LATE MANIFESTATIONS OF AMEBIASIS

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THE recent epidemic of amebiasis emanating from Chicago, has resulted in numerous excellent articles on the affection. By now, the medical profession should be wellversed in the symptoms and the treatment of amebic dysentery per se.

It is reasonable to suppose that some of the acute instances will become chronic and that many infected persons will not develop dysentery symptoms. It is this type of infection—the chronic dysentery case and the latent infection—which may, later on, develop complications of a serious nature. It is well that one consider briefly the late manifestations of amebiasis in order that he may be prepared to make a proper diagnosis and institute adequate treatment.

The following classification of the clinical and pathological manifestations of amebic infection, in the order of their frequency, is derived of our ten years' experience in the tropics of the Far East:

I. Typical amebic dysentery
(a) Acute
(b) Chronic

II. Extensive ulceration with massive hemorrhage

III. Liver abscess

IV. Intestinal obstruction
(a) Due to stricture
(b) Due to tumor formation

V. Intestinal perforation
(a) Intraperitoneal with peritonitis
(b) Extraperitoneal with fecal fistula

VI. Pulmonary and other rare abscesses.

As stated above, typical acute amebic dysentery has been dealt with at length in numerous articles both in the medical and lay press. It might be stated that the country's population is at the present time "dysentery conscious." This sudden awakening to the seriousness of the infection on the part of both physician and layman will reveal many cases of chronic amebic dysentery that have been treated as nonparasitic "ulcerative colitis." I have found this type of case, severe ulcerative, very subject to massive hemorrhage. This complication, although immediately alarming, is not so serious as would at first appear. On the other hand, continued loss of blood, although it may not be noticed by the patient, eventually leads to serious secondary anemia and loss of resistance. In the treatment of chronic dysentery with extensive ulceration, it is advisable, in addition to the specific treatment, to administer some preparation of calcium. The scientific administration of such drug materially assists in the healing of the ulcerations and the control of bleeding. Too often these patients are treated only for their amebic infection while the general condition is neglected.

Liver abscess is one of the most common and serious manifestations of amebic infection especially in the Tropics. The relationship between liver abscess and amebic dysentery is very similar to that of tabes dorsalis and primary syphilis. In both instances, the unfortunate patient may be quite innocent of the fact that he ever suffered an infection. This, of course, is not absolute, but not infrequently the patient with a liver abscess never has had dysentery; we all have seen patients with tabes who have never been aware of the fact that they at one time were infected with syphilis.

The diagnosis of amebic abscess of the liver is not difficult once a tumor mass presents itself. When the patient reaches this stage of the disease, the treatment is of course surgical, combined with the usual medical therapy and general care. Our aim should be to diagnose the condition before it has made such extensive progress. We should be suspicious when a patient complains of vague hepatic distress, slight elevation of temperature, a degree of leukocytosis and the history of exposure particularly with special reference to the Chicago outbreak. These patients should have the advantage of a thorough intestinal analysis, primarily for the detection of the cysts of endameba histolytica. In some patients, it is possible to abort an incipient liver abscess, if the condition is diagnosed early and treated thoroughly.

The surgical treatment of a liver abscess does not end with the discovery of the characteristic abscess material. Not infrequently these abscesses are multiple and may or may not communicate with each other. An attempt should be made to locate and drain them all. Before these patients are operated upon they should be saturated with sugar for several days during which time anti-amebic medication should be pushed.

Intestinal obstruction was less frequently observed by the author than was liver abscess. Obstruction due to stricture,
their intestinal infection has been active and not passive.

The pathology in these cases can be fairly well anticipated when there is a history of dysentery and one finds amebae or their cysts in the stools. Otherwise, the usual diagnosis is malignancy especially when one deals with obstruction due to tumor formation. Amebic granuloma is not a frequent finding. The case illustrated (Figure 5) was a patient over fifty years old, who came to the hospital complaining of complete obstruction for more than a week. The diagnosis was "malignancy." The operative procedure proved fatal and a tumor mass presented as shown by the Figure. Sections of the tumor revealed *endameba histolytica* in the tissue; the stool, post-mortem, revealed cysts of the same protozoan. (Figures 6 and 7 are microscopic sections of Figure 5.)

**Intestinal perforation.** We have not found such to be a common complication of amebic dysentery. Intraperitoneal perforation with peritonitis practically always is fatal. There is little to be said about diagnosis or treatment. The patient presents himself with an "acute abdomen" and the operative procedure is an emergency one. The exhibition of antiamoebic medication combined with free surgical drainage are the only procedures one can carry forward.

Extraperitoneal perforation accompanied by fecal fistula (Figure 8), is a rare complication. This particular patient from which our specimen was obtained insisted that he had never suffered from dysentery. It is possible that he controlled his tendency to dysentery by the large amounts of opium which he smoked. The defect in his colon is shown in Figure 9. The tissues of the abdominal wall immediately surrounding the fistula were heavily infected with amebae. They could be recovered from under the skin edges and from the muscles of the abdominal wall.

This type of case is treated best by side-tracking the intestinal flow through a colostomy and then instituting thorough anti-amebic medication.

**Pulmonary abscess** is rare. One must bear in mind the fact that the lung may become infected via the hepatic veins and not necessarily as an extension process from abscess of the liver. In Figure 2 there is detailed an amebic abscess of the