examination of the colon for cancer masquerading as appendicitis is worth while (Case 8).

An ileocaecal mass exposed at operation for appendicitis can be a diagnostic problem, because a wide range of pathological conditions produce inflammatory masses with an identical picture. Out of 85 ileocaecal masses reported by Roberts (1959), 17 distinct pathological states were found. As many of these lesions are better treated by hemicolectomy, it seems reasonable to resect a suspicious lesion rather than to leave what may prove to be a deadly carcinoma. When conservative treatment is proposed for such a mass with the impression of appendicitis radiological investigation should on no account be neglected. Reduction in size of a mass does not rule out malignancy (Cases 1, 3, and 7).

An appendix abscess discovered at operation calls for careful examination of the caecum for a hidden carcinoma (Cases 1, 3, 4, and 7). In Miller and Wooldridge's (1954) patient examination of pus led to the discovery of cancer cells.

Faecal fistula, recurrent abscesses, or discharging sinuses (Coulter, 1957; Burt, 1949; Thomas, 1953, Case 5) following appendectomy may originate from unrecognized carcinoma of the caecum and require prompt investigation and often exploratory operation.

A detailed x-ray study of the caecum, including oblique views, spot, evacuation and air contrast films, and repeat x-ray films in doubtful cases should form an essential part of the investigation. Casual and hurried examinations have caused many catastrophic delays (Bartlett and Miller, 1940; Patterson, 1956; Case 3).

When carcinoma of the caecum is discovered at operation for appendicitis in a fit patient prompt resection—that is, right hemicolectomy—is the procedure of choice. "The first chance at these tumours is the best" (Patterson, 1956). Primary resection of the right colon without adequate bowel preparation seems no more risky than a similar resection of small gut at an emergency. The fluid contents and complete peritoneal covering of ileum and transverse colon ensure safe anastomoses. Instillation of 100 ml. of 1% solution of neomycin into the colon at the time of resection provides additional safeguard. Perforation (Hinshaw and Carter, 1960) or presence of pus (Coulter, 1957) does not contraindicate radical resection.

Conservative treatment should be reserved for gravely ill patients in whom provision of simple drainage for large quantities of pus, exteriorization of colon for perforation, and intestinal by-pass in obstruction offer good palliation, and should be followed by effective tumour operation, which is right hemicolectomy.

Summary

Seven cases of appendicitis secondary to carcinoma of the caecum and one case of carcinoma of colon simulating appendicitis are described.

The problems of diagnosis and management are made clear by a study of the relevant literature.

A plea is made for a careful examination of the caecum during appendectomy and a detailed x-ray study of the caecum in cases of appendix abscess, sinus, fistula, and inflammatory mass in elderly people. Only in this way is the incidence of unrecognized carcinoma of the caecum likely to be reduced.

I am grateful to Mr. Stephen Power, consultant surgeon, for allowing me to handle some of his case records, and for his generous guidance, criticism, and correction of this paper. I also thank the record office and the pathology department for their valuable help.

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Medical Memoranda

Tuberculous Endometritis Diagnosed 12 Days After Abortion

In recent years there has been renewed interest in the subject of genital tuberculosis in women. Particular attention has been paid to the relationship between infertility in the female and genital tuberculosis, but little has been written of genital tuberculosis in the immediate postpartum period.

In a ward reserved for the treatment of septic abortions and puerperal pyrexia a rise in a patient's temperature after abortion does not in itself give much cause for comment. It is often difficult to ascertain whether the abortion was spontaneous or induced, under anything but aseptic conditions. However, when the pyrexia continues despite antibiotic therapy it is important to consider other, less common, causes for this state of affairs.

It was in circumstances such as these that the cause of pyrexia in the following case was diagnosed and treated.

CASE REPORT

A married woman aged 31 was admitted to Robroyston Hospital in the evening of October 23, 1961. On admission her condition was satisfactory and she had no previous medical history of note. She had had two abortions—one in 1955 and one in 1956. These had occurred spontaneously at three months and neither required further treatment after the abortion had completed itself. In 1959 she had an uneventful pregnancy and was delivered of a healthy male child weighing 8 lb. 3 oz. (3,715 g.). The puerperium was uneventful, and from that time until the start of the present pregnancy her menstrual cycle had been regular, lasting for three days in every 28.

On examination after admission the patient was found to be 20 weeks pregnant, and was having regular uterine contractions. Vaginally there was a loop of cord presenting at the introitus, the cervix was dilated two fingerbreadths, and the foetus could be felt in the cervical canal.

The next morning the foetus was manually removed from the vagina and the placenta delivered by the Brandt-Andrews method. Blood loss was minimal.

Within 24 hours of delivery she developed a pyrexia of 101.2° F. (38.4° C.). A high vaginal swab and mid-stream specimen of urine were taken for bacteriological culture and a course of crystalline penicillin, one mega unit a day intramuscularly, and sulphadimidine 3 g. initially then 1 g. six-hourly by mouth, was begun.

