Local bulging was present in nine cases, and when present was a valuable sign. When the bulging is lateral it is seen best by arranging the patient straight in his bed in a good light, and observing from the foot of the bed. In a few cases the bulging was forwards.

Epigastric varicosity was not present in any case.

Lung complications were present in 13 cases. In 12 they were confined to the right base and afforded a diagnostic sign of value. The signs observed were: Basal crepitations in 7 cases; basal pneumonia in 4 cases; pleuritic friction sound in 3 cases. In one case from which 5 oz. of pus had been withdrawn, an abscess (probably a second one) burst into the base of the right lung five days later. Ten ounces of brownish pus were coughed up in twenty-four hours, the expectoration became bile-stained on the third day, gradually diminished, and the patient made a good recovery.

Decubitus.—No characteristic position was observed.

Leucocytosis.—In fourteen of these cases a white blood count was made, and a polymorphonuclear leucocytosis was found in every case. The average white count was 18,600.

Rigidity of the right rectus abdominis was observed in about half the cases.

From the above analysis it will be seen that there were seven outstanding diagnostic signs present in this series:

1. General enlargement of the liver	...	...	15
2. Pyrexia continuous or remittent	...	...	15
3. Leucocytosis	...	...	14*
4. A local tender spot over the liver	...	...	14
5. Signs of irritation at base of right lung	...	...	13
6. Rapid wasting	...	...	14
7. Heavy sweats	...	...	12

The other signs and symptoms of value are:

Local bulging	...	...	9
Pallor	...	...	12
Rigors	...	...	6
Referred pain in right shoulder	...	...	8
Rigidity of right rectus.	...	...	

* One not examined.

Treatment.

Four of the early cases were treated by open operation and drainage by tube. Two of these were drained through incisions in the epigastrium, the exposed area of liver being packed round with gauze and the abscess opened by sinus forceps. In both these cases the *Entamoeba histolytica* was found in the discharge from the tube on the third day, although not found in the pus removed at the operation; evidently the organism was liberated during the breaking down of the abscess wall.

The other 2 cases were treated by drainage through the chest wall. After localizing the abscess by means of a glass syringe (20 c.cm.) and needle, the needle was left *in situ* and 2½ in. of the tenth rib were excised in the axillary line. The diaphragm was incised below the level of the pleura, the edges being sutured to the intercostal muscles. After packing gauze round the area of liver exposed a pair of sinus forceps was passed into the abscess cavity guided by the needle. A drainage tube was then passed into the abscess and sutured to the chest wall. One of these cases died suddenly during the night following the operation.

Pathologist's Post-mortem Report.

Dysenteric ulceration of appendix, caecum, and large intestine. One large abscess cavity in right lobe of liver drained by the tube and a second smaller one which had not been found by the exploring needle.

An ante-mortem clot was found in the right ventricle and commencement of the pulmonary artery.

The remaining 11 cases were all treated by aspiration with an ordinary 20 c.cm. glass syringe and needle with a fairly large bore, which was passed in various directions into the liver until the abscess was found.

I found the syringe to be more convenient than the aspirator, and the needle, being of smaller diameter, probably did less damage to the liver tissue; where pus had definitely formed I found no difficulty in withdrawing it. When the pus was found, as much as could readily be obtained was withdrawn, the syringe being detached from the needle, emptied, and used again as long as any pus could be withdrawn.

In seven of the eleven cases I injected 10 grains of quinine hydrochloride in 1 oz. of water into the abscess cavity. I do not know whether it did any good, as the

four cases in which quinine was not injected did as well as the seven cases with quinine.

Personally, I think it better not to inject anything into the abscess cavity for two reasons: first, because the contents of the abscess are usually sterile, and, secondly, because a low pressure in the abscess cavity encourages the flow of lymph containing emetine.

After aspiration every patient was given a course of hypodermic injections of emetine hydrochloride, 1 grain daily for one week and then on alternate days until 12 or 14 grains had been given. Whenever possible each patient was given 1 grain of emetine a few hours before operation, so that the first serum to flush the walls of the abscess should be carrying emetine.

The action of emetine in these cases of liver abscess appears to be as specific in its action as that of quinine in malaria. In addition to the fifteen cases of proved liver abscess I saw seven or eight cases of hepatitis following dysentery, some of which were probably in an early suppurative stage and which cleared up rapidly with emetine.

