tube. During the day-time the tube and celluloid receptacle were retained. In this way the contents of the small intestine flowed normally into the large intestine during the night-time, but passed through the artificial anus into the bottle during the day-time. The colon had twelve hours of absorption, and twelve hours of rest, its working hours being of sufficient duration to keep the patient in good general health, and its resting hours sufficient to keep in check the colitis, which, though still not absolutely well, caused no inconvenience. This plan of blocking the plug during the night-time was adopted in May, 1903, and as the patient is still, nearly three years later, in perfect health, I think there is no doubt as to its success.

Three points of great interest arise in connexion with this case:

1. The haemorrhages seemed to be undoubtedly dependent upon the saline and even the plain water injections, but how? No pathologist has yet been able to help me with an answer. The process, whatever it may be, must surely be very complex, looking at the fact that it took three and a half months of injections to produce the effect in the first place.

2. Are we not justified in fearing that the scant respect now shown to the colon by some surgeons may possibly be followed by disaster? What fate may perhaps befall those whose large intestines have been short-circuited, or even boldly removed *in toto*, according to the latest fashion, for chronic constipation, or, one may hope, for greater evils? With regard to entero-anastomosis perhaps sufficient absorption may take place from the sigmoid and rectum to maintain nutrition, but with regard to complete removal of the colon there seems to be no saving clause. As far as my patient, at any rate, is concerned, I am persuaded that, should he cease to block his caecal anus in the way described for a sufficient number of hours in the twenty-four, and so exclude his colon from its duty of absorption, his progress downhill to ultimate death would be sure, if slow. Fortunately in his case he can regulate matters for himself.

3. Do not those people, and there are many of them (chiefly women), who every night take an aperient pill of such a character as to produce on the following day a liquid evacuation, interfere seriously with their own nutrition; and should they not be persuaded to withhold the dose, at any rate, every other night, and so give their large intestines a chance of useful absorption? Certainly these people get very thin. The caecal cesspool is perhaps more worthy of praise than abuse, and at any rate should not be emptied too frequently.

REMARKS ON

A CASE OF LARGE OVARIAN CYSTOMA, WITH TWISTED PEDICLE, COMPLICATED BY SUPPURATIVE APPENDICITIS.

By JOHN T. HEWETSON, M.D., M.Ch., F.R.C.S.,
ASSISTANT OBSTETRIC OFFICER, GENERAL HOSPITAL, BIRMINGHAM.

THE following case, apart from its extreme rarity, illustrates points of such great interest in the production of appendicitis, the effective drainage of localized peritoneal suppuration, as well as other clinical features connected with the diagnosis of the case, that one is certainly warranted in placing the facts before the profession.

E. T., aged 22, has been married twelve months, without family.

Family History.

Father, mother, five sisters, and four brothers are all well and strong.

Past History.

Catamenia commenced at the age of 11, and has been quite regular up to date of her admission to hospital; type twenty-eight days, duration five days. Since her marriage the menstrual periods have been a trifle more profuse. Patient has never suffered from illness or injury prior to her marriage.

Present Illness.

The patient states that her abdomen began to slowly increase in size during the first three months of 1905. One evening in March she was suddenly seized with severe pain in the left side of the abdomen which lasted forty-eight hours. The abdomen during this time appeared to become very much larger. She consulted a medical man in London, who informed

her that she was about four months pregnant. Having migrated from London to Birmingham, she consulted Dr. Faussett on April 6th, with a view to engaging him for her confinement. She told him that she had been getting larger, had felt quickening a week ago, that she had been examined in London and had been told that she was pregnant, in spite of the regularity of her menstruation. An abdominal examination was made by Dr. Faussett, who found a rounded tumour, median in position, partly fluid and partly solid in consistency, rising out of the pelvis and reaching as high as a point midway between the symphysis and the umbilicus. No vaginal examination was made. Without questioning the condition further Dr. Faussett assumed that Mrs. T. was pregnant, and booked her for the last week in July.

