

# Gastrointestinal tuberculosis

## REPORT OF A CASE

BYRON K. COLE, M.D.,\*

*Department of Pulmonary Disease*

GUDMUNDUR ODDSEN, M.D.,†

*Department of Internal Medicine*

EUGENE I. WINKELMAN, M.D.,

*Department of Gastroenterology*

HOWARD SCOTT VAN ORDSTRAND, M.D.

*Department of Pulmonary Disease*

**D**ESPITE the great advances in the management of pulmonary tuberculosis in the last two decades, the disease is not yet a rare problem. It is still necessary to consider this disease in the differential diagnosis for patients whose presenting symptoms cover a wide variety of pulmonary abnormalities. Extrapulmonary tuberculosis is infrequently encountered, but is still an important possibility to consider when evaluating a difficult diagnostic problem. Recently a patient was admitted to the Cleveland Clinic Hospital whose case illustrates the importance of a consideration of tuberculosis that occurs outside the thorax.

## REPORT OF A CASE

A 56-year-old Caucasian housewife was first examined at the Cleveland Clinic on November 2, 1966, because of symptoms of obstruction of the bowel. In August 1965, incomplete obstruction of the bowel developed; it was treated conservatively. Soon, intermittent pain in the right lower quadrant of the abdomen developed, along with increased frequency of bowel movements, decreased caliber of feces, and fatigue. On a roentgenogram of the chest there was abnormality compatible with old tuberculosis, with minimal residual lesions, but pathologic change never was evident clinically. The gastrointestinal symptoms became progressively worse; and in August 1966, an exploratory laparotomy was performed at another hospital. Numerous nodules of the parietal and visceral peritoneum were reported to be found, and a large intrinsic tumor-like mass affecting the ileocecal region was seen, as well as several other small tumor-like masses in other portions of the ileum. The large mass was biopsied, and an incontinuity surgical bypass was performed. Postoperatively, the patient's appetite decreased, and she continued to lose weight. On November 2, 1966, she came to the Cleveland Clinic and was admitted to the Cleveland Clinic Hospital as stated.

Physical examination revealed a chronically ill, malnourished, and emaciated woman

\* *Fellow, Division of Medicine, Cleveland Clinic; also Fellow of the National Tuberculosis Association and the American Thoracic Society.*

† *Fellow, Division of Medicine, Cleveland Clinic.*

who was 66 inches tall and weighed 78 pounds. Her blood pressure was 95/70 mm Hg, and her pulse rate was 78 and regular. The abdomen felt doughy and was exquisitely tender in the right lower quadrant. Bowel sounds were increased over normal. Pelvic examination revealed no abnormalities, and a rectal examination was normal to 6 inches. There was mild clubbing of the fingers.

Deeper sections of the specimen obtained from the other hospital revealed increased caseation, and special staining technics revealed acid-fast organisms. The diagnosis was intestinal tuberculosis and she accordingly was started on a regimen of isoniazid (INH) and para-aminosalicylic acid (PAS). The PAS seemingly upset her stomach, so administration of it was discontinued. Obstructive symptoms continued, and on November 18 she underwent a second laparotomy. The small bowel was partially obstructed in several places, and minute tubercles were found scattered throughout the peritoneum. A colectomy on the right side was performed and an end-to-end ileotransverse colostomy.

Postoperatively, respiratory distress developed, caused by acute pulmonary edema. Digitalis was administered and the edema cleared rapidly. Diarrhea and abdominal distress continued; but two days before the patient was discharged from the hospital, she was nearly asymptomatic; her appetite returned, and the diarrhea ceased. She was discharged from the hospital with the advice to take INH, 100-mg tablets, three times daily, pyridoxine, 25 mg daily; diphenoxylate hydrochloride with atropine sulfate, one tablet, every six hours, if needed for diarrhea; and diet as tolerated.

She was examined on January 10, 1967, at which time she reported that her appetite was excellent, but that occasional diarrhea and abdominal pain have occurred since she was discharged from the hospital. She was advised to continue the regimen described above.

#### DISCUSSION

Though a number of granulomatous conditions affect the gastrointestinal tract (e.g., regional enteritis, brucellosis, syphilis, granuloma inguinale, and leprosy), in this discussion we are considering only sarcoidosis because of its relevance to this case, histoplasmosis because of its close resemblance to tuberculosis, and tuberculosis itself.

