Amebic Granuloma and Its Relationship to Cancer of the Cecum

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AMEBIC DISEASES are very common in Mexico. Acevedo,[1] in 1961, found an incidence of 25 per cent in the general population. The most common amebic infection is proctocolitis. Amebic proctocolitis, with or without ulceration, was found in 70 per cent of a large series of cases reported by Peña and Ruiloba[8] from the Nutrition Hospital in México City. The disease has very serious complications and/or sequelae, especially when not properly diagnosed and treated. Amebic granulomas, or amebomas, of the rectum and colon also occur. They were found in the cecum only in 85 per cent of the cases reported by Treviño Mere,[11] and in 45 per cent of those studied by Spicknall and Peirce[10] in the United States. They were present in the rectum, the second most common site, in 14 per cent of the cases reported by Spicknall and Peirce.[10]

Fortunately, malignancies of the colon and rectum are very rare among the Mexican people. Reports from Pelaez and Mendez[7] of the Spanish Hospital, from Zarate,[12] from Becerra and de la Portilla,[2] and from our own experience[4] at the University of Guadalajara Hospital yield incidences of 0.29 per cent to 0.40 per cent for the general population, which is very low. Of the cancers which do occur, 40 per cent are in the rectum, 23 per cent in the sigmoid, and only 14 per cent in the cecum.

Several authors, among them Harris[6] and Treviño Mere,[11] state that the coincidence of amebic granuloma and cancer of the colon and rectum is 15 per cent: this figure is generally accepted. At the University of Guadalajara Hospital, we became interested in the relationship between the amebic granuloma and cancer in the cecum. In order to expand our experience, we initiated this study. It should be borne in mind that the present report is a preliminary one.

Material and Methods

The study was initiated in January 1961. A review of 1,225 clinical cases of intestinal amebiasis was done. Of these, 40 cases in which the patients had single or multiple amebic granulomas of the cecum were selected for study. All 40 diagnoses had been established definitively by x-ray, at operation, and by histopathologic studies. In the same manner, a control group of 10,000 case histories was analyzed, and from this group 20 cases of patients who had adenocarcinomas of the cecum were chosen. All 60 cases were followed up for three to eight years. Special attention was given to clinical evolution before diagnosis and to clinical progress after correct or incorrect treatment.

Results

Of the 40 patients who had amebic granuloma, 23 were men and 17 were women. Their ages ranged from 20 to 40 years. Of the 40, 23 had multiple granulomas of the cecum, the transverse colon, and the sigmoid; in 17, the cecal granuloma was the only lesion. Seven of the 40 patients also had definitively diagnosed adenocarcinoma of the cecum. Six of these developed the malignancies one to four years after the beginning of the study; the other had a coexistent granuloma and adenocarcinoma at its inception. For the majority of patients (31), medical

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treatment (emetine, chloroquine, diiodochlorohydroxyquinoline) for two months to a year was adequate treatment. Nine patients required surgical operations. Two of these had sealed perforations of the granulomas, six resections were done because of suspicion of adenocarcinoma, and one was the patient who had coexisting ameboma and malignancy.

Of the 20 patients who had adenocarcinoma of the cecum, 12 were men and eight were women. All were 40 to 60 years old. All had been treated for amebic granuloma previously. All were treated by surgical operation. Four had large tumors of the cecum of the Dukes' III type which had been diagnosed as granulomas one to four years before the cancers were found; one of these had a coexisting cecal granuloma. All four of these patients died within a year of operation. The remaining patients survived three years or longer.