Nothing was heard of the case until July 4th, when Dr. Faussett was sent for to attend her labour. Abdominal pain had set in, with loss of blood from the vagina; this corresponded with her menstrual period. The abdominal tumour reached nearly to the ensiform cartilage, and was solid in parts. There was no uterine contraction, however, to be felt, and the cervix was quite closed. The condition was regarded as one of spurious labour, and the patient was told to send again when the pains became worse. The abdominal pain rapidly passed off, and she resumed her household duties in a day or two. On August 9th the patient was seized with severe pain in the right lower abdomen, accompanied by vomiting, constipation, and a temperature of 101°. This condition continued for four days, when the vomiting ceased; the bowels were opened by enema and the pain abated. Dr. Faussett now recognized the condition as one of ovarian tumour and not that of pregnancy. My colleague, Dr. Thomas Wilson, was asked to see the patient. He confirmed the diagnosis of ovarian tumour with some complication such as suppuration or twisted pedicle, and sent her in to the General Hospital under my care. On August 16th she was admitted into our special gynaecological ward, and the case presented the following clinical features:

Present Conditions.

The patient was a well-nourished girl, with flushed cheeks slightly cyanosed, but not apparently in respiratory distress. The pulse was 120 per minute, temperature 102.4°, and the tongue was coated with a thick, yellowish fur. She complained of pain in the right side of the abdomen, which was much exaggerated on taking a long breath. The last menstrual period had taken place on August 9th. The abdomen was enormously distended from pubis to ensiform, the circumference at the level of the umbilicus being 38 in. The distension was quite uniform, there being no irregularities visible. The subcutaneous veins were much dilated. On palpation, a large tumour could be made out filling up the whole abdomen. Its shape was roughly ovoid, with the long axis vertical. The right and left halves of the tumour were approximately equal; its greatest vertical measurement was 12 in. and the greatest transverse measurement 9 in. The lower two-thirds of the tumour appeared to be a tense thin-walled unilocular cyst. The upper third was somewhat irregular on palpation and solid in consistency. It was no doubt this solid mass which has led to the case simulating pregnancy. There was very marked tenderness over the right lumbar and right hypochondriac regions, and a coarse friction fremitus could be felt during respiration over these two regions. On percussion, the abdomen was dull everywhere except in the loins. On vaginal examination, the cervix was found low down within 1½ in. of the vulva, looking forward, was firm, closed, and nulliparous. The body of the uterus was retroverted, pushed to the right, and admitted the sound 2½ in. The lower border of a large thin-walled cyst could be felt projecting into the anterior fornix. The breasts were soft, not enlarged, and presented none of the changes characteristic of pregnancy. The cardiac beat was normal in position, and the valvular sounds were healthy. The upper margin of the liver dullness reached as high as the right nipple, the hepatic dullness below merged into the tumour dullness. The left lung was healthy, whereas over the base of the right lung coarse pleural friction could be felt and heard. Vocal fremitus and vocal resonance were, however, practically normal over the friction area. The urine was acid in reaction, gave a faint haze of albumen, and showed a distinct trace of blood, which in all probability was due to the menstrual period, which was just passing off on the patient's admission to hospital. There was no frequency of micturition, and prior to her attack the bowels had been very regular.

Diagnosis.

The size, consistency, and general outline of the tumour, together with the position of the uterus and the rapidity of the enlargement, all pointed to a multilocular tumour growing from the left ovary. The history of the attacks of left-sided pain, latterly associated with right-sided pain, tenderness, friction fremitus, rapid pulse, and fever, suggested previous rotation of the pedicle with recent superadded suppuration and leakage of contents, producing localized peritonitis and pleurisy.

Operation.

