or explored the contents ought to be examined for amœbæ, and also submitted to cultivation experiment for the detection of other micro-organisms.

This latter may not be always possible for the practitioner to carry through, but it is always an easy matter for him to ascertain the presence or absence of amœbæ. Such an examination is a very simple matter, and requires little skill or special apparatus. A little of the abscess contents is placed on a slide and spread out in a thin layer by pressing on the cover glass. It is then examined with a magnifying power of from 80 to 100 diameters. If amœbæ are present, they are readily recognised as clear, spherical globules, about three or four times the diameter of blood corpuscles, and lying isolated among the blood, pus, and liver detritus. Several fields may have to be scrutinised before they can be found or their absence pronounced on. Under a power of 250 to 300 diameters, on placing the slide on a warm stage, the amœboid nature of these bodies is readily detected. It is well to select for special examination an amœba lying in any islet of clear serum which may be present in the preparation; here the movements are easily made out. In this climate, to elicit the amœboid movement a warm stage is necessary; this fact may be an obstacle to some who would otherwise be willing to make the necessary examination; but a very simple apparatus is all that is necessary. For my examinations I have used a long piece of tin with a hole cut in one end for the transmission of light, a spirit lamp being applied to the other end. No delicate regulation of temperature is necessary. In hot climates a warm stage is not required. As the temperature of the slide approaches 100° F., the amœbæ become very active—not all of them, but most of them. When the temperature falls below 80° F., they become globular and passive, or exhibit only very languid movements. If it be inconvenient to examine the abscess contents in the patient's house, it will suffer nothing by a five or six hours' delay, and may therefore be taken home by the observer and examined at leisure.

The illustration on page 676 conveys a very good idea of the amœba and of its size relative to that of the blood corpuscles usually present in slides of liver pus and dysenteric dejecta, and which, therefore, form a convenient standard of measurement. The clear rim of ectosarc which tips the advancing pseudopodium in several of the amœbæ is very characteristic and is well represented. The only points in the figure I would take exception to are the vacuoles which in Löscher's drawing are too pronounced, and the very large number of amœbæ in the limited field—I have never seen them thus crowded together. Perhaps, too, the endosarc is somewhat too deeply shaded. Otherwise the figures convey a graphic conception of the various shapes the amœba assumes in its movements.

IS DYSENTERY THE INVARIABLE PRECURSOR OF "TROPICAL" LIVER ABSCESS?

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DURING the first years of my acquaintance with liver abscess, its relationship with dysentery seemed to me only occasional. This conclusion was based partly on the literature of the subject and partly on clinical observation, from which alone the answer to the above query would certainly not be in the affirmative. For some years past I have been convinced that the answer to the question should be practically in the affirmative, and that the facts urged against this view—namely, the absence, in certain cases, of a history of bowel disturbance or of ulceration of the large intestine on *post-mortem* examination—have another interpretation. Two recent fatal cases in my practice furnish striking illustration of some of the points connected with this question. It is very generally accepted that multiple liver abscess—portal pyæmia as it is sometimes designated—is secondary to dysentery, but if single hepatic abscess is not to be attributed to the same cause, owing to the absence of antecedent dysenteric history, such causation ought likewise to be denied to multiple abscess, as may be seen from the following case:

A robust well-preserved man of 52 felt slightly ill on October 22nd, and took to bed on the following day. Liver dullness was not appreciably increased on the 24th, slightly increased on the 26th, distinctly so on the 28th, with slight jaundice. Uneasiness in the right side and epigastric tenderness were felt, and the hepatic dullness increased thereafter till it extended from the nipple to the umbilicus. On November 2nd friction could be felt and heard over the lower ribs laterally, and on the following day in the epigastrium. The jaundice deepened daily, and on November 5th a tumblerful of pus was evacuated from an opening made in the right epigastrium. The shock was out of all proportion to the severity or duration of the operation, and death took place in forty-eight hours. There was no history of bowel disturbance before the illness set in as described, but in its course the stools were soft, and, after a purgative, a small quantity of mucus, on one occasion reddish, was observed. *Post-mortem* examination revealed ten abscesses of right and left liver lobes, all larger than a small orange. Between twenty and thirty ulcers, from a-quarter to a whole inch in diameter, were present in the cæcum.

This patient, a man occupying a prominent position, one of the busiest men in the East, was going about neither feeling ill nor suspecting that there was anything wrong with the bowel, hard at work up to the first day of his illness. That dysenteric ulceration occurs without attracting the patient's attention is evidenced by the occurrence of hæmorrhage from the bowel, where no piles, typhoid, or tuberculous ulceration are present, the hæmorrhage being the first thing that attracts notice, and subsequently proofs of dysenteric disturbance are obtained. In a case of the kind noteworthy for its termination—to which Dr. Milles, of Shanghai, allows me to refer—he opened a single hepatic abscess, and death followed in forty-eight hours from bowel hæmorrhage. *Post-mortem* examination revealed ulceration of the large gut and the ruptured vessel. This case had no history of bowel disturbance, and, but for the hæmorrhage and *post-mortem* examination, would have gone to swell the number of single hepatic abscesses not preceded by dysentery. That degrees of dysentery may exist, from the most severe and fatal process to one not apparently interfering with health, is only in keeping with what is known of nearly every other disease that comes under observation.