There were multiple abscesses in three cases. The average quantity of pus was 8½ oz. The greatest quantity in any case was 30 oz. In colour the pus was yellow in eleven cases and grey in three cases. The classical chocolate-coloured pus was seen in one case only; it was noticed that the yellow pus rapidly became much darker when exposed to the air. The pus was found to be sterile in eight cases, to contain *Entamoeba histolytica* in three cases, staphylococcus in three cases, and *B. coli* and *B. pyocyaneus* in one case each.

Results.

Fourteen out of the fifteen cases recovered completely. One case died as already described.

In my opinion the majority of these cases can be treated successfully by aspiration with an ordinary 20 c.cm. glass serum syringe. It does not appear to be necessary even to withdraw all the pus. Once the tension in the abscess cavity is relieved, the emetine-carrying plasma can pass through the walls of the abscess cavity and exert its lethal effect on the army of amoebae present there. After aspiration the temperature usually drops to normal at once, the liver rapidly diminishes in size, and convalescence is rapid.

Open operation with a drainage tube in the liver substance—that is, one end in a constantly moving delicate organ and the other in the more or less rigid chest wall—would seem to be physiologically unsound. In the type of case met with in Mesopotamia I think that open operation can only be necessary in exceptional cases.

From what I have read of tropical abscess in India, the type met with in Mesopotamia appears to be of a more acute type, to have a more toxic effect on the patient, and to be more frequently multiple.

THE TREATMENT OF UTERINE FIBROIDS BY X RAYS.

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ALTHOUGH the value of x rays in the treatment of uterine fibroids has been known since 1911, principally through the writings of Professor Bordier and Professor Gauss, it does not appear to have gripped general attention; but their researches and those of many others since have placed the treatment, more especially of bleeding fibroids, on a very firm basis, and the use of x rays is the treatment of choice for intramural fibroids. It is very useful also in intrauterine fibroids, though the success is less marked; in subperitoneal fibroids the method is least satisfactory, though, perhaps, not quite useless.

Professor Gauss of Freiburg instituted a very drastic method in one sitting. He advocated many "points of entry" over the two ovaries and uterine tumour, from the front of the abdomen, then turning the patient on her face he administered the x rays through the sciatic notches and thinner portions of sacrum, the object being not to injure the skin. To this purpose he used a very heavy current,

well filtered by plates of aluminium, but with a small diaphragm, whilst the whole course of treatment was accomplished in one day, occupying several hours.

Professor Bordier of Lyons practises a less hurried method. He gives a series of cycles, each consisting of nine sittings. Thus he would give a sitting to the right ovary, one to the left ovary, and one centrally over the uterus. This is repeated three times, making nine exhibitions of x rays to the uterus and appendages. These exhibitions may be arranged according to the convenience of the patient; two may be given on the same day, or one may be given on alternate days. In an average case there is after the first cycle of nine exhibitions a slight increase of the flow of blood at the next period.

Twenty-one days after the first cycle a second is given, and when the next period is occurring the haemorrhage is usually less. A third and then fourth "cycle" is given, and by this time there is usually distinct lessening of the size of the tumour, and the periods have ceased. In many cases, the menopause having been established, flushing of the face with faint feelings often occur, as is usual. It is seldom that the cycles need be persisted in after the sixth.

Dr. Bordier himself urges that this treatment should never be made use of to determine the diagnosis, which should be made by every means first; and the cycle treatment should be used for fibromyomata only, and perhaps haemorrhagic metritis.

For ordinary cases in England, where this treatment can be followed out with no excessive fatigue or expense, the "cycle" treatment is convenient, but it is well to remember that there is great latitude in the mode of administration.

A series of four cases was published in the *Archives of the Roentgen Ray* by myself in 1914. I have now a further series of eighteen cases which seem to emphasize the value of the treatment which renders unnecessary a serious and mutilating operation.

On looking over the notes of my cases I found them so much alike that I propose to record only one or two typical cases.

CASE I.