Laparotomy was performed by a median incision 8 in. long on August 17th. The tumour presented the usual pearly white glistening appearance of an ovarian cystoma. An exploring

syringe was passed into its interior in order to ascertain the nature of its contents, and a straw-coloured rosy fluid was withdrawn. There were no adhesions to be felt in the upper and left half of the abdomen but only on the right side. In view of the tenderness and friction fremitus in this region, I deemed it advisable to tap the large clear cyst before liberating them. The cyst was tapped. It was then possible to determine the relation of the other abdominal viscera. The tumour was found to be one of the left ovary with one complete left-hand twist of the pedicle. The intestines were all situated above and behind the tumour. The upper part of the tumour was solid in consistency. The upper and left part of the abdomen was packed off by gauze swabs. My attention was then directed to the adhesions between the right half of the tumour and the abdominal parietes. As these proved to be recent there was little difficulty in breaking them down. Very little stripping had been accomplished, however, when a large abscess was opened containing about half a pint of fetid green pus and some gas. The pus was rapidly absorbed with gauze swabs as it welled up, so that there was fortunately no extensive fouling of the rest of the peritoneum. The remainder of the adhesions were then separated, and it was seen that the abscess cavity was an extensive flattened space extending from the right iliac fossa below to the liver above, and limited internally by the right wall of the cyst, and externally by the abdominal parietes external and anterior to the ascending colon. When the abscess had been completely emptied its cavity was filled with several swabs. The pedicle of the tumour was secured by clamps and the tumour was removed. Clean swabs were used to cover up the intestines to keep them away from the infected area. The clamped pedicle was secured with silk.

The right ovary was about the size of a hen's egg and showed early cystic disease with necrotic patches spread over its surface. This was removed with the corresponding tube.

The swabs filling up the abscess cavity having been removed, a careful inspection of this area was then made. The vermiform appendix was found running down into the right iliac fossa from the caecum and was plastered against the posterior surface of the lymph-covered abscess wall. About $\frac{1}{4}$ in. below the caecum the appendix was half amputated by a large hole in its anterior surface through which projected a large faecal concretion. The concretion was removed, the appendix was slit downwards, and its gangrenous-inflamed mucous coat peeled off. This course was adopted because the distal two-thirds of the appendix could not be easily isolated from the indurated wall of the iliac fossa. The proximal side of the perforation, about $\frac{1}{2}$ in. in extent, appeared to be shut off from the caecum and was not ligatured.

A small incision was then made in the right loin just above the iliac crest and external to the caecum. A rubber drainage tube was passed through this incision to serve as an outlet to the abscess cavity from behind. The abscess cavity was next filled with a large Mikulicz pack of iodoform gauze—bag of double sheets of iodoform gauze, having several strands of plain sterilized gauze—brought out at the median incision. In this way it was hoped not only to secure efficient drainage, but also to shut off the upper and left half of the abdomen from the infected area. The clean swabs keeping back the intestines were removed, and the abdominal incision was carefully stitched up except at the neck of the Mikulicz bag.

Specimen.

The fluid drawn off from the large cyst measured 13 pints, was of a pale brown colour, a rosy consistency, and contained pseudo-mucin. The solid part of the tumour, together with the cyst wall, weighed 4 lb. 3 oz. The solid part of the tumour consisted of numerous small cysts, the contents of some of which had become degenerated into necrotic cheesy-looking material. There was no sign of leaking anywhere.

Microscopical sections of the cyst confirmed the view that it was an ovarian tumour of the common pseudo-mucinous glandular type.

Cultivations from the pus of the abscess gave growths of *Bacillus coli* and *Bacillus pyocyaneus*, both of which were very pathogenic to rats.

After-history.

The patient bore her operation well, and never gave the slightest anxiety during her whole time in hospital. The abscess drained freely, both by the lumbar tube and the gauze packing. There was never any distension or faecal leakage. The bowels were opened naturally on the fourth day. The first strand of Mikulicz packing was removed on the fifth day, a little was removed each day, and the entire bag was taken out on the tenth day, when a rubber tube was substituted. The loin wound ceased to drain on the fourteenth day, and the tube was gradually withdrawn. The pleural rub disappeared a few days after the operation. As there remained an area of dullness at the base of the right lung, with diminished breath sounds, an exploring needle was introduced, but no fluid or pus was found.

