth below the middle of the outer half of Poupart's ligament, through the skin, subcutaneous tissue, and fascia lata; a probe was then passed deeply upward and backward, and, on being withdrawn, was followed by an escape of pus; whereupon the track of the probe was enlarged, and a free outlet afforded for the contents of the abscess, with evident relief to the patient." (*New York Journ. of Med.*, March 1857: Ranking's *Half-Yearly Abstract*, vol. xxviii, 1858, p. 229). The advantages of this operation are, that it gives the most dependent outlet for the matter, and it is not likely to involve the peritoneum or important blood-vessels. I should certainly not hesitate to adopt it in a suitable case. Compared with psoas abscess, the prognosis of iliac abscess would probably be pronounced to be favourable; yet Grisolle (*op. cit.*) shows that it is sufficiently dangerous. He says, that of seventy-three cases twenty were fatal and eleven serious. There can be no doubt of the serious, and fortunately not fatal, nature of the case above recited.

REMARKS ON OBSTRUCTION OF THE BOWELS: WITH CASES.

By EDWARD COPEMAN, M.D., M.R.C.P., F.R.C.S., Physician to the Norfolk and Norwich Hospital.

[Continued from page 937.]

CASE III. *Fatal Obstruction from Constriction of the Colon.* Master —, aged 14, had an attack of peritonitis about a year ago, and a second a few months since, from which he appeared to have quite recovered. About a week ago, whilst at school, he was much distressed from want of relief in the bowels, but his master refused him leave to go to the water-closet; and when he got home he complained of pain in the abdomen: the bowels then acted imperfectly with great effort, and afterwards refused to act at all. When I saw him on the evening of December 22nd, he was breathing rapidly, vomiting frequently, and had a pulse beating 140 or more in a minute. He had been carefully treated by the same medical man who had attended him on former occasions, who told me he had been suffering considerably from pain in the abdomen which had ceased suddenly. The abdomen was tympanitic, and it was evident that he was rapidly sinking from fatal abdominal mischief. He died early the following morning. On examination after death, four or five inches of the colon were found twisted like a cork-screw, and crossed here and there by several strong bands of lymph, forming a sort of network over the bowel. These bands were very firm, and the result, no doubt, of former inflammation. There were also marks of severe recent peritonitis, with sero-purulent effusion into the abdomen.

This case is instructive, inasmuch as it proves that peritoneal inflammation is, at all events, one of the causes, if not the only one, of the formation of those membranous bands which are so often found entangling some portion of the intestines, and producing internal strangulation at some future time. It also points out the danger of neglecting the calls of nature, and the inexcusable conduct of those schoolmasters who refuse the temporary absence of a boy from the schoolroom for a necessity that has no law. I believe this refusal is often made a rule, probably on account of suspected idleness on the part of the scholar; but surely the occurrence of one such case as this, where undoubtedly the inability to attend to the call for relief was the starting point of the fatal attack, should induce every conductor of a school to submit to the possibility of being deceived, rather than run the risk of refusing a boy the opportunity of going to the water-closet when he really has occasion to do so.

CASE IV. *Fatal Peritonitis, probably from Internal Strangulation.* I was summoned, in consultation, to Mrs. B., about 60 years of age, who was attacked last Monday (this being Sunday) with severe pain in the abdomen and sickness. She had taken aperients the day before, which had acted freely; but she was habitually subject to constipation, and years ago had suffered from inflammatory attacks in the abdomen. During the past week she has laboured under acute peritonitis, and been treated with leeching, calomel and opium, fomentations, injections, etc., but the bowels would not act, and her medical attendant considered that internal strangulation of some kind had taken place. No tumour could be discovered in any of the usual

situations of hernia. When I saw her at five o'clock this morning, her hands and feet were deadly cold; no pulse could be felt at the wrist; the beats of the heart could be heard amounting to 140, the respiration was rapid and laboured, and there was every sign of irreparable mischief in the abdomen, which was still distended and painful, though less so than a day or two before. She was perfectly conscious, and lingered until four o'clock in the afternoon.

I regret that no *post mortem* examination was allowed, but, from the history of previous attacks of abdominal inflammation, I think it probable that a membranous band or bands, such as those described in the preceding cases, had entangled some portion of the bowel causing strangulation and death.