A lady, aged 49, was referred to me for uterine myoma, reaching half-way to the umbilicus with outgrowths, one of which pressed on the rectum. The patient was a person of education, a church organist, who much wished to be able to carry on her work. She found herself growing weaker and weaker and had symptoms of obstruction of the bowels. The surgeon under whose care she was proposed colotomy, finding the rectum so obstructed by fibroid outgrowths, but it was determined before operating to give the x rays a trial. Owing to the urgency of the symptoms the rays were not administered in the usual three places only, for some of the sittings were given from either side of the sacrum. At the third cycle she expressed herself as feeling much better and relieved of the symptoms of obstruction. This patient had seven cycles, and although examined many times no growths could be felt. She was reported two years later as feeling quite well and able to carry out her duties as organist.

Apart from relief of urgent symptoms such as obstruction of the bowels, almost every patient expresses herself as feeling better. This is difficult to explain, but at least seems to show that x rays given in therapeutic doses do no harm to the general system.

CASE II.

Mrs. L. C., aged 47, was a case of uterine myoma in which haemorrhage was a marked feature. A hard mass could be felt in the uterus on vaginal examination, and was palpable also above the pubes. During the second cycle the patient found that the haemorrhage had ceased. During the third cycle she was examined by the surgeon who had referred her to me. He reported that the mass in the anterior part of the uterus was scarcely palpable. During the fourth cycle the lump had shrunk notably. She also complained of "flushes and fumes," and said she was getting stout and fat. When she was discharged cured after the sixth cycle it was noted that the lump could not be felt above the pubes, and there was only a little tenderness on deep pressure. Menstruation had not returned.

It seems, therefore, that we have a means of hastening the climacteric period with the usual symptoms of that period. As it has been found in intramural fibromata sometimes ceased to trouble after the climacteric cessation of menstruation, so with this artificial establishment of the menopause such fibromyomata shrink and cease to bleed. The nearer the patient is to the natural climacteric period,

the more successful is this form of treatment and the speedier.

In young subjects time should not be wasted on a bleeding myoma. Operative surgery is the right course. At the Brighton meeting of the British Medical Association I asked Professor Gauss whether in procuring such a rapid absorption of material he had observed any toxic symptoms, for such certainly do occur in splenomegaly; but he said he had not.

Two contraindications only of this form of treatment need be considered. It is not applicable to women below the age of 30 or 35, nor to those who have the sub-peritoneal form of myoma.

This treatment has one other advantage, for a rest of twenty-one days is advisable between the cycles, and during this period the patient's family doctor can watch the case and attend to her general health.

The eighteen cases may be epitomized as follows:

1. Mrs. A. D., 45. Small intramural myoma, barely palpable suprapubically. After five cycles it became no longer palpable. Discharged cured.
2. Mrs. H. C., 49. Large myoma reaching to umbilicus. Received six cycles, when, tumour having shrunk slightly, hysterectomy was carried out successfully.
3. Mrs. E. B., 34. Small myoma discovered during parturition. Haemorrhagic type. Tumour much shrunk, haemorrhage ceased; discharged after five cycles cured.
4. Mrs. A. S., 49. Uterine myomata reaching half-way to umbilicus. Case reported above. Ending in cure after seven cycles.
5. Mrs. M. B., 38. Uterine myoma, haemorrhagic type. After seven cycles was discharged cured.
6. Mrs. L. C., 47. Uterine myoma, haemorrhagic type, reported above. After six cycles was discharged cured.
7. Mrs. E. T., 46. Intramural myoma, haemorrhagic type. Haemorrhage ceased after three cycles. After four cycles was discharged cured.
8. Mrs. S. D., 56. Large, broad, hard swelling, haemorrhagic type. Swelling occupied the whole of lower half of abdomen. Haemorrhage ceased after two cycles. Patient looked and felt better, but tumour did not shrink materially, and the haemorrhage not having recurred, was, after six cycles, discharged benefited.
9. Mrs. E. H., 42. Uterine myoma, reaching half-way to umbilicus. Haemorrhage slight. After three cycles shrinking occurred, and was barely palpable after six cycles above pubes. Was then discharged cured.
10. Mrs. A. C., 50. Large haemorrhagic myoma, round in shape, barely reaching lower edge of umbilicus. At the end of three cycles haemorrhage much reduced and tumour shrunk to one inch below the umbilicus. At the end of six cycles further shrinking was reported to two-thirds between umbilicus and pubes. She was discharged much benefited and haemorrhage ceased.
11. Mrs. E. H., 48. Myoma, haemorrhagic type. Much lessened in amount after two cycles, and ceased after four. After six she ceased attendance, saying she was cured.
12. Mrs. C. C., 42. Myoma central, and palpable above pubes. This latter ceased after the second cycle. She was persuaded to continue the treatment to the fourth cycle, when she was discharged cured.
13. Mrs. E. T., 40. Precisely similar case to No. 12. Received six cycles, but the monthly periods became normal in quantity and remained so. She was discharged cured.
14. Mrs. C. M., 40. Sent as a case of fibroid enlargement of uterus. It may have been a case of haemorrhagic metritis. She had been curetted twice, with very slight improvement. Received three cycles, when, feeling and appearing quite well, she discharged herself as cured.
15. Mrs. S. S., 33. Small myoma with anteverted uterus. Haemorrhagic type. This ceased during the second cycle. She received three cycles, when she was discharged cured.
16. Mrs. B. W., 37. Sent for fibromyoma extending to one inch below umbilicus. After seven cycles slight fullness just above pubes alone remains, felt only on deep pressure. Discharged cured.
17. Mrs. M. W., 53. Fibromyoma, haemorrhagic type. Besides outlying lumps, the uterus itself reaches to two inches above umbilicus. After the second cycle, haemorrhage and also menstruation ceased. At the fourth cycle the central lump extended nearly to umbilicus. She received seven cycles, when the central lump retired to pubes. The outlying lumps remained, but lower in abdomen.
18. Mrs. L. B., 55. Myoma, haemorrhagic type. Haemorrhage ceased during first cycle, and did not again recur. After four cycles uterus shrank to pubes. Received six cycles, when the menopause seemed established and flushings were frequent. She was discharged cured.