A point of very great interest in the case was the permanent upward displacement of the liver. It was discovered soon after the operation that the liver had been pushed up well under the costal margin, and this position remained unaltered for fully two months after the operation, when the patient was

last seen. The liver dullness had the following relations to the chest wall:

	Upper Border.	Lower Border.
Middle line	... Base of xiphoid	Tip of xiphoid.
Nipple line	... Fourth rib	$\frac{3}{4}$ in. above costal margin.
Mid-axillary line	... Sixth rib	Seventh rib.
Posterior axillary line	Eighth rib	

When seen on October 18th, one month after leaving hospital, the position of the liver remained unchanged.

The apex beat of the heart remained unchanged in position after the operation. The patient had no difficulty in respiration, and the abdomen moved quite naturally during this act. She left hospital on September 21st with a sinus 5 in. long from the median incision passing downwards and to the right. It discharged a small quantity of pus each day. I saw her again on October 18th, when the length of the sinus and the amount of the discharge were the same. Suspecting that the silk ligature which secured the pedicle of the small right ovarian enlargement was the cause of the slow healing, I passed a pair of fine urethral forceps down, and fished up the silk ligature in question. I asked her to let me know when the sinus healed up. She wrote on November 11th, saying that the wound had been healed about a week, and that she was in all respects well.

Since Pozzi and Terrillon in 1890 drew attention to the relation between the vermiform appendix and the pelvic organs in women numerous publications have appeared, especially in the last five years, showing how frequently the appendix and the uterine adnexa suffer concurrently. This is partly due to the fact that the appendix in women is frequently a pelvic organ, partly to the liability to bacterial infection of the Fallopian tubes, and partly to the tendency to enlargement of the uterus and ovaries. These phenomena distinguish the female pelvic contents very sharply from those of the male. It has been estimated that of all cases of pure appendicitis, 60 per cent. occur in men and 40 per cent. in women. If to these, however, be added all those cases in which there is associated disease of the pelvic contents, it will be found that appendicitis is more common in women than in men.

If an analysis is made of those cases of associated appendical and pelvic disease in women, it will be found that they comprise three great groups:

1. Those in which the pelvic disease is primary and the appendicitis is secondary.
2. Those in which the appendicitis is primary and the pelvic disease is secondary.
3. Those in which the appendicitis and the pelvic disease are independent of each other.

After carefully considering the case under discussion, I feel satisfied that it falls under Group 1, indicating that the ovarian cystoma was primary and the appendicitis secondary. Although cases of associated disease must fall into these three great groups, there might be great difficulty at times in deciding exactly in which group to place the case.

In this relation I should like here to draw attention to the apparently widespread idea in this country that appendicitis is very rarely found complicating pregnancy and the puerperium. This is probably due largely to the fact that the majority of the contributions to the literature of this subject have been made by Continental and American writers. The idea of the supposed rarity of appendicitis during pregnancy is rapidly being dissipated by more accurate methods of diagnosis. Hitherto only grave cases calling for operative interference have been brought to light, whereas mild attacks have been entirely overlooked. When appendicitis occurs during the puerperium it has generally been attributed to puerperal infection or the lighting up of an old salpingitis. The pregnant uterus has probably little or no evil effect on the healthy appendix. If, however, the appendix be the seat of chronic inflammation, extensive adhesions or a large concretion, it is quite easy to understand how the increasing pressure of the growing uterus or the frequent association of constipation could act as an exciting factor in the production of an acute attack of appendicitis.

The pelvic conditions which are commonly associated with appendicitis are, in the order of frequency: salpingo-oöphoritis, pregnancy, retroversion of the uterus, ectopic gestation, primary tuberculosis of the Fallopian tubes, ovarian tumours and fibroids of the uterus. It must be fully understood that this list does not include those numerous pelvic conditions in which the appendix is frequently adherent, but shows no evidence of appendicitis.