Yet another class of cases is met with. Ten years ago a man from Pekin came under observation from fever, which was suspected and demonstrated after the lapse of a few weeks to be symptomatic of suppurative hepatitis, and that multiple. There was no history of diarrhoea or dysentery, and *post-mortem* examination of the large gut furnished traces of ulcers in the shape of unpuckered cicatrices. The following case affords absolute proof that the dysenteric process with ulcers may exist prior to the occurrence of hepatic abscess, and that the ulcers may heal before death.

On August 24th commenced a typical attack of dysentery in a man of 36. The stools having lost their dysenteric character, but occasionally containing blood, and there being no piles, on September 19th he was sent north to Chefoo, to escape the Shanghai heat, with a note to a physician there stating that the thermometer gave no evidence of fever, and that there was no sign or symptom of liver disturbance at the latter date. At Chefoo fresh dysenteric trouble manifested itself, and was followed by hepatitis and a hectic type of fever, the latter setting in on September 28th. Aspiration of the liver aided to reach pus on October 2nd, and at sea on the 13th symptoms of rupture into the peritoneum either of an abscess or of an ulcer of the descending colon were followed by peritonitis. Evacuation of 12 ounces of pus from the liver gave no relief, and death occurred on the 24th, two days after the operation. Examination after death showed a single abscess of the back part of the right lobe of the liver. This abscess had ruptured below, and communicated with an encysted collection of about 6 ounces of pus lying below the left lobe. From this on the extreme left leakage had taken place, causing almost general peritonitis. The colon presented no ulcers, but there were fresh cicatrices.

The ulcers in the colon in this case must have healed subsequent to September 19th, and probably while the hepatitis was going on, since (1) the absence of a history of diarrhoea or dysentery in a case of liver abscess does not negative ulceration of the large gut; (2) in every fatal instance of liver abscess that I have examined after death, some 20 or 30 ulcers or their cicatrices have been found; (3) in the majority of those cases of hepatic abscess that I have seen recover, symptoms of dysentery have preceded the inflammation; (4) "tropical" liver abscess seldom or never occurs except in those who are or have been resident in countries where dysentery prevails; and since (5) an ulcer of the large bowel overlying a vein with an opening in the latter (and this occurs in dysentery occasionally) furnishes conditions which can set up suppurative hepatitis, single or multiple.

I hold that the answer to the heading of this paper should be tropical liver abscess (and by this is meant cases in which the suppurative process is not a part of a general pyæmia,

or connected with gall stones, hydatids, or operative procedure on the large bowel) is the result of dysenteric ulceration.

THE ACTION OF *SENECIO JACOBÆA* IN THE TREATMENT OF FUNCTIONAL AMENORRHOEA.

By WILLIAM MURRELL, M.D., F.R.C.P.,

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SOME years ago I learnt that the common ragwort (*senecio Jacobæa*) made into tea was extensively employed in many parts of England in the treatment of various menstrual disorders. I looked up the literature of the subject, but could find nothing definite. I found, however, that a closely allied species, the *senecio aureus*, was employed by the eclectics under the name of "life root" as an emmenagogue. In an old herbal I came across the statement that it acted with such certainty that it was commonly known as the "female regulator."

I had several pounds of ragwort collected and made into a 1 in 10 tincture, and my first endeavour was to ascertain the dose and the quantity which could be taken with safety. I began with half-drachm doses of the tincture in water three times a day, and gradually increased the quantity until I took half an ounce four times a day for a month without producing any effect.

I then began giving it to women suffering from menstrual derangements, and found that it answered well in cases of amenorrhœa. My observations have not been confined to the tincture, for in many cases I have employed a 1 in 1 liquid extract. I have reason to think that this liquid extract was sometimes prepared from the *senecio aureus*, but I do not think that the substitution of one species for the other is a matter of any importance, as apparently they have the same action. I have also used with good results the active principle known as *senecin*, a dark resinous-looking substance, the minimum dose of which is 2 grains three times a day.

I find *senecio* useful in those cases in which the menstrual function, having been performed regularly for some years, has been suddenly suspended as the result of exposure to cold.

L. G., aged 18, commenced menstruating at the age of 14, and had always been perfectly regular. The period usually lasted four days, was fairly profuse, and unattended with pain or discomfort. Six months before coming under observation she took a situation as chambermaid in a country hotel, where she slept in a cold damp room. The menses ceased, and she saw nothing for five months. She was examined, and there were no indications of pregnancy. On May 26th, 1893, she was ordered one drachm of tincture of *senecio* in water four times a day. On May 29th the dose was increased to two drachms four times a day, and on June 5th to three drachms four times a day. On June 8th the catamenia appeared, and lasted three days. She was given a tonic, and was not seen again.

