2½ in. by 1½ in. (6.25 cm. by 1.25 cm.) with an overhanging undermined edge on the inner wall; internal to this there was a dusky, devitalized area of skin with three sinus openings close to the natal cleft, superior, and one 3 in. (7.5 cm.) lower down, inferior. A probe could be passed from each of these sinuses for from 2 to 3 in. (5 to 7.5 cm.) emerging below the undermined edge of the ulcer. Curettings from the walls of these sinuses revealed actively motile *E. histolytica*, many of them with ingested red blood corpuscles. In view of this positive finding it was not considered justifiable to carry out a biopsy. Sigmoidoscopy to 25 cm. revealed a normal mucosa, except for the presence of two pin-point petechiae on the anterior wall of the rectum; no communication or induration that suggested a fistula could be felt, and pressure on the left wall of the rectum revealed no tenderness and did not lead to any discharge from the external sinuses. *E. histolytica* cysts were present in the faeces in small numbers. A course of emetine, 1 gr. (65 mg.) intramuscularly for ten days, together with "diodoquin" three tablets t.d.s. by mouth, was completed. At the end of this course the condition had greatly improved; the pain, swelling, and discharge had disappeared, but it was still possible to pass a probe in various directions beneath the dusky devitalized skin, and it was decided to lay open and incise the sinuses.

The operation was carried out by Squadron-Leader Pike on Feb. 25. On slitting open the sinuses they were found to communicate with each other like an extensive rabbit-warren, and it was considered advisable to excise the whole devitalized skin. The sinuses were found to be entirely subcutaneous and appeared to have spread laterally without penetrating the deeper areas; there was no evidence of any communication with the rectum. This form of peripheral spread was reported by Ngai and Frazier (1933), who stated: "After reaching the deeper layers of the epidermis the parasites tended to advance along the plane of least resistance between the epidermis and the cutis." It was also a marked feature in the case reported by Smyth (1946), in which an ulcer involving half the abdominal wall followed an operation for closing a colostomy in an unsuspected case of amoebiasis. A skin graft was carried out on April 21 by Wing-Commander Morley in order to expedite healing, and this was entirely successful. The patient was discharged to duty on May 21.

Discussion

It is difficult to decide the exact role of *E. histolytica* in the genesis of the abscess. There are three ways in which the abscess may have arisen. (1) By invasion through the blood stream. Although this is possible, Craig (1944) in his unique experience has never heard of it in amoebiasis cutis. (2) By invasion from the rectum. If the abscess was primarily due to *E. histolytica* it must be presumed that infection occurred through the rectum in a symptomless cyst carrier via a fistulous tract which subsequently healed spontaneously and of which no trace has remained; this is an extremely unlikely occurrence. Norwich and Muskat suggest the possibility of lymphatic spread from the rectum; this is a possibility in our case. (3) By secondary infection with *E. histolytica* in a discharging staphylococcal abscess. This appears to be the most reasonable explanation, and is supported by the negative biopsy findings at the time of the first operation, the initial improvement followed by further spread and sinus formation, and the failure to respond to penicillin.

The pathology of amoebiasis cutis has been well described by Hu (1937), and the localization of the entamoebae immediately under the skin, together with the peripheral spread, would produce the clinical picture found in this case.

Christophers's *Text Book of Surgery* states: "It seems to the writer that one or all of the following conditions should obtain before it can be fairly stated that amoebae are participating actively in any infection: (1) there should be histological evidence of the invasion of the tissues by

the amoebae, (2) they should be found either by smear or culture in the advancing margin of the lesion, or (3) the lesion should respond to medical treatment recognized as adequate for amoebic disease. The writer believes that the mere presence of amoebae on the surface of the lesion or in the exudate is no more evidence of their participation in the infection than the presence of *B. coli*, *B. proteus*, *Cl. welchii*, or any of the other intestinal organisms is evidence of their activity in the tissues about a faecal fistula." Our case satisfies these three conditions.

Summary

A case of amoebic ulceration of the buttock in a symptomless cyst carrier is described and the recent literature on the subject is reviewed.

