note the perfect mechanical safety of the gastro-jejunostomy on the fourth day of the operation.

Remarks.—Additional interest in the first case, that of the old lady, is that it is a good example of the fact that even very old people stand operations well when their tissues are young, and the number of years a patient has lived is not in itself a bar to even a considerable surgical operation.

In Case II all of those present at the first operation were sure that the growth was malignant, and I regretted at the time that I did not think the man's general condition warranted me doing a partial gastrectomy. It was a matter of great surprise and satisfaction to see, when the abdomen was reopened, how the mass had melted away.

I have been so much impressed with this case and the next that I am strongly inclined to think that in a large number of cases where partial gastrectomy is under consideration it would be always as well to do a preliminary gastro-jejunostomy. The operation in either case is of material benefit to the patient. The pain suffered is much less or entirely disappears, and peaceful sleep is procured. The diet can be increased and the food is digested.

If a partial gastrectomy is ultimately necessary the patient is in much better case after two or three weeks than when the abdomen is first opened, and the time lost makes no material difference in the possibility of removal of the growth.

In the third case when the stomach was exposed the condition looked so hopeless that I nearly closed the wound without doing anything further.

The effect of the operation on the patient was interesting, and most satisfactory during the three days that she lived. The drawn, pain-stricken appearance of her face disappeared, and she lay in bed quite comfortable and placid.

I was fortunately able to procure a *post-mortem* examination—which I was anxious to get—to see whether this case was also only inflammatory growth around ulcer; this, as the specimen shows, it proved to be, and a microscopical section of the tissue near the ulcer is a further proof of it.

The lesson this third case teaches is that delays are dangerous in cases of gastric pain which are well marked, and do not readily respond to medical treatment. Under such circumstances the abdomen should be opened and the stomach examined. A gastro-jejunostomy can be done, and if there has been haematemesis to any marked degree, the stomach should be opened through healthy tissue in the neighbourhood of the ulcer, and the ulcer either cauterized, cut out, or ligatured to prevent further haemorrhage.

THE RELATION OF ULCERATIVE COLITIS TO DYSENTERY.

By A. E. CARVER, M.D., M.R.C.P.,
TORQUAY.

THE brief notes recorded below appear to have some bearing on the views put forward in Dr. Saundby's interesting paper on endemic sporadic dysentery in England. In addition to the case described at length by Dr. Saundby, there is some evidence that the bacillus of Flexner and Shiga does, occasionally at all events, occur in cases of colitis.

In 1903 Mr. Foulerton, of the Middlesex Hospital, very kindly tested for me the agglutinative power of the blood of three patients suffering from ulcerative colitis. One gave a positive result, whilst the other two were negative, the dilution in each case being 1 in 40. A positive reaction had previously been obtained by Mr. Foulerton¹ in six cases of dysentery and in one of acute colitis, and in no other disease was the reaction obtained with a dilution greater than 1 in 10.

It has been pointed out, by Flexner I believe, that the agglutinative reaction is obtained in cases of dysentery comparatively early in the course of the disease, and that it disappears also at an early date. This is hardly to be wondered at considering how great are the chances of a secondary infection occurring from the large bowel, and it seems not unlikely that the nature of such secondary infection may determine the clinical variety of the colitis.

In the autumn of 1902* there occurred in North London

a sharp outbreak of acute colitis, an account of which was read before the Medical Society of London. The disease presented the symptoms and pathological lesions of acute bacillary dysentery, and seemed also indistinguishable from the acute cases of asylum dysentery described by Dr. Gemmel.² I was able to find a published account of only one similar outbreak, that described by Dr. Cautley,³ which occurred in a London barracks during the summer of 1900; but I have been informed that a similar condition prevailed at Aldershot about the same time, and that an account of it was read before the Epidemiological Society.

It will be remembered that shortly after the conclusion of the late Boer war a good deal was heard of "typhoid infected blankets" brought home from South Africa. Now, typhoid fever and dysentery were of almost equal prevalence during the war, and if the one infection were brought home it is not unreasonable to suppose that the other may have been conveyed in like manner. A consideration of the times and places at which the above epidemics occurred would seem to lend colour to such a conjecture.

A sequence of events which occurred at the Great Northern Hospital in 1902, and again at the Westminster Hospital in 1903, seems also to suggest that there is some relationship between acute colitis and the more chronic ulcerative colitis. During the nine months included between October, 1901, and June, 1902, there were admitted into the Great Northern Central Hospital 5 cases of ulcerative colitis, the last of which was followed in three weeks by the first case of acute colitis, and this was in the person of one of the nurses of the hospital. No other cases of either disease had been in the hospital during the previous four years certainly, and possibly not during a longer period.

Again, during April, 1903, two cases of ulcerative colitis were admitted into the Westminster Hospital, and a fortnight later there appeared in the children's ward an outbreak of bloody diarrhoea, of which one patient died. The bowel presented the lesions of acute colitis. These events may well be mere coincidences, but it would be interesting to learn whether any similar sequences have occurred at other hospitals.

REFERENCES.

- ¹ *Centralbl. für Bakt. und Parasiten.*, February 27th, 1902. ² *Ulcerative Colitis*, 1895. ³ *Lancet*, May, 1901.

THE EFFECT OF X RAYS UPON THE LEUCOCYTES IN THE BLOOD AND BONE MARROW IN LEUKAEMIA.

By R. J. M. BUCHANAN, M.D., M.R.C.P.,

ASSISTANT PHYSICIAN TO THE LIVERPOOL ROYAL INFIRMARY.

THE extraordinary results which have been obtained from the treatment of leukaemia by exposure to the x rays are well known. Clinically the action of the rays is manifested by a rapid diminution of the enlarged spleen, and a great reduction in the number of leucocytes in the blood, as evidenced by the leucocytic count. From so great a number as 500,000 per cubic millimetre, or about fifty times the normal, the leucocytes may fall gradually to the normal. The large finely granular myelocyte, and the large coarse granuled eosinophile myelocyte, which give the blood in leukaemia so distinctive a character by their presence, and which are not usually to be found in normal blood, are rapidly reduced in numbers, and have been said to disappear entirely.

When one states that the presence of these large myelocytic cells is distinctive of this disease, one is brought face to face with the problem of myelogenous leukaemia as opposed to simpler leucocytosis. They are clinically regarded as different conditions.

Apart from physiological leucocytosis, which is rather of a lymphatic than a myelogenous origin, I consider we are in a position to distinguish two forms of pathological leucocytosis only: (a) one in which the excess is due to an increase of the lymphocytes derived from the lymphatic glands and tissues—a lymphocythaemia, lymphæmia, or lymphocytosis; and (b) one which is due to an excess of cells derived from the marrow—a myelocythaemia, myelæmia, or myelocytosis.

* Abstracted from thesis for degree of M.D., Cambridge.