CASE V. *Fatal Obstruction from Sloughing of the Appendix Vermiformis.* Oct. 21st, 1858. I attended a *post mortem* examination of the body of a young man, 17 years of age, who died the day before under the following circumstances. He complained of feeling sick five days before, and had uneasiness in the body. The next day he was not so well, but no particular notice was taken of it until the following day, when he was so unwell that a surgeon was called in, who thought it a bilious attack and gave aperient medicine. No relief followed; other medicines were given, and injections were administered, but the bowels would not act. No alarm, however, was felt until yesterday morning, as there had been no fever and the pulse had remained quiet; but at this time a sudden change occurred, the pulse ran up to 120, the abdomen swelled and became more painful and tender; distressing sickness followed, and he died soon after midnight. On examining the body the next day, we found severe and universal peritonitis, considerable effusion of lymph and purulent serum, portions of the small intestines in a sloughy state, and, (what we considered the source of all the mischief), the appendix vermiformis obstructed by a substance of the size of a kidney-bean, and the distal end of it sloughy and disorganised. The escape of matter from this part was probably the cause of the general peritonitis, which so quickly led to a fatal termination.

CASE VI. *Fatal Obstruction, probably from Impacted Gall-Stone in the Sigmoid Flexure of the Colon.* November 6th, 1854. Mr. E., an innkeeper, of middle age, consulted me on account of pain in the abdomen, with constipation, and an appearance of impending jaundice. After treatment for a week, he reported himself as much relieved. His bowels had acted comfortably, and his complexion was more natural. I advised him to keep up a free action of the bowels, to take a mild nutritious diet, and to avoid cold.

I saw no more of this patient until the morning of the 23rd, when I was summoned in consequence of his suffering from considerable pain across the abdomen of an intermitting character, like colic, and vomiting everything taken into the stomach. The pulse was not much disturbed. The tongue was furred. The left iliac region was fuller than that of the opposite side, and tender on deep pressure. I could also feel that the colon in that situation was impacted with faeces. He had no fever. His history was that he had been going on quite well until yesterday, when he went out in the evening to a card party, and took too much stimulus; and that when he returned home he was very sick. He took a calomel powder, followed by a black draught, and turpentine fomentation. In the evening, I found he had vomited the medicine, and had no relief from the bowels. Pulse 72. He was ordered to repeat the calomel powder, and have an enema early in the morning.

Nov. 24th. The vomiting continued, and the enema returned without any faecal appearance or smell. He had pain in the abdomen at intervals. The urine was loaded. Pulse 100. The tongue was foul, but moist. He was ordered to take half a grain of calomel and the same quantity of opium every four hours; hydrocyanic acid mixture when the vomiting was troublesome; to have a blister applied to the abdomen; and a purgative enema.

In the evening, there was much less pain, but he had had no motion, the injection having returned uncoloured. The blister had drawn well. He had been sick only once since the morning. Pulse 60. The calomel and opium were continued.

Nov. 25th. He had a good night, with much less pain. Pulse 72. The tongue was furred. He had no vomiting since twelve o'clock last night. No motion had taken place; but there had been some tenesmus and mucous discharge from the bowel. The pill was continued, and the enema was repeated.

In the evening, he had had no vomiting, and had been comfortable during the day. The last enema smelt of faeces, but had no faecal matter in it. The pills and enema were repeated.

Nov. 26th. He passed a restless night, and complained of increased tenderness in the left side of the abdomen, which was also more tense. He had no return of vomiting. The pulse was under 70; the tongue furred. He had had no motion, but the injection was tinged with blood, and smelt more of faeces. There was tenesmus. Six leeches were applied; an enema of starch and opium was given; poultices were applied; and the calomel and opium were repeated.

In the evening, there was less tenderness, but no motion. An enema given this afternoon was also tinged with blood; and he had several times passed a little bloody mucus with a strong faecal smell. The colon was distinctly felt to be loaded near its sigmoid flexure. He had taken a small dose of colocynth and henbane twice on this day.

At night, Mr. — visited the patient with me, and we attempted to use O'Beirne's tube, which we could pass up about six inches; and then it came into contact with a very firm substance, against which we could hear the instrument strike, and which, when pushed up a little by the tube, fell back upon the end of the tube. On pushing it up with the tube, and suddenly withdrawing the latter a little way, the mass would fall down against the instrument, giving rise to a very sensible *ballottement*; we were able also to inject fluid past it to the amount of a pint and a half or more. The rectum between the anus and the obstructing substance was very capacious, and its mucous membrane healthy. The substance we felt with the tube seemed hard enough to be capable of wounding the lining of the bowel in attempts to remove or expel it; and this was probably the cause of the bloody discharge. A little air passed when the injection passed away, and perhaps a little faecal fluid, but no motion worthy of the name. We repeated the colocynth and henbane.

Nov. 27th. The patient slept in the night, and had less tenesmus. He took an ounce of castor oil this morning early, and had no sickness. Pulse 90. He passed a few ounces of bloody liquid this morning, smelling strongly of faeces, but no motion. He felt weary and exhausted. The left side of the abdomen was not quite so tender; but he said he felt a good deal of pain there when he attempted to lie on the right side. The compound colocynth pill was repeated. He took another ounce of castor oil in the afternoon.