Despite this treatment the pyrexia reached 103° F. (39.4° C.) on the sixth day of antibiotic therapy. A report on the high vaginal swab and mid-stream specimen of urine revealed that there were few pus cells in the specimens, and a scanty growth of *Escherichia coli* which was not regarded as significant. Antibiotics were stopped on the sixth day.

Other Investigations.—Chest x-ray examination revealed no abnormality. Blood cultures showed no growth. Full blood examination gave normal results apart from a raised E.S.R.—28 mm. in first hour (Wintrobe). The white-cell count was 8,500 per c.mm., the differential count being within normal limits.

During this time the patient's only complaint was of occasional dull aching pain in the left iliac fossa. Examination revealed abdominal tenderness and some guarding on deep palpation.

In view of these findings an examination under anaesthesia and dilatation and curettage were performed on November 4, 12 days after the abortion. The uterus was normal and the curettings appeared to be so, with no degenerating chorion or decidua. Behind and to the left of the uterus a well-defined, hard, irregular mass was felt, suggestive of a tubo-ovarian abscess.

Histological examination of the curettings showed a number of giant-cell systems and chronic inflammation which was highly suggestive of tuberculous endometritis (see Fig.). This diagnosis was confirmed by the finding

Histological section showing giant cells and inflammation. (H. and E. $\times 200$.)

of acid-fast bacilli in a section stained with Ziehl-Neelsen stain. Further evidence was obtained when a guinea-pig which had been inoculated with some of the patient's post-operative vaginal discharge was obviously infected with tuberculosis when killed six weeks later.

The patient's pyrexia continued after the operation. On the fourth post-operative day, when the diagnosis was confirmed, treatment was started with streptomycin 1 g. daily intramuscularly, and isoniazid 250 mg. and sodium P.A.S. 12.5 g. daily in the form of "pymisan PH 10" 10 cachets a day. The pyrexia settled within three days of starting this treatment, and within two weeks the patient was sent home on the above therapy.

Since then she has been seen regularly for follow-up and her condition has shown marked improvement. By January 16, 1962, she had put on 14 lb. (6.4 kg.) in weight and the mass behind and to the left of the uterus was found on vaginal examination to be about half its original size.

Apart from two normal menstrual periods the patient has had no vaginal discharge.

DISCUSSION

It seems highly probable that this patient had developed active genital tuberculosis either during the pregnancy or at the time of abortion. Very few cases have been reported in which active pelvic tuberculosis and pregnancy have coexisted.

Sutherland (1952) described six cases of post-partum tuberculosis. Five of these were diagnosed from two months to two years after a pregnancy. The sixth case was very unusual in that chorionic villi and tuberculous endometritis were present in the same specimen. Russell, Jackson, and Midgley (1951), in a series of 40 cases, had two patients who developed tuberculous meningitis after abortion and died. Herring and King (1950) also described a case of tuberculosis of the endometrium and cervix which probably developed during pregnancy. Sutherland's sixth case is in many respects similar to the one here reported. It is not certain that the two conditions coexisted in the present case, but in view of the short period between abortion and a temperature developing it seems very likely.

Treatment must be fairly prolonged. A full course of 120 g. of streptomycin intramuscularly should be given, along with P.A.S. and isoniazid. Experience has shown that cessation of treatment after this course leads to recurrence in many cases. It would now seem that the P.A.S. and isoniazid should be continued for two years to avoid this.

The prognosis in these patients is good from the point of view of general health, but their chances of conceiving again are small, and any who do conceive usually abort before the foetus is viable.

While very few cases of post-abortive sepsis will be due to tuberculosis, it is probably wise to avoid using streptomycin as a routine antibiotic until a diagnosis of the type of infection responsible has been made, otherwise any underlying tuberculous infection will be masked.

My thanks are due to Dr. W. C. Armstrong for permission to publish this case record; to Dr. A. D. T. Govan for reporting the pathology of the curettings; to Dr. C. J. MacKinlay for helpful advice and criticism; and to Mr. T. Pearston, chief technician at the Royal Samaritan Hospital, for preparing the illustration.

KEIR H. FISHER, M.B., D.Obst.R.C.O.G.
Trainee Assistant in General Practice, Kilmacoll,
Renfrewshire; formerly Resident House Officer,
Robroyston Hospital, Glasgow.

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A new service is to be started in New South Wales soon to help doctors in country areas keep abreast of the latest developments in medicine and surgery. The Postgraduate Medical Foundation of New South Wales plans to send regularly to country hospitals tape-recorded talks by visiting overseas specialists and leading Australian medical men. The new service will be an extension of a scheme by which eminent doctors are able to address the staffs of all teaching hospitals in Sydney on a land-line system, a telephone network connected to amplifiers. (*Radio Australia News*, July 27.)