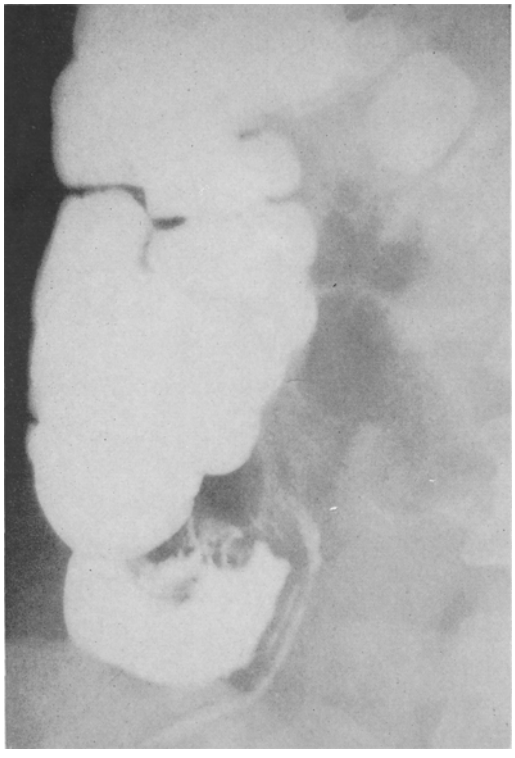

FIG. 1. Barium-enema study shows cecal deformity characteristic of either lesion, cancer or amebic granuloma.

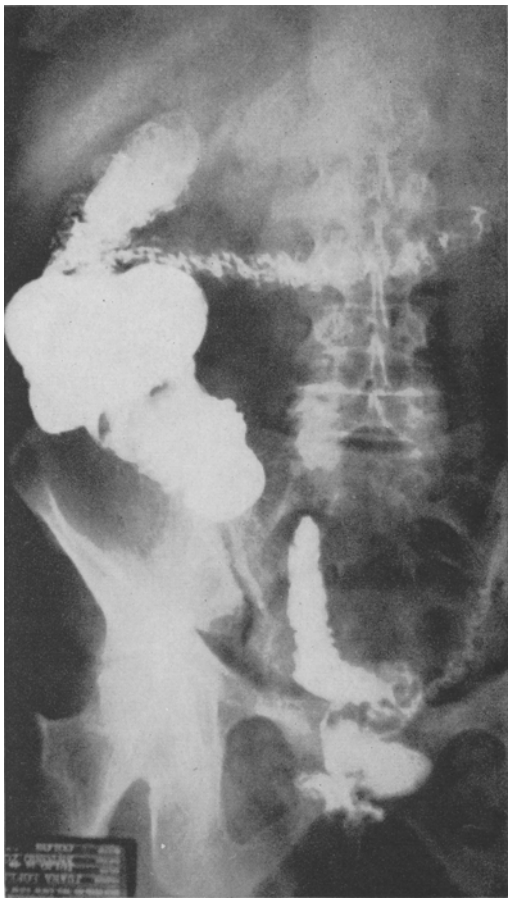

FIG. 2. Deformity of the cecum in amebic granuloma.

The patients in the two groups had similar symptoms with anemia, anorexia, malaise, weight loss, and occult blood in the stools. In addition, those with amebomas had fever; with multiple lesions there were loose stools, with mucus, tenesmus, and abdominal colic. Proctoscopy disclosed mucus and mucosal edema in half of the patients; in eight, severe pain suggestive of acute appendicitis in the right lower quadrant led to exploratory laparotomies. Eighteen of the patients who had adenocarcinoma had tumors in the right lower quadrant on abdominal examination.

FIG. 3. Tumor in the right lower quadrant characteristic of both amebic granuloma and carcinoma.

Comments

The diagnosis of amebic granuloma of the cecum is not difficult. Generally, the clinical history, proctoscopy, and barium-enema studies, together with a trial course of antiamebic drugs which causes regression of the lesion, will establish the diagnosis. In this manner, 90 per cent of cases can be exactly defined. It is even easier when barium-enema studies show additional granulomata in other parts of the colon.

But the phantom of cancer is always present. For this reason, these patients must be strictly controlled until the lesions are completely healed. If this does not occur within a reasonable time, surgical treatment must be instituted. The danger of excising amebomas without careful planning has been stressed by Ruiz Moreno,[9]

