

NON-SPECIFIC ULCERATIVE COLITIS IN TWO ASIAN PATIENTS IN SINGAPORE

By W. P. Fung, M.B.B.S., M.R.A.C.P. and O. T. Khoo, M.D., F.R.C.P.E. F.R.F.P.S.

(Department of Clinical Medicine, University of Singapore.)

INTRODUCTION

Idiopathic ulcerative colitis has been recognised as a disease of civilisation, and is thought to be rare in primitive communities (Truelove and Reynell 1963) (Bockus 1964). It has however been increasingly reported in countries in Asia and Africa—in Bedouin Arabs in Kuwait (Salem and Shubair 1967); in Africans of the Baganda Tribe (Billinghurst & Welchman 1966); in Egypt and Lebanon (Abdel Ghaffar and Wahba 1959, B.M.J. 1962).

So far no cases have been reported from Singapore, where the commonest cause of diarrhoea is still of infective origin. These however clear up readily with treatment. We report here 2 cases of non-specific ulcerative colitis; one born in Singapore of Pakistani parents, and the other an Indian-born resident.

In each case the diagnosis was confirmed by sigmoidoscopic appearances, repeatedly negative stool cultures for bacteria as well as for *entamoeba histolytica*, barium enema studies, and response to steroid therapy.

CASE REPORTS

Case 1

A 19 year old Singapore-born Pakistani boy presented in 1961 with a history of diarrhoea with blood and mucus in the stools for 2 years. The diarrhoea varied from 5 to 6 times during the day, and 2 to 3 times at night. This was associated with an occasional low grade fever with occasional chills, and mild epigastric pain.

Physical examination showed some tenderness over the sigmoid colon which was easily palpable, and the liver was enlarged to 1 finger breadth below the costal margin. Investigations showed a haemoglobin on 9.8 gm.%; a total white cell count of 12,900 per cu. mm. with a mild polymorphonuclear leukocytosis. His sedimentation rate was 24 mm. per hour and stool examination revealed numerous pus cells and red blood cells. His fresh stools were cultured repeatedly (6 times) and were all negative for bacteria and *entamoeba histolytica*. Fresh stool smears were also repeatedly negative

for *entamoeba histolytica*, cysts, and ova. In spite of negative stool cultures and smears, he was initially treated with antibiotics (Terramycin, Achromycin, thalazole, sulphaguanidine) and diiodohydroxyquinoline; but all without any effect on the diarrhoea.

Sigmoidoscopy had revealed inflamed granular oedematous mucosa with contact bleeding. He was finally given a course of steroids and improved.

He was apparently well until in 1962 when he had a relapse of diarrhoea with blood and mucus in the stools and a fever of from 100 to 102°F, and mild abdominal pain. Repeated stool cultures and fresh smears were again negative. A barium enema showed marked loss of haustration from transverse to Sigmoid colon—a picture typical of chronic ulcerative colitis (See Fig. 1).

Sigmoidoscopy revealed acute mucosal changes, but no ulceration. His haemoglobin was 11.2 gm.% and total white count was 8,700 per cu. mm. He had a sedimentation rate of 10 mm./hour, and serum electrolytes showed a potassium of 3.8 meq/L and sodium of 137 meq/L.

He was given steroid therapy both orally and by retention enema (Hydrocortisone 100 to 300 mg. per enema). He improved and was subsequently given Salazosulphapyridine as an out-patient.

By 1965 he already had 6 admissions for relapse of diarrhoea with blood and mucus in the stools. Each episode was treated with oral steroid therapy and hydrocortisone retention enemata with fairly good response. During his 5th admission in 1964, he also developed a steroid psychosis, but this subsided following steroid withdrawal.

A repeat barium enema in 1965 showed absence of haustration—the so called “hose-pipe” colon—a picture typical of chronic ulcerative colitis (see Fig. 2).

He is at present (Nov. 1967) in a fairly good state, and on maintenance salazosulphapyridine 3 to 4 gms. a day. He had acute appendicitis

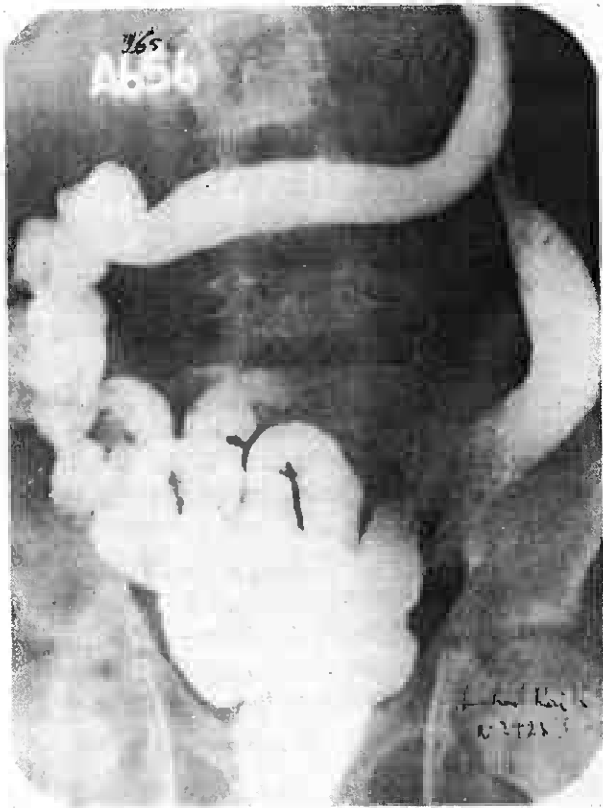


Fig. 1. Barium enema of Case 1 showing marked loss of haustration from Transverse to Sigmoid Colon—A picture of chronic ulcerative colitis.