These eighteen cases—making, with the four I have already reported, twenty-two cases—do not exhaust my list, but they will suffice to draw attention to this mode of treatment, which should be widely known amongst the great body of general practitioners, for they can instruct their family patients, who would gladly undergo such

treatment, even if rather prolonged, in preference to a formidable operation from which they would naturally shrink.

Several of the cases are of three and four years' standing, yet none of those discharged cured have returned, and a few have written letters saying how well they still feel.

THE WORK OF A VENEREAL DISEASE CLINIC.

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In October, 1918, I published in the JOURNAL a short account of the first 500 cases attending the King Edward VII Hospital Clinic at Cardiff. I have now analysed a further 1,000 cases, and the figures may be of interest as showing the source of infection in 1,500 consecutive male patients.

	Prostitutes.	Amateurs.	Others.
First 500	279	183	38
Next 1,000	481	328	191
Totals	760	511	229

The amateur infections thus show an increased percentage in the last few months and the "other sources" a marked increase. Out of the 191 "other source" cases, 71 men definitely blame their wives, the bulk of the remainder denying connexion or being uncertain as to which of more than one woman infected them.

Some hundreds of the cases have recently been discharged from the services while suffering from, or having recently suffered from, venereal disease, and a very large percentage of these were infected in French licensed houses.

The "salvarsan substitute" used during the last twelve months has been novarsenobillon, given concentrated and always intravenously. I have seen no ill effect of any sort in the last 5,000 injections. Intramuscular injections of mercury have been little used, the bulk of the patients being colliers; as they work in a cramped position, these injections caused inconvenience.

The clinics have suffered from overcrowding, 80 or 90 cases sometimes attending at a time, and as all train fares are refunded, men attend from a large area.

I should like to add two facts which have struck me:

1. The small number of men infected while drunk. This is possibly owing to the difficulty of obtaining drink, but it rather does away with the argument that without drink few men would be infected.

2. The hopelessness of expecting men to take any preventive measures after running the risk. As I stated in my previous note, in two brigades in which every facility was provided no one availed himself of them. Since then, out of some hundreds of soldiers reporting at a certain dépôt, with venereal disease contracted in every theatre of war, I did not find one man who had used the appliances provided. In this civilian clinic, too, I do not recollect more than two or three men who had taken any precaution, and I have had one man on the books three times for separate infections.

As the bulk of the male population has served in the forces, it will apparently be the case that men who would take no trouble in units away from their homes, will surely not bring suspicion on themselves by visiting the suggested disinfecting stations in their own localities.