The rarity of the case just recorded will become evident when I say that after a careful search through the literature of the last ten years I can find references to only 7 cases of ovarian cystoma complicated by appendicitis. That this must represent the greater number of cases which exist is almost certain. Even if the appendical trouble were overlooked, ovarian cystoma is so easily recognized and calls for such prompt operative treatment, that the double combination would be readily revealed. Of the 7 reported cases the greater number were cases of catarrhal or chronic appendicitis, and not perforative or suppurative. It is rather astonishing that appendical trouble is not more common with ovarian tumours than the published records suggest. One would have imagined that the same factors which predispose to appendicitis, and which exist in pregnancy, would have existed also in cystomata. It cannot be that many chronic conditions of the appendix are overlooked, because it has become almost a routine for the gynaecologist to examine the vermiform appendix even when operating for purely pelvic conditions.

In the case before us it would appear that the appendix contained a larger faecal concretion which had probably occupied the appendix for some considerable time without giving any evidence of its presence. As the ovarian tumour increased in size the intestines generally were pushed into the upper abdomen, and the appendix containing its hard concretion became directly exposed to the pressure of the neoplasm. The appendix lying in the iliac fossa became steadily compressed between the growth and the iliacus muscle. This eventually became so pronounced that the appendical wall became gangrenous and gave way at the point opposite to the concretion. In this almost purely mechanical way suppurative appendicitis probably arose.

It must at the outset be evident that, in the evacuation of an intraperitoneal abscess complicated by a large tumour, there is an increased risk of the supervention of general peritonitis. This is especially the case in suppurative appendicitis, where the organisms present, unlike those frequently met with in tubal infections, are almost always of the most virulent kind. The method adopted in the treatment of this case was, I feel satisfied, a sound one. It had for its justification three great objects in view: (1) To prevent fouling of the peritoneum during the complete evacuation of the abscess; (2) to efficiently drain the septic surface of the abscess; (3) to prevent for some days a spread of infection to the healthy peritoneal surface. It is for the third object that I specially commend the Mikulicz bag. Dr. Wilson and I have used it very extensively in our department both in oozing cavities and in extensively-fouled surfaces, with very great satisfaction. This method of draining those peritoneal abscesses in which the peritoneal cavity must be opened in order to reach them, whether pelvic, appendical, or upper abdominal, is, in my opinion, better than the introduction of one or more rubber tubes. The drainage is quite as efficient, and, most important of all, it retards the spread of infection to the virgin peritoneal surface by setting up an artificial barrier sufficiently secure to keep back germ invasion until peritoneal adhesions have had time to form. When such adhesions are established the immediate danger of general peritonitis is passed, and rubber tubes may then advantageously be substituted. This mode of surgical procedure is familiar enough, and is based upon scientific principles which are quite elementary. In the anxious moments, however, of dealing with these urgent abdominal conditions I fear that the systematic adoption of sound method is not always carried out—a fact which accounts for many unfavourable results. One always feels that in the treatment of ovarian, tubal, or appendical infections, where the peritoneal cavity must be extensively exposed, we are far too content to resign ourselves to the uncertainty of chance as to whether general peritonitis will supervene or not. I believe that in the method used in the above case we have one of the best means of obviating the necessity of trusting to chance and one which goes far to ensure success. The liver was primarily displaced by the upward pressure of the ovarian tumour, and later became anchored in this position to the chest wall by inflammatory adhesions induced by the appendicitis.

In conclusion, I would like to thank Dr. Faussett for the information he gave me concerning the case and for the assistance he rendered me during the operation.

BIBLIOGRAPHY.

Shoemaker, *Amer. Journ. Obstet.*, N.Y., 1904, xlix, 238. Ransford, *BRITISH MEDICAL JOURNAL*, 1904, p. 1077. Eitel, *North-West Lancet*, Minneap., 1904, p. 288. Michel, *Etoile Méd. par Boulogne*, 1900, p. 1011. Naumann, *Hygiea*, Stockholm, 1898, lx. Werder, *Journ. Amer. Med. Assoc.*, January 1st, 1898. Thompson, *Washington Med. Ann.*, 1904-5, iii, p. 413.

A NOTE ON THE THERAPEUTIC VALUE
OF SARSAPARILLA IN SYPHILIS.

By CHARLES J. CULLINGWORTH, M.D., F.R.C.P.,

CONSULTING OBSTETRIC PHYSICIAN, ST. THOMAS'S HOSPITAL.