The aetiology of the genesis of the abscess is discussed and the importance of excluding amoebiasis in any lesion of the ano-rectal region is stressed, especially in personnel who have served in the Tropics.

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A CASE OF SEVERE PRE-ECLAMPTIC TOXAEMIA WITH CENTRAL PLACENTA PRAEVIA

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A married woman, 32 years of age and in her third pregnancy, was admitted to hospital as a moderately severe case of pregnancy toxæmia on March 25, 1946. On admission she complained of some swelling of the ankles and occasional vomiting during the past week or ten days. She had had no headaches, visual disturbances, or pain elsewhere, and her only other complaint was a certain amount of epigastric discomfort caused by indigestion and flatulence which was relieved by a carminative mixture. Her last menstrual period was Aug. 1, 1945.

The patient had two children, now aged 8 and 10 years, and no miscarriages. She had had no illnesses or operations except for some degree of hypertension during the latter part of the second pregnancy.

On examination she looked rather ill and had slight conjunctival pallor. There was some oedema, not marked, of both ankles and the lower parts of both legs. Her blood pressure was 150/100 mm. Hg, and testing the urine revealed a distinct cloud of albumin. The fundus of the uterus corresponded to a height of about 36 weeks' pregnancy and was not tender on palpation. Although it was rather difficult on abdominal palpation to determine precisely the presentation of the foetus it seemed more likely to be a breech rather than a vertex.

The next day, March 27, after starting routine treatment for toxæmia, which consisted in complete rest in bed, the administration of "ostocalcium," "multivite" tablets, "bemax," glucose drinks, and phenobarbitone, 1/2 gr.

(32 mg.) b.d., there was a slight improvement in her general condition and the oedema became less. The blood pressure was then 160/98 mm. Hg, and a catheter specimen of urine still showed a cloud of albumin on testing.

The following day she complained of some blurring of vision, with spots in front of her eyes during the night, and this persisted during the day. She also complained of backache and headache mainly in the frontal region, and her blood pressure rose to 168/110 mm. Hg. In view, therefore, of the sudden deterioration in the patient's condition it was decided to perform a surgical induction forthwith. Artificial rupture of membranes was attempted but had to be abandoned because an unsuspected central placenta praevia was felt completely covering the internal os. There was some slight bleeding on digital examination. The patient was thereupon prepared at once for caesarean section, for this was considered to offer the best chance of survival to both mother and baby.

Operation

On March 28 at 6.30 p.m. atropine, 1/100 gr. (0.65 mg.), was given. At 7 p.m. a general anaesthetic was started (chloroform 1 part mixed with ether 3 parts). At 7.15 p.m. the abdomen was opened through an incision for a classical caesarean section. As soon as the uterus was reached its anterior wall was seen to be a deep purple in colour, almost the whole of the myometrium being extremely thin—in places almost like paper. It appeared to consist merely of the outer peritoneal covering and a little fibrous tissue and to be in imminent danger of spontaneous rupture. There were many peritoneal adhesions, especially on the anterior uterine wall, and omentum and intestine were also adherent to the uterus. A living female infant, breech presentation (right sacro-anterior) was then delivered. The upper segment of the uterus was separated from intestines and omentum and removed. During this part of the operation the wall of the uterus came apart in fragments when pulled upon by forceps. Hysterectomy was attempted but found to be impossible owing to adhesions, so the remaining lower portion of the uterus was sewn together with a double row of catgut sutures. The placenta, which was of the central variety and almost filled the lower segment, was very disorganized and infarcted in appearance. Towards the end of the operation the patient became shocked and was given oxygen. She was then returned to the ward.

At 8.15 p.m. anti-shock treatment was continued and intravenous plasma started. Soon afterwards the patient began to recover consciousness but was still in a very shocked condition. There was some improvement after one bottle of plasma. At 9 p.m. intravenous transfusion of Group-O Rhesus-negative blood was begun. There were some slight rigors in spite of satisfactory cross-matching.