Fig. 2. Barium enema of Case 1, done 4 years after onset of colitis, showing complete absence of haustration—The "Hose-Pipe" colon of chronic ulcerative colitis.



Fig. 3. Barium enema of Case 2 showing extensive Polypoidal lesions and deep ulcerations of the Transverse, descending, and Sigmoid colon.



Fig. 4. Barium enema of Case 2 showing extensive Polypoidal lesions in the colon—The Polypoidal stage of ulcerative colitis.

in mid-1967, and a gangrenous appendix was removed, followed by rapid recovery.

He continues to have 3 to 4 motions a day on the present treatment.

Case 2

A 39 year old Indian male presented in January 1967 with diarrhoea, fever, anorexia, and lower abdominal pain for 3 weeks. His diarrhoea consisted of watery stools 4 to 5 times a day with blood and mucus. He also had weight loss.

Physical examination revealed he had a fever of 100.4°F, anaemia, dehydration, and tenderness in the left iliac fossa. Sigmoidoscopy showed a congested, inflamed, oedematous, granular mucosa with contact bleeding, and scattered areas of ulceration.

Investigations showed a haemoglobin of 11.4 gm. % a polymorphonuclear leukocytosis, and stool cultures and smears were repeatedly negative for amoeba, and bacteria. Stool smear showed numerous pus cells and red blood cells.

His sedimentation rate was 37 mm/hour and the S. electrolytes showed a potassium of 4.6 meq/L and sodium of 131 meq/L.

He was initially treated as a case of dysentery with oral tetracycline but there was no response at all. A barium enema showed extensive polypoidal lesions in colon, from mid-transverse colon to recto-sigmoid junction—a picture of polypoidal stage of ulcerative colitis. No strictures or fistulae were seen (See Figs. 3 and 4).

His increasing anaemia required blood and plasma infusions, and multivitamins parenterally. Hydrocortisone enemata (100 to 200 mg. per enema) were given daily and this was followed by a very good response, so that the patient was fit enough to be discharged.

A repeat sigmoidoscopy showed subsiding inflammation of the mucosa.

This patient also received a short course (7 days) of emetine injections before steroid therapy, but this had no effect at all on the diarrhoea. This would clearly rule out amoebiasis.

DISCUSSION

This is the first report of non-specific ulcerative colitis from Singapore. This diagnosis is rarely made here as the commonest cause of diarrhoea with blood and mucus in the stools is still amoebic and bacillary dysentery. These however usually clear up rapidly with specific therapy, leaving little or no sequelae. With greatly improved public health in Singapore,

infective diarrhoeas are on the decline, and functional causes e.g. irritable colon syndrome are becoming more important. This is partly associated with the stress and strains of modern city living.

Ulcerative colitis is rare in Asians, especially among the Chinese. It is not clear whether this is due to racial or genetic factors, but there is no doubt that compared to the prevalence of this disease in the Western countries, among the Caucasian races, the disease is indeed rare in Asian communities. This cannot be attributed to primitive living conditions since a large part of our population live in the city of Singapore. The great difference in incidence must therefore be explained on racial or genetic factors.

This report of only 2 cases from Singapore, which has a population of nearly 2 million of 3 basic racial groups viz. Chinese, Malay and Indians, emphasizes the rarity of idiopathic non-specific ulcerative colitis in Asian communities.

SUMMARY

The case histories of 2 patients resident in Singapore (one born in Singapore of Pakistani parents and the other an Indian-born resident) with non-specific or idiopathic ulcerative colitis are described. This is the first report of non-specific ulcerative colitis from the Republic of Singapore. The rarity of this condition in the Asian population is stressed. Although it is possible that psychological stresses associated with urban living may be important in predisposing Asians to this disease, we believe that the rarity of this condition in Asians as compared to its prevalence in the caucasian races in the West is probably due to racial and genetic factors.

ACKNOWLEDGEMENT

The authors are grateful to the Department of Radiology, General Hospital, Singapore, for the barium enemas done in these two patients.

REFERENCES

1. Abd-el-Ghaffar, Y; Wahba, M.E. (1959): Ulcerative colitis in Egypt; *J. Egypt Med. Ass*; 42, 509.
2. Billingham, J.R.; Welchman, J.M. (1966) Idiopathic ulcerative colitis in the African, a report of 4 cases; *Brit. Med. J.*, 1, 211.
3. Bockus, H.L. (1964) *Gastroenterology*, 2nd. Ed. Vol. 2; Philadelphia.
4. Editorial: Geographical distribution of ulcerative colitis (1962) *Brit. Med. J.*, 2, 36.
5. Salem, S.N.; Shubair, K.S. (1967) Non-specific, ulcerative colitis in Bedouin Arabs, *Lancet*, 1, 473.
6. Truelove, S.C., Reynell, P.C; (1963) *Diseases of the digestive system*, 1st. Ed., Oxford.