In the majority of cases the period is not re-established until the drug has been taken for ten days or a fortnight, but in one case the patient, after having missed for two months, came on unwell after six 2-drachm doses. As a rule the patients were given only one drachm three times a day to begin with, the dose being gradually increased. This precaution, however, is unnecessary, and it is perfectly safe to begin with a couple of drachms of the tincture, or 20 minims of the liquid extract four times a day. Either preparation is taken without difficulty, and induces neither purging nor vomiting.

In some cases which were under observation the amenorrhœa was associated with marked anæmia, and then *senecio* failed. On giving iron the catamenial function was sometimes restored without further treatment, but when the periods failed to make their appearance *senecio* answered well. In cases of amenorrhœa following parturition *senecio* answers admirably, provided always that anæmia is not a prominent symptom.

Mrs. B., a stout well-nourished woman, aged 24, had been married three years, and had had three children. She had always been perfectly regular, except when pregnant. The menses ceased in March, and in the following December she was delivered of twins. The labour was not prolonged or difficult, and there were no complications. She suckled the children for a fortnight, and then weaned them. She came under treatment on March 18th, and complained that she had seen nothing

since her confinement. She was not anæmic, and there was no history of syphilis. On vaginal examination nothing abnormal was detected, except that both ovaries were tender. She was ordered 20 drops of the fluid extract of *senecio* three times a day, and came on unwell on March 22nd, the period being profuse and lasting three days.

In another case the patient had seen nothing since the birth of her first child, five months previously. She was suckling the child, and was slightly anæmic. She had no leucorrhœa, and the condition of the uterus was normal. She was given a drachm of the tincture four times a day for four days, and the dose was then increased to 2 drachms twice a day. After taking four doses of the stronger mixture the catamenia appeared and lasted four days.

In cases in which the menstrual period has never been established *senecio* is sometimes useful.

C. G., an ironer, came to the hospital on February 25th, 1893. She stated that she had never seen anything, but every month had a severe pain in the back and stomach, which lasted two or three days. The pain was always followed by bleeding from the mouth and gums. The hæmorrhage lasted only for a few minutes, but it occurred several times a day for three or four days, and always came on immediately after the pain and at the same time every month, the last time being on February 14th. The breasts were well developed and there was hair on the pubes. On February 25th, 1893, the patient was ordered a drachm of the tincture in water three times a day. On March 1st, this was increased to 2 drachms three times a day, and on March 11th to 2 drachm four times a day, which was continued until April 3rd, when, after three days of acute abdominal pain she came on unwell, the period lasting one day. The pain on this occasion was not accompanied by the usual bleeding from the mouth. The medicine was discontinued immediately on the appearance of the period, but was resumed in 2-drachm doses four times a day on April 8th. On April 19th she came on unwell quite unexpectedly, the period lasting two days, being much more profuse and again being unattended with bleeding from the mouth. This case is satisfactory, but the drug should not have been discontinued quite at the commencement of the menstrual flow, and it should not have been resumed until a week or so before the expiration of the month.

In another somewhat similar case the patient, a girl of 17, was regular, but the menses were scanty and at each period she spat blood three or four times a day. She said it was bright red blood and that there were several mouthfuls each time. Her chest was examined but nothing abnormal was detected. Her next period was due in a fortnight. On June 19th she was ordered 2 drachms of the tincture three times a day, and this she took without intermission until July 2nd, when she came on unwell. The flow was much more profuse than it had ever been before and there was no spitting of blood.

I am satisfied that *senecio* not only anticipates the period but that it also increases the quantity. In many cases it relieves the accompanying pain and not infrequently the headache from which some women suffer at those times. In one instance the administration of the drug was coincident with the disappearance of a profuse leucorrhœa from which the patient had suffered for many months.

I have not attempted to give any numerical results of my observations, for figures, especially when accumulated slowly and at long intervals, are apt to prove misleading. There is, I think, very little doubt that we have in *senecio* and its preparations a drug which deserves to rank with permanganate of potassium and binoxide of manganese in its power of stimulating the menstrual flow.

A CASE OF PERIPHERAL PARALYSIS FOLLOWING VARICELLA.

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THE late discussion at the Medico-Chirurgical Society upon paralysis following measles and other exanthemata induces me to put on record the following case of paraplegia immediately succeeding an attack of varicella. It does not conform to the type of nerve lesion, which was then chiefly considered, since the area of nerve disturbance was definitely localised, and the affection, after a sudden onset, ended in a comparatively brief space of time in complete recovery. It is, nevertheless, of some little interest, for with the exception of the so-called varicella gangrenosa that affection is usually considered of the slightest importance, and free from any complications or sequelæ. I have myself been unsuccessful in finding recorded any undoubted case of nerve affection following chicken-pox, and the fact that both Ross and Gowers in their handbooks omit all reference to such an association proves it to be of extreme rarity.

S. B., aged 2 years 5 months, was brought to Great Ormond Street Hospital for Sick Children on account of a difficulty in walking. The family history was quite unimportant. The patient was one of three children, of whom the eldest was 4 years and the youngest 10 months. All were robust, and none had suffered from any of the neuroses of