At 11 p.m. there was marked deterioration in the general condition. The patient became very restless and delirium started. Morphine, 1/6 gr. (11 mg.), was given at 11.45 p.m. At 12 midnight the pulse became very much weaker and the respirations were infrequent, shallow, and irregular. Nikethamide and continuous oxygen were given, but the patient soon became comatose and died.

Discussion

The sudden change from a moderately severe toxæmia to a condition bordering on true pre-eclampsia, in spite of treatment having been started, after symptoms had been present for only just over a week before admission to hospital is noteworthy. There were present three abnormal conditions, any one of which might have proved fatal, for at any moment immediately before entering hospital the patient might have been overtaken by (1) the sudden onset of eclampsia, (2) a severe antepartum haemorrhage, and (3) a ruptured uterus.

The cause of the low-lying placenta in this case might have been the poor condition of the upper portion of the uterus, with consequent difficulty in nidation of the ovum

in a normal position. The reason for the excessive thinness of the upper uterine segment and the almost complete disappearance of muscle fibres in certain areas was not determined. There was no history of peritonitis or an operation which might have accounted for the many dense adhesions found at laparotomy. So far as the patient herself knew her previous confinements were quite normal, apart from some degree of hypertension towards the end of the second pregnancy. There was no history of pyrexia during the puerperium after the birth of her other children.

The previous hypertension might have contributed to the degeneration of the myometrium, for in women dying from eclampsia areas of myometrial infarction have been found post mortem. Hypertension could presumably lead to a relative ischaemia of the tissues supplied by the affected vessels and perhaps in some cases, if severe enough and prolonged, to their replacement by fibrous tissue. Furthermore, this patient was clinically rather anaemic, although unfortunately a haemoglobin estimation and erythrocyte count were not done. Anaemia would conduce to any degenerative processes which might occur. Another possibility is that there was an undiagnosed partial rupture during one of the previous confinements, although there was no history of any previous dystocia; nor, if the myometrium was then healthy, is there any reason why even a partial rupture should have occurred. Probably, as often in medicine, the cause of this and other morbid conditions will ultimately be found to be a combination of several factors.

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Medical Memoranda

Abdominal Implantation of Fertilized Ovum

Since examples of implantation of a fertilized ovum in the peritoneal cavity are comparatively rare, the following case may be of some interest.

CASE REPORT

A married woman aged 32 was admitted to the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Jan. 16, 1947, as a case of ruptured ectopic pregnancy. In 1940 she had a normal full-time delivery and her puerperium was uneventful. She had never had a miscarriage, nor could any evidence of previous abdominal or pelvic inflammation be obtained. Her menstrual cycle was regular every 28 days and the period usually lasted four to five days. Her last normal period began on Dec. 10, 1946, and was of the usual duration. She was perfectly well until Dec. 26, when at 1 a.m. she was seized with sudden acute lower abdominal pain which prostrated her and made her crawl about in agony. She remarked that the pain was similar to that of labour. After three hours the pain disappeared suddenly and she felt well again. There was no haemorrhage per vaginam. A week later she was able to undertake a long journey. On Jan. 12 she had another attack of lower abdominal pain, not so severe as previously, but on this occasion it persisted until Jan. 15, although it was not particularly acute. With the onset of pain, haemorrhage per vaginam was noted, and it continued right up to the time of operation. While reading in bed on the morning of Jan. 16 a further sudden attack of acute lower abdominal pain occurred and she felt very ill indeed. She was seen by her doctor at 6 a.m. and sent into hospital.

On admission the patient looked very ill, with a definite cyanotic tinge of the skin. The temperature was 98.6° F. (37° C.); the pulse was 100 and of poor volume. She complained of generalized lower abdominal pain, and also pain in the right shoulder region and the lower ribs on the right side. Examination showed a diffuse tenderness over the lower abdomen, possibly slightly greater on the right. There was no rigidity and Cullen's sign was absent. Vaginal examination caused the patient much pain, but it was possible to feel a boggy mass in the pouch of Douglas. A lump was not palpable.