At night, we again introduced the tube, and felt the same hard and slightly moveable lump as before; and, after a while, by pressing the end of the tube against the obstruction and endeavouring to force the fluid out of the syringe, we found that the tube passed on, and we got it up as far as two-thirds of its length, and then the injection passed up freely. It became therefore pretty clear that we had passed fluid up beyond the obstruction; and the idea that it might possibly have been caused by twisting or constriction, was well nigh dismissed. The injection came away of a darker colour, and with a strong faecal smell; so we gave two more pills, and ordered another ounce of castor oil to be taken early in the morning. He seemed rather weaker, and was suffering from piles.

Nov. 28th. He had a very fair night; he took the castor oil, and had two or three evacuations of a liquid character, but evidently containing some dissolved faecal matter. There was still a good deal of swelling and tenderness in the left lumbo-iliac region, but rather less than on the previous day, and a poultice was ordered. He was also taking calomel and opium three times a day. He had no nausea or sickness; nor was there any slime or blood in the stools. He had had some egg, milk, and brandy, and wished for broth. The tongue was loaded; the pulse 90; the countenance cheerful. His piles were painful.

In the evening, more liquid evacuations occurred, but nothing solid. The tumour was perhaps less prominent. His general strength was diminished. The pulse was 120. The calomel and opium were omitted; the castor oil was repeated; and he was ordered to take an opiate draught occasionally.

Nov. 29th. He took rather too freely in the night, and suffered from distension of the abdomen, which, however, was not more prominent than on the previous day in the situation of the obstruction. He had had two more liquid faecal stools. The pulse was 120. Finding him weak and faint, we determined to omit for a time all further purgative medicine, and to trust to injections, and such soothing and tonic measures as might be required. We used the tube this morning, but could not pass it beyond the obstruction; but we found the same remarkable *ballottement* as before, a sensation of some heavy, hard, and somewhat moveable substance impinging upon the end of the tube. The injection afterwards passed away coloured with faecal matter.

He had two or three liquid fecal evacuations during the day, and was not worse at night. He had taken grain-doses of quinine, with an effervescent ammonia mixture, during the day.

Nov. 30th. He took two calomel and opium pills in the night, on account of restlessness. He had only one small liquid motion during the night. The abdomen was more tender, and more generally distended. The countenance was dejected. The pulse was weak, but not more rapid than yesterday. He had no sickness. We determined to apply turpentine stupes to the abdomen; to give port wine negus, good broth, and a dose of castor oil and laudanum; and to repeat the injection in the evening, if we then found him in a fit state to bear it. He appeared to be gradually sinking; and yet he had evidently a passage through the canal sufficient for fluid to pass; and the solid obstruction (perhaps a large gall-stone) seemed almost within reach of manipulation.

In the evening, we found him so much more feeble that we declined further interference as hopeless, merely giving some opium to ease his pain. He died at about nine o'clock the following morning.

No *post mortem* examination was allowed.

It was unfortunate that in this case I could not obtain leave to examine the body after death, for without this it has lost chief of its practical interest. I offered the wife every possible inducement to allow it, but failed to make the slightest impression upon her mind in favour of what I most urgently requested.

[To be continued.]

CASE OF IMPERFORATE RECTUM, WITH MALFORMATION OF THE COLON.

By THOMAS O'CONNOR, Esq., March.

Mrs. A. B., the wife of a labourer, was delivered of an apparently healthy child. Five days afterwards, I was consulted by the mother, who informed me that her infant's bowels had never been relieved. I passed my finger into the rectum, and found that it terminated, at about three-fourths of an inch from the anus, in a *cul-de-sac*. Having consulted with a neighbouring surgeon, I determined on dividing the obstructing membrane. This I effected with a probe-pointed bistoury, but failed to reach the bowel. I subsequently dilated this opening with a full-sized common bougie, and after that with a small rectum-bougie, passing these instruments fully two inches without resistance. Ultimately, the aperture was large enough to admit the little finger; but as no fluctuation, such as would indicate the proximity of a bowel, could be detected, I abstained from further operative proceedings. As after events proved, it was well that I did so, as I could not have reached the bowel.

The child lived until the sixteenth or seventeenth day, when it died, with an enormously distended abdomen. It took daily, for the first twelve days, a fair quantity of food at intervals of four or five hours, and rejected it by vomiting, copiously tinged with bile, after having retained it about half-an-hour. The urine passed was excessive in quantity, and highly ammoniacal. The complexion, up to within the last two or three days of life, was clear, and might be considered consistent with perfect health.