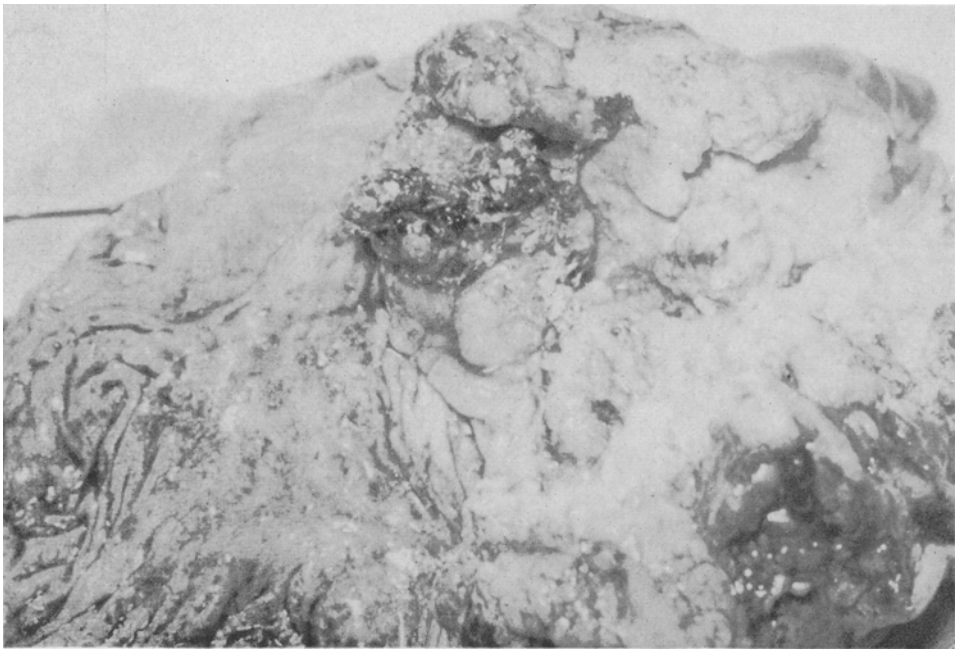

FIG. 4. Typical appearance of the amebic granulomatous lesion.

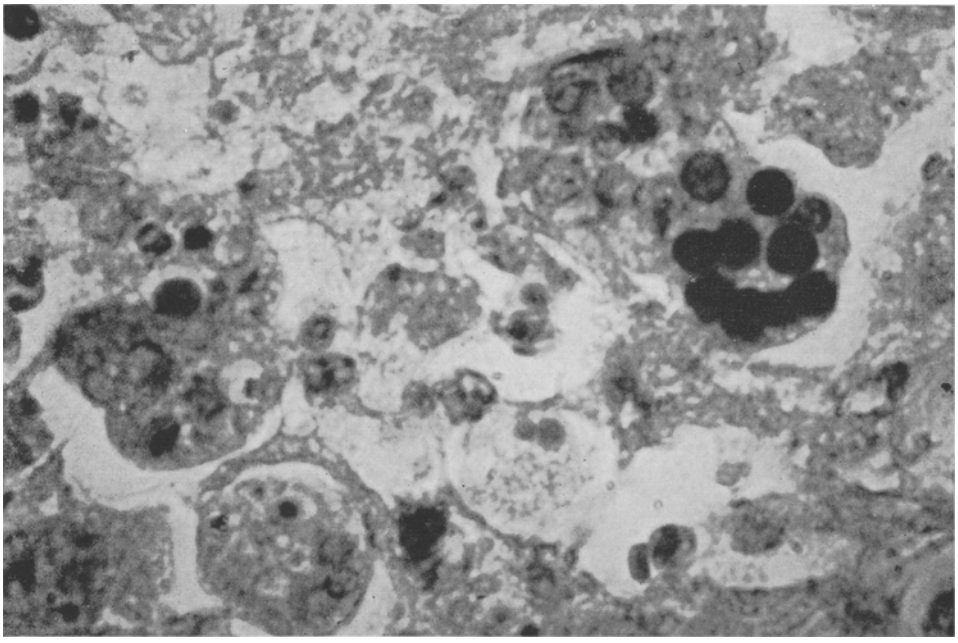

FIG. 5. Trichrome stain of a lesion shows the nuclei of the amebae darkest; the cells stain red; cytoplasm stains blue.

but they must be excised when they do not respond to medical treatment.

