Amoebic granuloma—an unusual cause of caeco-colic intussusception

S. B. PATRA*
M.D. (Path & Bact)

G. N. SHUKLA†
M.S.

D. D. GIRI*
M.D. (Path), D.C.P.

H. S. MEHTA†
M.S.

*Department of Pathology, †Department of General Surgery, Medical College, Baroda, India

Summary

A case of amoeboma presenting as an intussusception, encountered for the first time in this institute, is reported. The diagnosis was only made postoperatively. The importance of awareness of such lesions in the tropics, in view of the efficiency of trial anti-amoebic therapy, is discussed.

KEY WORDS: amoebic granuloma, amoeboma, hemicolectomy, respiratory failure.

Introduction

Amoebiasis, both acute and chronic, occurs commonly in the tropics and the subtropics; a population incidence in the range of 8-58% has been reported in India (Doshi, 1969). Amoebic granuloma (amoeboma) first described in 1931 (Gunn and Howard, 1931) is a complication of this infection (Marcial-Rojas, 1971). The condition is difficult to diagnose as it closely resembles a carcinoma, a tuberculous or Crohn's lesion or an appendix abscess (Goligher, 1980). The early recognition of this condition is important as the institution of anti-amoebic therapy effectively prevents the post-operative complications which are otherwise invariable with a high morbidity and mortality (Alvarez, 1971). A case of amoebic granuloma leading to chronic intussusception is presented in view of the unusual presentation and the obvious importance of early diagnosis in such a case.

Case report

A 40-year-old male with a long standing history of chronic obstructive pulmonary disease presented with the complaints of a swelling and colicky pain in the abdomen for a duration of 1 month. The abdominal examination revealed the presence of a smooth, firm, non-tender, sausage shaped lump in the peri-umbilical region, freely moving in the vertical direction. The rest of the examination and investiga-

tions including plain X-ray of the abdomen and microscopic examination of stool were non-contributory. A diagnosis of chronic intussusception with a presumption of carcinoma of the colon was made. After adequate pre-operative correction of fluid and electrolyte imbalance, a right-sided hemicolectomy was performed to resect terminal ileum (5 cm), caecum and proximal ascending colon (10 cm) including the intussusception segment. The reduction of the intussusception and opening of the bowel revealed an oval mass 4 × 3 cm in size having a rough necrotic surface. The surrounding mucosa though congested did not show ulceration (Fig. 1). The cut surface of the mass showed a hyperplastic and necrotic wall of the bowel bereft of an invasive tumour. Microscopic scrutiny showed marked necrotizing inflammation of the mucosal and sub-mucosal layers. The exudate chiefly comprised eosinophils. Trophozoites of *Entamoeba histolytica* invading and destroying all the layers of the bowel could be detected (Fig. 2). A pathological diagnosis of amoebic granuloma was made.

Unfortunately, even before the diagnosis was obtained, the patient succumbed to acute respiratory failure.

Discussion

The largest series of amoebic granuloma reported is a review of 230 cases documented in the literature (Spicknall and Pierce, 1954). The largest Indian series comprises of 35 cases (Kaushik, Perianayagam and Budhreja, 1973). The condition is a tumour-like lesion made up of firm fibroblastic granulomatous mass resulting from exuberant granulating reaction to the amoebic invasion, secondary infection and tissue destruction. Such an occurrence has been experimentally shown to be the result of hypersensitivity reaction against the parasite (Kaushik *et al.*, 1977). The sites of involvement in the descending

FIG. 1. Gross appearance of amoebic granuloma of caecum showing a mass at the centre. The reduced intussuscepiens can be seen at its periphery.