Longcope and Freiman<sup>1</sup> pointed out that sarcoid is found frequently in the liver, rarely in the intestine and the stomach. Only a few cases of tuberculosis of the stomach have been reported, including one in which the process produced pyloric stenosis. Localized involvement of the appendix has occurred in a few cases. An important differentiating point is that sarcoid does not cause studding of the peritoneum with multiple granulomata. The great similarity between the granulomata of sarcoid and those of regional enteritis gave rise to a theory that the lesions of the latter disease were actually due to sarcoid. It is now generally accepted that the two diseases are separate entities.

The presenting symptoms of histoplasmosis almost always are pulmonary. In rare cases, when the disease is not disseminated, pulmonary manifestations may be minimal or absent. Instead, the clinical picture may be one of meningitis, pericarditis, adrenal insufficiency, or multiple ulcerations of the gastrointestinal tract. In addition, there may be fever, hepatomegaly, splenomegaly, and generalized lymphadenopathy. When the intestine is involved, crampy abdominal pain develops, diarrhea occurs, and bleeding may be profuse.<sup>2-4</sup> Granulomata due to histoplasmosis may develop a central necrotic core resembling caseation. Fungal organisms usually can be

found in reticuloendothelial cells and macrophages, an important finding in differentiating these lesions from those of tuberculosis.

Tuberculosis of the intestine may be either primary or secondary; the primary form is most common in the United States. Secondary tuberculosis of the intestinal tract is usually due to pulmonary tuberculosis, and affects the ileocecal region most frequently. The primary form is usually due to the ingestion of milk contaminated by *Mycobacterium bovis*. The disease is typically asymptomatic unless dissemination to other organs occurs. The secondary form usually produces symptoms, but most often these are mild, consisting of crampy abdominal pain soon after meals, and alternate bouts of diarrhea and constipation. In a few persons, the course is acute, being marked by severe diarrhea, pain, and symptoms of partial obstruction of the bowel.<sup>5-8</sup> If these symptoms fail to respond to an intensive medical regimen, surgical treatment is indicated; and ileotransverse colostomy is usually the procedure of choice.

#### SUMMARY AND CONCLUSION

A patient, with gastrointestinal tuberculosis, was examined at the Cleveland Clinic, whose prior major diagnostic consideration had been sarcoidosis. In the differential diagnosis of gastrointestinal involvement, we considered sarcoidosis, histoplasmosis, and tuberculosis. The rarity of sarcoid involvement of the intestine is an important point to remember, and the close resemblance of certain forms of disseminated histoplasmosis to gastrointestinal tuberculosis. The patient underwent medical and surgical treatment and currently is doing well.

To us, this case illustrates the importance of including a consideration of extrathoracic tuberculosis in the differential diagnosis of gastrointestinal symptoms of doubtful origin.

#### REFERENCES

1. Longcope, W. T., and Freiman, D. G.: A study of sarcoidosis based on a combined investigation of 160 cases including 30 autopsies from Johns Hopkins Hospital and Massachusetts General Hospital. *Medicine* 31: 1-132, 1952.
2. Conrad, F. G.; Saslaw, S., and Atwell, R. J.: The protean manifestations of histoplasmosis as illustrated in twenty-three cases. *A.M.A. Arch. Int. Med.* 104: 692-709, 1959.
3. Polachek, A. A., and Matre, W. J.: Gastrointestinal sarcoidosis; report of a case involving the esophagus. *Am. J. Dig. Dis. new ser.* 9: 429-433, 1964.
4. Sheinfeld, W. I., and Rubinow, M.: Noncaseating epithelioid granuloma of the appendix (localized sarcoid disease?). *J. Internat. Coll. Surg.* 42: 1-4, 1964.
5. FitzGerald, P.: Diarrhoea of small bowel origin. Tumours and tuberculosis. *Proc. Roy. Soc. Med.* 56: 1079-1080, 1963.
6. Abrams, J. S., and Holden, W. D.: Tuberculosis of the gastrointestinal tract. *Arch. Surg.* 89: 282-293, 1964.
7. Howell, J. S., and Knapton, P. J.: Ileo-caecal tuberculosis. *Gut* 5: 524-529, 1964.
8. Hamandi, W. J., and Thamer, M. A.: Tuberculosis of the bowel in Iraq: a study of 86 cases. *Dis. Colon & Rectum* 8: 158-164, 1965.