The meal, when given by the mouth, may of course be of great value. When there is any marked obstruction this barium will show up on the proximal side of the stricture as a thick black shadow with a sharply defined rounded end, and later thin flakes of the metal may be seen escaping through the stricture, the dense black mass remaining for long on the proximal side. All barium meals should be verified a second time in order to avoid any fallacy.

It is an interesting fact that, however tight a stricture may be, as long as the hypertrophic compensation is good on the proximal side, and no great obstruction is present at the time the barium is passing along the intestinal tract, the salt will travel to the distal side of the obstruction in an amazing way. We must remember that a barium meal is not at any time palatable, and that any one the subject of carcinoma of the colon with obstruction is apt to be sick, and thus render the value of this method of diagnosis not practicable.

The method of giving barium by the rectum in the case of malignant stricture of the colon has this advantage over the mouth method—that it may be done much more quickly, and that long and frequent examinations are not necessary. It has for long been known that enemata given by the rectum will travel the whole length of the large gut to the caecum, and that on introducing a solution of barium sulphate into the rectum by the tube and funnel it will travel to the caecum within a few minutes. To enable this procedure to work satisfactorily the colon must be empty. The patient is laid flat on the back, there being no need to adopt the knee-elbow position. In the case of obstruction to any marked degree the salt will be arrested on the distal side of the stricture, enabling the site to be distinguished.

During the past few years I have had considerable experience in the use of barium enemata as an aid to diagnosis of malignant strictures, and although I regard it as a valuable method of examination in the diagnosis of the condition I feel that it is not to be relied on alone.

The following case is of interest:

A growth was located in the sigmoid; the patient was given a bismuth enema and the salt was seen to pass through the growth without delay to the caecum. Later, at the operation, when the growth was removed, the lumen was found to be reduced by half.

This is a point of great importance, showing that a growth producing partial obstruction does not necessarily interfere with the passage of the barium.

I recently saw a man, aged 58, who had been suffering from diarrhoea and rectal tenesmus for upwards of a year. There was occasionally blood in the stool, but never bright. He was seen by a distinguished radiologist, who administered a barium enema. The barium solution travelled the whole length of the colon to the caecum, and on account of the free passage of the salt along the bowel the radiologist reported that the patient was suffering from colitis, whereas on rectal examination the lower edge of a hard craggy carcinoma could be felt adherent to the bladder. This was verified by operation shortly after, when secondary deposits were found in the liver, and he died nine months later from general dissemination of the disease.

This case brings out several points:

1. How a most advanced cancer of the bowel will allow a barium enema to traverse it.
2. That the method of investigating the case was wrong; for had the history been obtained and a rectal examination made, and if necessary sigmoidoscopy, the diagnosis would have been clear.
3. Radiologists should not make a diagnosis on their findings alone.

It would be difficult to exaggerate the value of palpating the barium-filled colon under the x-ray screen in the diagnosis of lesions of the large intestine. The colon stands out in a dense shadow and can be freely moved about the abdomen. When an abdominal tumour is present its exact relation to the colon can be detected, for the visible colon is easily altered in position in relation to the swelling; so that it can be ascertained whether or not a tumour has its origin in the large gut. The method is useful chiefly in the case of tumours which are in the immediate neighbourhood of the colon, such as those of the kidney and pancreas, swellings in the psoas sheath, and for certain retroperitoneal growths.

Abdominal palpation, aided by sight, may be of great value, and all practical physicians and surgeons should be familiar with it.

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TWO CASES OF RAT-BITE FEVER.

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MORE than twenty cases of rat-bite fever have now been described in this country alone, and the clinical picture is well established. The following cases are recorded because in the first the disease was caused by the bite of a cat, and in the second the diagnosis was established by gland puncture during an afebrile period.

CASE I.

A woman, aged 52, was admitted to the hospital in September, 1921. Three weeks previously she had been bitten on the back of the hand by a cat. The cat lived in a barn and was known to be a rat killer. One week before admission the hand became very swollen and was incised by her doctor. On admission to the surgical ward there was a granulomatous ulcer on the back of the hand with some cellulitis, and enlargement of epitrochlear and

axillary glands. The local condition rapidly yielded to treatment, but during her stay in hospital she had three bouts of fever, each of four to five days' duration, in which the temperature mounted gradually to 103° F. A fourth bout was aborted by an injection of novarsenobillon. Each bout of fever was accompanied by an eruption of purplish blotchy non-itching spots, as well as by headache, sore throat, and pain in back and limbs. The blood culture was negative, and during the fever there was a polymorph leucocytosis of 30,000 per c.mm. The spirochaete was not found in the blood, but it was not sought by dark-ground illumination.

I have found three other cases described in the literature of this country in which the disease was not due to the bite of a rat. In two cases it followed the bite of ferrets, and in the third that of a kitten which had been playing shortly before with the body of a dead rat.

CASE II.

A farm labourer, aged 26, was admitted to the hospital in February, 1924. Five weeks previously he had been bitten on the hand by a rat while ferreting. The wound healed, but a fortnight later became inflamed and was incised by his doctor. It then healed rapidly, but a week later he developed sore throat with a temperature of 104° F. and red blotches all over his body. The fever subsided after several days, only to recur shortly before admission.

The temperature was 102.8° and the body was covered with large purplish macules which appeared to be already fading. By the following evening the temperature had fallen to normal, and there was no subsequent rise above 99° during the remaining ten days of his stay. On the third day, after the temperature had fallen to normal, Dr. Gibson punctured the epitrochlear gland with a hypodermic needle and injected a small quantity of sterile saline. He then removed a small quantity of gland juice, in which he was able, by dark-ground illumination, to demonstrate the presence of spirochaetes. Two days later the first injection of novarsenobillon was given.

These are the only cases which have occurred in the practice of this hospital since the war. As the hospital serves an agricultural area of about twenty miles radius, it is possible to form some idea of the frequency of the disease in this country.

I have to thank Mr. Bevers and Dr. Gibson respectively for permission to publish the notes of these two cases.