sodium citrate and sodium chloride. This emulsion is sucked up to the mark above the bend; it will be found that it is difficult or impossible to do this with a rubber teat owing to fluidity of the emulsion (unless a throttled pipette be used). The pipette may now be laid down, and the column of emulsion will be found to stay steady while a puncture is made in the finger. A short column of air having been taken up, a column of perfectly fresh uncoagulated blood is aspirated to the mark, and the whole rapidly blown out on to a glass slide, so that the citrate may at once act on the blood and so prevent coagulation; this is not so efficiently done if blood is taken up first.

The two fluids are then mixed, aspirated, sealed, and incubated, unless a portion be reserved for the leucocyte count. The films are made in the usual way, by blowing out and mixing before spreading; this remixing is important if the estimation of the leucocytes is made after incubation. The film need not be fixed before staining with carbol fuchsin; the index is calculated in the usual way. To correct the apparent index, multiply the control index by its corresponding number of leucocytes and divide the result into the other index multiplied by its corresponding number of leucocytes, as shown in the following examples:

T. B. per Cent.	Index (Leishman).	Index (Wright).	Leucocytes.
A. 190	1.0	1.0	11,000
B. 115	0.6	0.9	16,000

The corrected index, 0.87, corresponds closely to 0.9 as got by Wright's method:

T. B. per Cent.	Index (Leishman).	Index (Wright).	Leucocytes (Average per Field).
A. 114	1.0	1.0	18
B. 84	0.73	1.01	25

In another case, where a hundred leucocytes were found in one field, they were found to contain about 100 per cent. bacilli; whereas in the control only twelve leucocytes were found, and those on the film were so full of bacilli that no count could be made, though they illustrated the proposition of inverse proportion.

Some interesting experiments with the writer's own blood were made, and may be recommended as a method of practice; a drop of blood was obtained from the finger, mixed and incubated as usual; then a second drop of blood from the same finger, and only three minutes later, was similarly treated, except that the pressure used in obtaining it was not necessarily the same as that used for the first drop. The leucocytes and indices were estimated in the two specimens, calculating the first as 1.0, and very good illustrative results were seen; thus, on one occasion, each specimen contained the same number of leucocytes per haemocytometer field (13), and the bacilli ingested were respectively 200 and 205 per cent.; on another occasion approximately twice the number of leucocytes and half the number of ingested bacilli were found in one specimen as compared with the other; several similar results were seen, and as the same blood was used on all occasions for each comparison there could be no doubt as to the actual index.

A tube was mixed and kept for half an hour at room temperature, and showed no phagocytosis at the end of that time, but showed good results after incubation. The mixing may therefore be done at the bedside, and the mixture carried some distance to the laboratory. Dr. Campbell² suggests that the emulsion be made up of previously stained and washed bacilli. This would further simplify the procedure. One might almost be able to count these already stained and ingested bacilli, and the leucocytes in the haemocytometer chamber at the same time.

The method as a whole is simple, requires little apparatus, and is quite within the powers and opportunities of the general practitioner after a little practice. It seems to be more especially applicable when it is only desired to estimate two or three indices occasionally, as

in diagnostic work, as with T. R.,³ or as suggested by the writer with T. O.⁴

The proposition of the inverse proportion between ingested bacilli and leucocytes suggests several interesting speculations. Should it be proved universally true, the number of leucocytes per c.mm.—at any rate, within wide limits—seems unimportant as far as the opsonic action is concerned. Yeast, cinnamic acid, and other drugs have been used in the hope that the leucocytosis caused by them would combat disease. But Huggard and Morland⁵ showed that yeast altered the tuberculo-opsonic index as well as the number of leucocytes, and so it may possibly be shown of the other drugs. May we regard leucocytosis as superfluous as far as opsonic effect is concerned? The leucocytes might be compared to the fielders in a cricket match. If the fielders are as good at their work as the leucocytes are, of a hundred balls delivered ten fielders could theoretically stop as many of them as a hundred fielders could. But the limits must not be too wide; one man could not stop them all, and one leucocyte cannot do the work of a hundred. Another consideration is that experimental phagocytosis lasts only (say) fifteen minutes, whereas in the body phagocytosis has all day to go on, when a larger number of leucocytes may be more useful if only in bringing up reinforcements.

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MALIGNANT DISEASE OF THE INTESTINE RENDERING AN INGUINAL HERNIA IRREDUCIBLE.

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THE rareness of this condition warrants, I think, the account of a case occurring in my practice.

R. T., a man, aged 57, apparently otherwise healthy, came to me in July, 1906, with an irreducible left inguinal hernia of long standing, which was causing him pain. He also had a complete inguinal hernia on the right side, but this was reducible.

He was kept in bed for a week or so on a careful diet, but as the hernia remained irreducible and painful, he was advised to submit himself to operative treatment, to which he consented.

Operation.

On July 18th, 1906, the sac was opened and was found to contain a loop of large intestine markedly adherent to the sac. On freeing the gut a hard mass of malignant disease was found in the concavity of the loop, and in the centre of this mass a small abscess cavity containing 2 or 3 drachms of foul, appendix-abscess-like pus; this was evacuated, and the loop of intestine was excised, together with about 2½ in. of healthy gut on each side of the growth. The cut ends of the intestine were fixed in the original incision in the inguinal canal, an end-to-end anastomosis not being considered advisable, owing to the presence of the pus. The patient made an uneventful recovery.

After-History.

The colotomy opening so formed was only meant as a temporary measure, but the patient having been fitted with a double inguinal truss, the pad on the left side being replaced by a cup-shaped receiver for the faeces, found that he could get about his work all day without any inconvenience and has hitherto refused to have an end-to-end anastomosis done.

I saw him twelve months after the operation; he had gained weight, the colotomy wound looked healthy, and there was no evidence of any secondary deposits in the liver.

Description of Specimen.

It consists of 12 in. of large intestine having a growth involving the central 6 in. which at one point has protruded into the lumen of the intestine. In the centre of the growth is a necrotic area. Microscopic examination showed a columnar carcinoma.