THE first congress of the association of French-speaking gynaecologists and obstetricians will be held at Brussels on September 25th, 26th, and 27th. The following subjects are proposed for discussion: Biological diagnosis of gestation, indications and technique of hysterectomy in the treatment of suppurative of the adnexa, early getting up of women after confinement and operation, operative treatment of cancer of uterus, the value of different incisions in laparotomy, gynaecology and obstetrics, protection of pregnant women and wet-nurses.

A CASE OF PRIMARY SARCOMA OF THE LIVER.

BY

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The following case is interesting on account of its rarity.

History.

A man, aged 42, was admitted to the hospital in a condition of advanced emaciation. He stated that his health had been good until about a year previous, when he began to feel pain in the stomach about half an hour after food, and had a constant sense of discomfort during the intervals between meals. Flatulence was a prominent feature, but there had never been any vomiting. There was no noteworthy constipation. There had been a steady progressive loss of weight.

Condition on Examination.

The abdomen was distended by a large smooth solid tumour, extending from the costal margin to the brim of the pelvis; at its lower edge a distinct fissure could be felt in the middle line. There was some bronchial catarrh, with a persistent irritating cough. The urine was normal. A blood count showed only a slight secondary anaemia (red cells, 4,000,000; haemoglobin, 70 per cent.), total white cells, 10,000, and differential white count normal. A Wassermann test was negative. The patient gradually sank, and died on the fourth day after admission.

Post-mortem Examination.

The body was greatly emaciated. There were no signs of injury, discoloration, jaundice, or external growth. The most noticeable feature was a bulging forwards of the upper part of the anterior abdominal wall. No enlarged subcutaneous veins were visible.

On opening the abdomen the liver was seen to have a mottled appearance and to be greatly enlarged, extending on both sides as low down as the iliac crests. The surface of the liver presented a large number of greyish-white areas of new growth, some of which were about the size of a pea, while others were larger, umbilicated, and slightly raised above the surface. The general "mottling" appeared to be due to the coalescence of these nodules, forming large greyish patches which were little, if at all, raised above the surface.

The great omentum was spread out and appeared to be normal. In the gastro-hepatic omentum, and in the mesentery, slightly enlarged lymphatic glands could be felt, and those about the head of the pancreas were particularly large and matted together. There was only a small amount of clear fluid in the abdomen. The stomach, pancreas, intestines, kidneys, and suprarenal bodies were thoroughly scrutinized, but nothing abnormal was found. The liver was easily removed from the body, being quite free from adhesions, and was found to weigh 14½ lb. and to measure 23 in. in transverse diameter. The gall bladder and bile ducts were free from growth.

The lungs showed numerous small whitish patches scattered over the surface. These were almost uniform in size, none of them being larger than a sago grain. The lungs were free from adhesions, and there was no effusion into the pleural cavity. The mediastinal glands were slightly enlarged. The heart and pericardium were normal. The head was not allowed to be examined.

Morbid Anatomy.

When the liver was incised no abscess or cystic growth could be found. The left lobe consisted almost entirely of a firm whitish growth, with the exception of a small seam of liver tissue running across the surface near the lower anterior border. The growth extended to the right beyond the middle line, and formed the greater part of the substance of the upper and anterior portions of the right lobe, penetrating backwards to within two inches of the posterior surface. Small nodules, separate from the main growth, were scattered about in the remainder of the liver substance. The liver tissue was friable, and pale and fatty in appearance.

Pieces of the liver and of the lungs and some of the enlarged lymphatic glands were excised, fixed and hardened in 10 per cent. formalin, and sections cut and stained in the usual way with haematoxylin and eosin. On microscopical examination the growths from each of the above tissues were found to present the same histological features, and the following description applies to the appearance of the sections made from the liver.

Histological Characters.

Microscopically the growth was seen to exhibit an alveolar structure—strands of fibrous tissue forming alveoli which enclosed groups or clusters of cells. The fibrous strands varied considerably in thickness, some consisting merely of a few fibres, while others formed well marked bundles. The cells enclosed within the alveoli showed great diversity in size, shape, and numbers. In most of the alveoli the predominating cell was rounded or polygonal, with abundant cytoplasm and a deeply staining round nucleus. Other alveoli showed a preponderance of small round cells with scanty cytoplasm.