FIG. 2. Microscopic appearance of amoebic granuloma showing numerous trophozoites of *E. histolytica* (see arrows). Note the empty spaces around the parasites.

order of frequency are—caecum, rectum, anal canal, transverse colon and the sigmoid colon. The lesion is usually single, multiple involvement is very rare and has been reported on not more than a dozen occasions (Grigsby, 1969). The condition although rare resembles a variety of lesions and the difficulties in early diagnosis may be almost intractable. In fact, the diagnosis on many occasions is essentially post-operative and pathological (Gendre *et al.*, 1978) as was obtained in this case. Radiological appearances have been reported to be conclusive in 80% of the cases (Cardoso *et al.*, 1977) and thus an X-ray examination may enable a pre-operative diagnosis. The most important lesion which it resembles is the carcinoma of colon with which it may even co-exist. In fact, there is an isolated report in the literature which suggests that long-standing invasive amoebiasis may be pre-cancerous (Camacho, 1971).

Early diagnosis of this condition is important as adequate antiamebic therapy may even obviate a surgical approach. Even in cases where surgical treatment is mandatory as in the cases presenting with obstruction or intussusception an early diagnosis and institution of amoebicidal regime will prevent postoperative complications which otherwise are invariable and carry ominous implications. Colonoscopy and biopsy may provide the necessary information.

In view of the difficulties in pre- or per-operative diagnosis of amoeboma, a trial of amoebicidal therapy should be given in all cases where the slightest clinical presumption of an amoebic lesion exists (Freni and Boon, 1977). Such an approach is indispensable in the tropics where the magnitude of the problem of amoebiasis should be high and an inadvertent misdiagnosis may lead to a major surgical blunder.

Acknowledgments

We are thankful to Dr O. D. Gulati, Dean, Medical College, Baroda and Dr H. C. Shrivastava, Medical Superintendent, S.S.G. Hospital, Baroda, for their permission to publish this paper.

References

- ALVAREZ, C.K. (1971) Abdominal emergencies produced by *Entameba Histolytica*. *Revista De Gastroenterologia De Mexico (Mexico)*, **36**, 226. [English abstract.]
- CAMACHO, E. (1971) Amebic granuloma and its relationship to cancer of the cecum. *Diseases of Colon and Rectum*, **14**, 12.
- CARDOSO, J.M., KIMURA, K., STOOPEN, M., CERVANTES, L.F., ELIZANDO, L., CHURCHILL, R. & MONCADA, R. (1977) Radiology of invasive amebiasis of the colon. *American Journal of Roentgenology*, **128**, 935.
- DOSHI, J.C. (1969) Amebic granuloma—a review. *Indian Journal of Medical Sciences*, **23**, 61.
- FRENI, S.C. & BOON, T.A. (1977) Ameboma of the cecum. *Tijdschrift voor Diergeneeskunde*, **121**, 1353. [English abstract.]
- GENDRE, J.B., HARDOUSH, J.P., MARCHE, C. & DEBRAY, C. (1978) Ameboma—report of 3 cases. *Gastroenterologie Clinique et Biologique*, **2**, 889. [English abstract.]
- GOLIGHER, J.C. (1980) *Surgery of the Anus, Rectum and Colon*, 4th edn., p. 886. Bailliere and Tindall, London.

- GRIEGSBY, W.P. (1969) Surgical treatment of amebiasis. *Surgery, Gynecology and Obstetrics*, **128**, 609.
- GUNN, H. & HOWARD, N.J. (1931) Amebic granuloma of large bowel. *Journal of the American Medical Association*, **97**, 1966.
- KAUSHIK, S.P., PERIANAYAGAM, W.J. & BUDHRAJA, S.N. (1973) Amebic granuloma of the large bowel. *International Surgery*, **58**, 715.
- KAUSHIK, S.P., RAVINDRA, N., VINAYAK, V.K. & CHAKRAVARTY, R.N. (1977) Amebic granuloma—an experimental study. *American Journal of Gastroenterology*, **68**, 64.
- MARCIAL-ROJAS, R.A. (1971) In: *Pathology*, 6th edn. (Ed. by W. A. D. Anderson), p. 434. C. V. Mosby, St. Louis.
- SPICKNALL, E.G. & PIERCE, E.G. (1954) Amebic granulomata—report of 4 cases with review of literature. *New England Journal of Medicine*, **250**, 1055.

(Accepted 3 March 1983)