

Fever of Unknown Origin in Carcinoma of the Colon

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Key Words

Fever of unknown origin · Carcinoma of the colon

Abstract

Objective: To report a case of fever of unknown origin in a patient with carcinoma of the colon but without gastrointestinal symptoms. **Clinical Presentation and Intervention:** A 65-year-old man presented with a long-standing fever (of 38°C, about two months' duration), night sweats, fatigue, malaise and anxiety. General physical examination including rectum, radiographic examinations of the chest, abdomen and bones (including ultrasonography and CT scanning) was normal. Biochemistry profile as well as other laboratory studies including blood, urine and stool cultures were normal except for erythrocyte sedimentation rate, which was 105 mm/h. A barium enema showed a rectosigmoid carcinoma. A left sigmoidal colectomy was performed. The patient recovered quickly and remained well for eight years postoperatively. **Conclusion:** This case shows that carcinoma of the colon should be included in the differential diagnosis of patients with fever of unknown origin.

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Introduction

Fever of unknown origin (FUO) has fascinated clinicians because of its complexity and the difficulty that is often encountered in making a final diagnosis [1]. In classical FUO, the breakdown of causes includes: infections (30–40%), tumors (20–30%), collagen-vascular diseases (10–20%) and miscellaneous disorders (10–15%) [2]. Pyrexia is often associated with occult malignant disease, most commonly of the reticuloendothelium system, lung, kidney, pancreas and liver, though many other malignancies have also been reported [2]. The objective of the present study was to describe a rare case with FUO, which turned out to be due to rectosigmoid cancer.

Clinical Presentation and Intervention

A 65-year-old man with no significant past medical history presented with a long-standing fever (38°C daily, occasionally 38.6°C) of two months' duration. Other symptoms included night sweats, fatigue, malaise and anxiety. No gastrointestinal symptoms were present during the two months. On examination his temperature, pulse rate, and arterial blood pressure were 38.1°C, 92 beats per minute, and 135/86 mm Hg, respectively. Physical examination including rectal examination was normal, but the patient was admitted to the hospital due to FUO.

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Laboratory studies showed that values of biochemistry profile, hemoglobin, hematocrit, white blood cell count and differential, as well as values of CEA, AFP and CA-19-9 tests were within the normal range, except for erythrocyte sedimentation rate, which was 105 mm/h. Although the value of CEA was found to be 12 ng/ml, this was not considered serious because the patient had smoked more than 30 cigarettes a day for 20 years. Cultures of blood, urine and stools were negative. Bone marrow biopsy showed hypercellularity. Antinuclear antibodies, rheumatoid factor, febrile agglutinins, Brucella titers and thyroid function tests were also negative. Radiographic examinations of the chest, abdomen and bones (including ECHO and CT scan) were normal. A barium enema showed a rectosigmoid carcinoma. An exploratory laparotomy was performed; the patient underwent a left sigmoidal colectomy and a 5 × 6 cm mass was resected. Histopathological examination of the tumor demonstrated a Duke's B carcinoma of the colon. The tumor was of a desmoplastic (scirrhous) histopathological type which explained the absence of blood in the stool, or at least the presence of some minimal anemia. The patient recovered quickly and remained well for 8 years after the operation.

Discussion

FUO is a challenging medical problem. Petersdorf and Beeson [3] defined it as an illness characterized by a temperature exceeding 38.3°C on at least three occasions and of at least three weeks' duration, without diagnosis during one week of inpatient's investigation. In several series of patients with FUO, the most common causes of the solid tumors were carcinomas of the pancreas and kidney [2]. Colorectal carcinoma may cause an intermittent or continuous fever [4]. However, Petersdorf and Beeson [3] in their classic series of 100 patients with FUO did not find any patient with colorectal carcinoma. Similarly, although 33 of 105 patients with FUO reported by Larson et al. [5] had neoplastic diseases, none presented with a colorectal carcinoma.

However, six cases of FUO in association with carcinoma of the colon and without any other detectable cause of fever had been reported [6–9].

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Kelleher and Sales [6] reported three patients who had complained of intermittent fever associated with chills a over prolonged period of time. None of the patients had gastrointestinal symptoms. Barium enema examination was normal in two of the patients. Nevertheless, malignant tumors located in the rectum or cecum area were found during an exploratory laparotomy. In the third patient, barium enema revealed a rectosigmoid carcinoma. The authors speculated that the fever was probably due to a recurrent transient bacteremia. Indeed one of the patients had documented *Escherichia coli* bacteremia. The other three cases of FUO due to carcinoma of the colon were reported recently [7–9]. One patient had a fever persisting for 6 months due to a well-differentiated sigmoid carcinoma with no evidence of infection [8]. Such carcinomas did not cause gastrointestinal symptoms probably due to the fact that they were growing slowly and were also nonobstructive. In contrast, other colonic neoplasms typically cause fever due to pericolic abscesses, secondary bacteremias with *Streptococcus bovis*, *Clostridium septicum*, or other intestinal flora.

The importance of this case is that it is the seventh reported case of FUO due to carcinoma of the colon. The fact that the patient survived well for eight years after the operation without any recurrent fever or other symptom confirms the accuracy of diagnosis even in the face of its rarity. It is worth pointing out that CT failed to detect this malignant lesion probably due to presence of stool in the colon or its location in the large bowel without serosa infiltration as confirmed during surgery.

Conclusion

This case shows that carcinoma of the colon should be included in the differential diagnosis of patients with FUO.