IN connexion with the interesting letter from Professor Clifford Allbutt in the *BRITISH MEDICAL JOURNAL* of March 24th on the value of sarsaparilla in syphilitic cachexia, I am sending what I have often thought I would publish, but never have published—a note of some observations I made when a student at Leeds, and afterwards when in charge of the medical wards as a resident officer at the Manchester Royal Infirmary. The observations had reference to the effect of sarsaparilla upon the body weight of syphilitic subjects. The preparation administered was that known at Leeds as syr. sarsae, which contained nothing but a decoction of sarsaparilla—prepared by boiling and reboiling, according to special directions*—and white sugar. Of this latter it never seemed to me there was enough either to render the preparation palatable or to justify the name of syrup. But that is a matter of opinion and does not affect the question. The dose of the syrup in all the cases here mentioned was 4 fluid oz. three times a day. The patients were on ordinary full diet unless the contrary is specified.

CASE I.

J. W., aged 30, was admitted into the Leeds General Infirmary, August 8th, 1863, suffering from syphilitic cachexia. He was ordered syr. sarsae and no other medicine. His weight, not taken at first, was ascertained at the end of the first week and every week after that as long as he remained in the hospital, care being taken in this as in all the cases that the same clothes were worn on each occasion.

	st. lb.	lb.
Weight on Aug. 15th	7 1½	
" Aug. 22nd	7 7½	a gain in the week of 6
" Aug. 29th	7 10½	" 2½
" Sept. 5th	8 2½	" 6½
" Sept. 12th	8 6½	" 4½
" Sept. 19th	8 11	" 4½
" Sept. 26th	9 1½	" 4½
" Oct. 4th	9 6	" 4½
Total gain, 32½ lb. in 7 weeks—a little more than 4½ lb. per week.		

CASE II.

W. K., aged 31, was admitted into the Leeds General Infirmary, September 18th, 1863, suffering from syphilitic cachexia. He was ordered syr. sarsae and no other medicine.

	st. lb.	lb.
Weight on Sept. 21st	8 11½	
" Sept. 28th	9 1½	a gain in the week of 4½
" Oct. 5th	9 2½	" 1
" Oct. 12th	9 11	" 8½
" Oct. 19th	10 0	" 3
Total gain, 16½ lb. in 4 weeks = 4 lb. per week.		

CASE III.

J. E., aged 39, was admitted into the Leeds General Infirmary, June 5th, 1863, suffering from syphilis; pustules, sore throat, enlarged glands, hair falling off, pains in knee and shoulder, etc. On June 24th he was ordered syr. sarsae. On the 25th his weight was 7 st. 3½ lb. On July 31st he weighed 8 st. 6 lb., having gained 1 st. 2½ lb. in five weeks = 3 lb. per week.

CASE IV.

W. T., aged 40, single, a stoker, was admitted into the Manchester Royal Infirmary under the care of Dr. Henry Simpson, January 30th, 1867. He had contracted syphilis some years previously, and was now suffering from cachexia with slight jaundice supposed to be from deposits in the liver. Mercurial ointment was ordered, and a few days later a mixture containing 5-gr. doses of potassium iodide. On March 7th, this was changed for a nitro-hydrochloric acid mixture. On March 16th, the weight (now taken for the first time) was 9 st. 13½ lb. A week later it was 9 st. 12 lb., showing a loss of 1½ lb. The syrup of sarsaparilla was now ordered, without other medicine.

	st. lb.	lb.
Weight on Mar. 30th	10 3½	a gain in the week of 5½
" April 6th	10 6½	" 3
" April 13th	10 9½	" 3½
" April 20th	10 8	a loss in the week of 1½
Average gain per week, whilst taking sarsaparilla only, 2½ lb.		

* The directions were as follows: Put 3 lb. of sarsaparilla root into 2 gallons of water; boil down to 1 gallon and strain; add 2 gallons of water, boil down to 1 gallon, and strain; again add 2 gallons of water, boil down to 1 gallon, and strain; then add 2 lb. of sugar. The result will measure 3 gallons.