ANOMALOUS CASE OF ENTERIC IN AN
INOCULATED SUBJECT.BY
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THE following case is interesting by reason of the impossibility of arriving at a diagnosis by clinical observation alone, and important from the possibility such a case presents, as long as it is undiagnosed, of proving a reservoir of infection.

It appears to us that the masking of the symptoms was in all probability due to the high degree of resistance by vaccination, the man having been vaccinated against enteric in March, and again just previous to admission.

Private V., admitted to No. 10 Stationary Hospital on November 13th, 1914, with a history of three days' malaise; the temperature was 100°. He had been inoculated against enteric on November 10th. Blood cultures on November 14th proved negative. A few days after admission temperature became normal. He was discharged from hospital on November 19th for observation.

On November 21st he was readmitted complaining of slight headache, slight cough, and pains in joints; he stated that he had had a shivering fit previous to admission. The temperature was 104°, pulse 92, and respirations 32. There was a slight patch of bronchopneumonia

at the left base; this soon cleared up, and no other physical signs whatever, either on admission or subsequently throughout his illness, could be detected, though repeated examinations were made by the hospital staff and by Sir Wilmot Herringham, consulting physician.

For two weeks the temperature oscillated between 100° and 104°, when it dropped to 97°. It then rose to 99° to 102° for two weeks; after this it remained at 97° to 98°. During the last week he had several rigors followed by cyanosis and signs of heart failure. He had slight pyorrhoea which improved under treatment. During the second and third week of his illness he had slight diarrhoea which was not typhoid-like. Emaciation, especially towards the end, was a marked feature of his illness. During the first four weeks the pulse remained between 80 and 90, but for the last week it rose to 100 to 110. Blood cultures made on November 14th, 24th, and December 4th, were all negative.

The diagnosis was not established until December 21st, when examination of the urine showed it to be full of typhoid bacilli in agglutinated clumps. On December 22nd the patient had two haemorrhages from the bowel; the blood was bright red. There was never any abdominal tenderness or distension, no splenic enlargement and no rose spots; moreover, except during the first few days there was no headache and the tongue remained clean throughout. He died from heart failure on December 24th. The mind remained clear up to the end.

On post-mortem examination about a dozen typical typhoid ulcers, mostly healing, were found in the ileum; all other organs were healthy. Typhoid bacilli were recovered from the gall bladder, which contained a rich pure culture.

MESSRS. SMITH, ELDER AND CO. will publish on January 1st a work entitled *The Early Diagnosis of Heart Failure, and Other Essays on the Heart and Circulation*, by Dr. T. Stacey Wilson, senior physician to the General Hospital, Birmingham. The volume, which is illustrated by over 130 original diagrams, contains a great deal with regard to simple methods of diagnosis of heart failure.

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APPENDICITIS TREATED WITH ANTI-COLON
BACILLUS SERUM AND VACCINE.By A. COWAN GUTHRIE, M.B., C.M.EDIN.,
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THE possibility of appendicitis being due in some measure to infection by *B. coli communis* suggested to me that the serum and vaccine of the colon bacillus might be of service in this affection. I have tried it with success in no fewer than 22 cases, of which the following is a typical example:

Mr. L., 59 years of age, spirit merchant, had suffered for many years from indigestion and constipation; there was also a history of two previous attacks of appendicitis. Two months ago, while at work, he was suddenly seized with severe pain all over the abdomen. Under treatment by poultices the pain gradually subsided. Next day, however, the pain returned, becoming so severe that it was only by resting on the floor on his hands and knees that he could obtain slight relief; the pain was attended by sickness and some vomiting. Both recti were rigid, especially the right, and there was slight dullness in the right iliac region. On sacral percussion by Lewis's method a dull area could be detected on the right side.

I injected 10 c.cm. anti-colon bacillus serum into the right hypochondriac region subcutaneously. In a few hours the pain had entirely passed away and he was able to stretch his limbs, which up to this period had been kept flexed. There was entire absence of pain all the following day, but slight haematuria and haemorrhage from the bowel were present. Next day there was a slight recurrence of pain, the right rectus being still rigid with tenderness on pressure all over the abdomen, especially in the right iliac region. I again injected 10 c.cm. anti-colon bacillus serum, this time in the left hypochondriac region. This injection was followed in a few hours by complete relief from pain; the patient also expressed himself as feeling better generally. To prevent recurrence I injected 100 million colon bacillus vaccine into the deltoid region. The pain did not return, and the patient gradually passed on to complete convalescence, being quite well again in three weeks. His tongue became clean for the first time for years.

All the 22 cases of appendicitis in which I have adopted this method of treatment have recovered without the necessity of operative measures. Most of the cases were in the acute stage; a few showed symptoms of chronic appendicitis, and in one the symptoms were of a post-operative character—that is, there was pain in the region of the caecum simulating appendicitis two years after the appendix had been removed. In only one case has there been a recurrence; here, too, little serum was used and no vaccine. What struck one most was the wonderful effect of the serum in causing complete relief from pain, also the feeling of well-being and hopefulness of recovery—a feeling entirely absent before treatment.

In appendicitis, as has been shown, when the mucous membrane of the appendix is affected the sympathetic nerve is involved and the pain is general; but when the muscular and serous coats become involved the eighth to the tenth dorsal nerves are implicated, and the pain is then localized to the iliac region. It is therefore in the first stage, when the pain is general, that the serum should be used.

I have found that the most suitable dose is 20 c.cm. anti-colon bacillus serum; 10 c.cm. should be injected subcutaneously first in the right and then in the left hypochondriac region. A few days later 100 million colon bacillus vaccine should be injected in a similar way into the deltoid region. This is to prevent recurrence. As organisms other than the *B. coli communis* may be the determining cause of this disease, the "fixation of complement test" should be tried, using the patient's serum and the most probable organism (*B. coli communis*, *pneumococcus*, *streptococcus*), a corresponding serum or vaccine being used.

The anti-colon bacillus serum probably acts chiefly as an antitoxin, also as a counter-irritant, causing local leucocytosis. It has also probably a physical effect, changing the equilibrium in the surrounding fluids and thereby producing increased osmotic pressure and favouring phagocytosis of the bacilli, as has been shown by Leduc.