As can be seen in our study, treatment with drugs gives excellent results. Of our patients treated by surgical operation, eight had erroneous diagnoses of appendicitis; in each of these cases, the abdominal cavity was drained, but the appendix was not

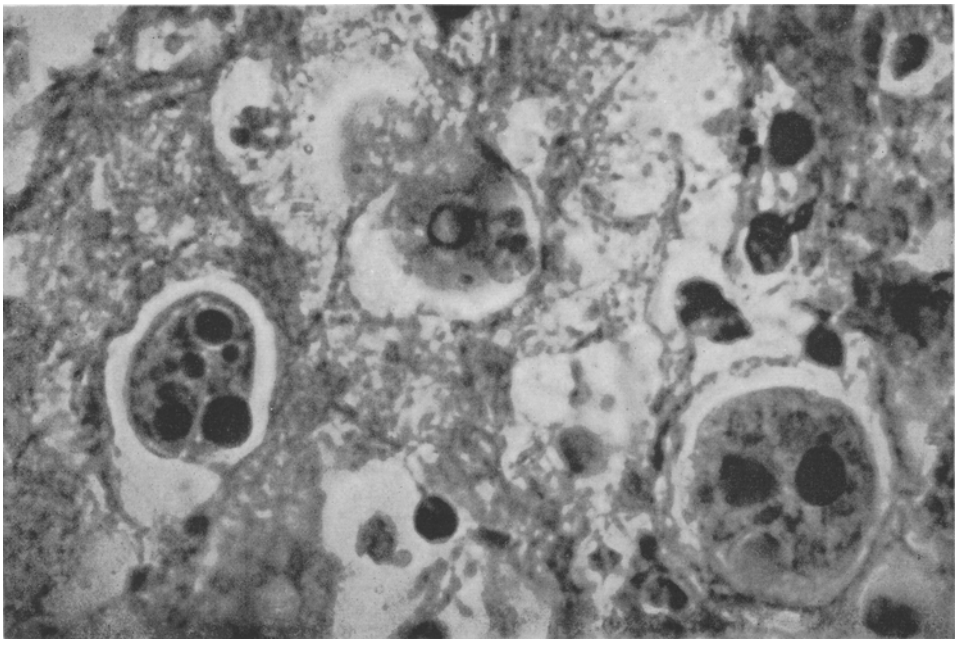

FIG. 6. Low- and high-power magnifications of the cells stained with a green stain, Naftol, which shows the amebae beautifully.

removed and no biopsy was taken, to avoid severe complications.

In both groups, a grave problem for the surgeon and clinician arose when the patient did not submit to proper control of the tumor. A critical point occurs when either doctor or patient, confident of improvement after the first treatment, fails to follow it up and repeat medication and x-rays; the lesion then starts to enlarge once again. All six patients in the granuloma group who developed carcinoma were mishandled in this fashion. In the cancer group, three patients had had amebomas which had been thought completely cured; three and four years later, they developed malignancies. They were then reluctant to undergo surgical operations, because their previous tumors had been cured by medication only.

In each group there was a case in which granuloma and malignancy coexisted. These were classic examples of the patient who undergoes incomplete courses of treatment off and on for several years. We are inclined to believe that in these cases the granuloma grows and regresses until, finally, the malignancy imposes itself. This strongly suggests that amebic granuloma may be precancerous.

All the findings in this study bear this premise out. Only seven patients of the 60 had no history of amebic infection at all. The incidence of adenocarcinomas in the group with granulomas was 17.50 per cent. The incidence of granulomas in the adenocarcinoma group was 20 per cent. Both figures are higher than the incidences of cancer in those with ulcerative colitis and pseudopolyposis (5–10 per cent), as reported by Brooke,[3] Fallis,[5] and others.

Summary

Forty cases of amebic granuloma of the cecum, taken from 1,225 cases of intestinal amebiasis, and 20 cases of adenocarcinoma of the cecum, taken from 10,000 general case histories, are reviewed. Special attention is given to the clinical picture, particularly the similarities between the symptoms of the two types of disorders. The relationship between amebic granuloma and adenocarcinoma of the cecum, and the likelihood that granuloma may be precancerous, especially in improperly treated cases, are emphasized. Treatment of all cases of granuloma must be adequate, and strict control must be exercised until the lesion has regressed completely. This is a preliminary study, made to call attention to the fact that amebic granulomas of the cecum may be precancerous. Further analysis of the topic will be made, and may clarify the issue and support our hypothesis.

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