A *post mortem* examination revealed the following anatomical conditions. The anus was normal, with its sphincter muscle well developed. The rectum, as far as it went, was sufficiently capacious, terminating, as I have stated, in an impassable pouch at about three-quarters of an inch from the anus. The posterior surface of this pouch was fixed to the tip of the coccyx by a granular substance, resembling in texture the mesenteric glands. The cæcum occupied its normal anatomical position in the right iliac fossa. The ascending colon, which received the ileum in its usual position, pursued its normal route; so did the transverse colon. There could hardly be said to be any descending colon; for at the upper border of the left kidney it became suddenly contracted, as if a ligature had been cast around; it here degenerated into a fibrous cord which, descending and diverging from its course towards the promontory of the sacrum, terminated at that point by uniting and identifying itself with the iliac fascia. The bladder, which was empty, was unusually large, capable of containing four ounces of fluid, and placed not in the pelvis but in the abdomen, *i. e.* in the left iliac fossa, occupying the place assigned,

in the normal position of parts, to the sigmoid flexure of the colon. The urethra was necessarily more than double its natural length, measuring two inches and a-half, and large enough to admit a full-sized catheter. The true pelvis was so contracted as to be scarcely capable of lodging a pigeon's egg.

An opening into the left iliac fossa, had I advised such a proceeding, which I did not, would have failed to give relief, as the large intestine, as has been stated, degenerated into a cord impervious at a point corresponding to the upper border of the left kidney. The only practical hint which I can see in connexion with the case, and which entitles it to notice at all, is the following: If in imperforate anus, or suspected deficient rectum, the surgeon should feel it his duty to recommend an opening into the left iliac fossa for the purpose of establishing an artificial anus, it will be well to bear in mind that nature sometimes, in her erratic humour, leaves out the whole of the descending colon, or substitutes for it a shrivelled and impervious fibrous cord.

OBSERVATIONS ON THE MORBID ANATOMY, PATHOLOGY, AND DETERMINING CAUSE OF EMPHYSEMA OF THE LUNGS.

By A. T. H. WATERS, M.R.C.P., Physician to the Liverpool Northern Hospital; Lecturer on Anatomy, Physiology, and Pathology, in the Liverpool Royal Infirmary School of Medicine.

[Read before the Royal Medical and Chirurgical Society.]

PART I.

The different kinds of Emphysema. Vesicular Emphysema; its various forms. Modes of Preparation of Lung Tissue for examination. Changes which take place in the Air-Sacs in the different Stages of the Disease. Condition of the Blood-Vessels; of the Bronchial Tubes. Is the Disease attended with any Degeneration of Tissue? Interlobular Emphysema.

[Continued from p. 913.]

PULMONARY emphysema is of two kinds:—I. *Vesicular Emphysema*; II. *Interlobular Emphysema*. The first is by far the most frequent and most important affection. I have rarely seen the second, except in advanced cases of the first kind.

1. *Pulmonary Vesicular Emphysema* exists in three forms, not differing in their minute anatomical arrangement, nor yet probably in their essential nature, but only in the extent to which they involve the lung. We have, firstly, that which is the most partial, and confined to a few air-sacs or to a single lobulette; secondly, that in which the whole of a lobule is affected; and thirdly, that in which the whole of one lobe of a lung, or, more frequently, the whole of the lung itself, is involved in the disease.

1. The first form of the disease, or *partial lobular emphysema*, is not often seen as an independent affection; but in lungs in which the second form exists, we occasionally meet with small patches of dilated air-sacs, especially along the margins of the lobes—patches which clearly only involve a few air-sacs, or at most, a single lobulette. These portions resemble enlarged vesicles; and, as pointed out by M. Lombard of Geneva many years ago, have very much the appearance of the vesicles of pemphigus. They push outwards the pleura, so as to raise it above the level of the surrounding lung-tissue. They are not simple elevations of the pleura, as may be distinctly seen in injected preparations, when the blood-vessels belonging to the air-sacs may be seen ramifying beneath the pleura. Sometimes these partial emphysematous patches are seen extending for some distance along the margin of the base of the lung, and they have then an appearance very like that of a row of beads.

2. The second form, or *lobular emphysema*, is that most frequently met with; in fact, in the majority of *post mortem* examinations I have seen, since my attention has been directed to this subject, I have found this form of emphysema more or less prevailing. It involves one or more lobules in different parts of the lung, and is more especially found along the margins of the base of the lung, the anterior border, and apex of the lung. This is the kind of emphysema so frequently found in cases of phthisis; I have also witnessed it in cases of pneumonia where the lung has become consolidated; and