

Malignant teratoma of the left colon associated with chronic ulcerative colitis

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Summary. An autopsy case of a malignant teratoma of the descending colon is presented, the first observed in this site. A 41-year-old woman had suffered from chronic ulcerative colitis and was operated because of an abscess forming a mass in the left colon. However, the tumour proved to be inoperable and the patient died from septicaemia. Histologically, the tumour was a highly metastasizing malignant teratoma containing mature tissue elements (hair, cartilage, adipose tissue, squamous epithelium, bronchial, endometrial and cervical tissues). The relationship between the ulcerative colitis and the teratoma is obscure.

Key words: Teratoma – Malignant – Colonic tumours – Ulcerative colitis

Introduction

Benign teratomas arising from the ovaries, testes, mediastinum or retroperitoneum are well known pathological entities, but their occurrence in the large bowel is an exceptional finding. There are only a few reported cases in the world literature. However, malignant teratoma located in the colon has not been reported up to now. Our case is also of special interest, as the tumour was associated with chronic ulcerative colitis.

Case report

A 41-year-old woman was admitted to the Surgical Clinic because of septicaemia presumably due to an abdominal abscess. The patient had a long (19 year) history of an ulcerative colitis

treated with prednisolone, Salazopyrine and synthetic ACTH. The colonic disease was confirmed by clinical signs and sigmoidoscopy.

At physical and ultrasonographic examination a 15 × 12 × 12 cm mass was found in the abdomen, so an operation was performed. At the laparotomy a huge, necrotizing tumour was observed in the descending colon, complicated by abscess formation. This tumour was inoperable because of its tight attachment to the pelvic tissues and vessels. During the postoperative period the sepsis remained unchanged in spite of massive antibiotic therapy and oncotomy, and the patient died 68 days after the exploration.

At the autopsy an entero-cutaneous fistula was revealed, caused by the colonic tumour. The tumour was 35 cm in length and located in the descending and the sigmoid colon, infiltrating the adjacent structures and contained haemorrhagic, necrotic areas with multiple small abscesses (Fig. 1). In the non-tumorous parts of the colon a picture of a typical ulcerative colitis of a later stages was found: the bowel was rigid and shortened, the mucosal surface was flattened with numerous tiny pseudopolyps. Metastases were seen in the regional lymph nodes, in the lung and liver (Fig. 2). Ovaries, genitalia, mediastinum, adrenals were normal.

Microscopically, the tumour was composed of a wide spectrum of tissue elements. The main cellular components were the bizarre, polymorphic giant cells, sometimes resembling choriocarcinoma (Fig. 3A–B), while in the other parts of the tumour sarcomatous mesenchymal proliferation could be observed (Fig. 3C). In addition, a number of mature tissues were also seen: glands of cervical and endometrial type with typical subnuclear vacuolisation, stratified squamous epithelium, hair follicles (Fig. 3D), immature bronchi (Fig. 4A), duct-like structures, cartilage with focal ossification (Fig. 4B–C) and adipose tissue (Fig. 4D). The frankly malignant and the non-malignant elements were irregularly mixed in the tumour.

Immunohistologically, a number of epithelial cells in glands were positive for carcinoembryonic antigen (CEA) and alpha-fetoprotein (AFP).

Discussion

The most typical localization of teratoma is in the gonads but the tumours may also appear in sacrococcygeal, retroperitoneal, mediastinal or cervical

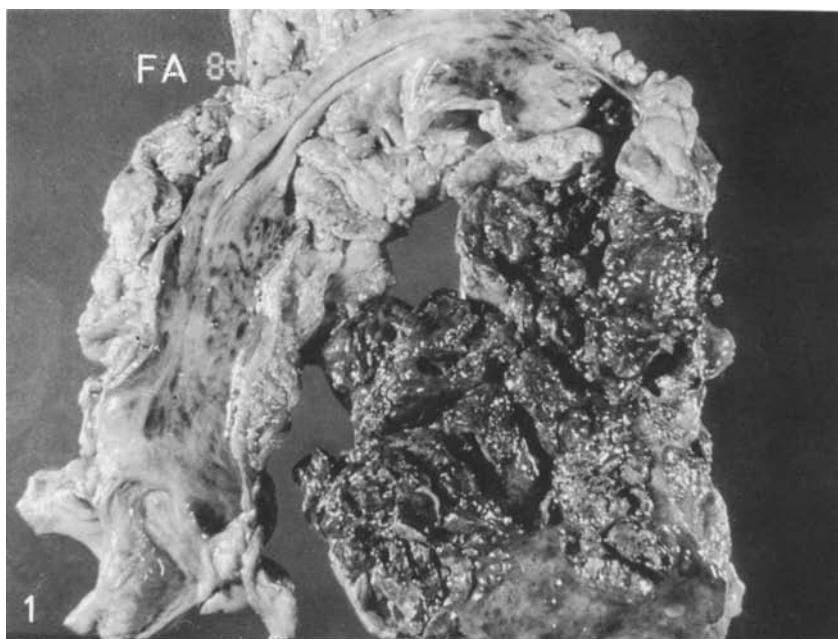


Fig. 1. Chronic ulcerative colitis of a late stage and a large tumour mass in the descending and sigmoid colon. The tumour is necrotic and haemorrhagic

Fig. 2. Multiple liver metastases

regions. Their occurrence in the large bowel is extremely rare, only a few such cases have been reported in the literature (Bremen et al. 1961; Dutz and Sadeghee 1968; El-Katib 1972; Glover 1963; Gowdy 1956; Kay 1971; Russell 1974). These cases were invariably benign. Malignant teratoma occur-

ing in the large bowel has not previously been reported.

Although chronic ulcerative colitis is well known to be a premalignant condition of the colon (Corman 1984) the tumours which develop on the basis of this disease are nearly always carcinomas.

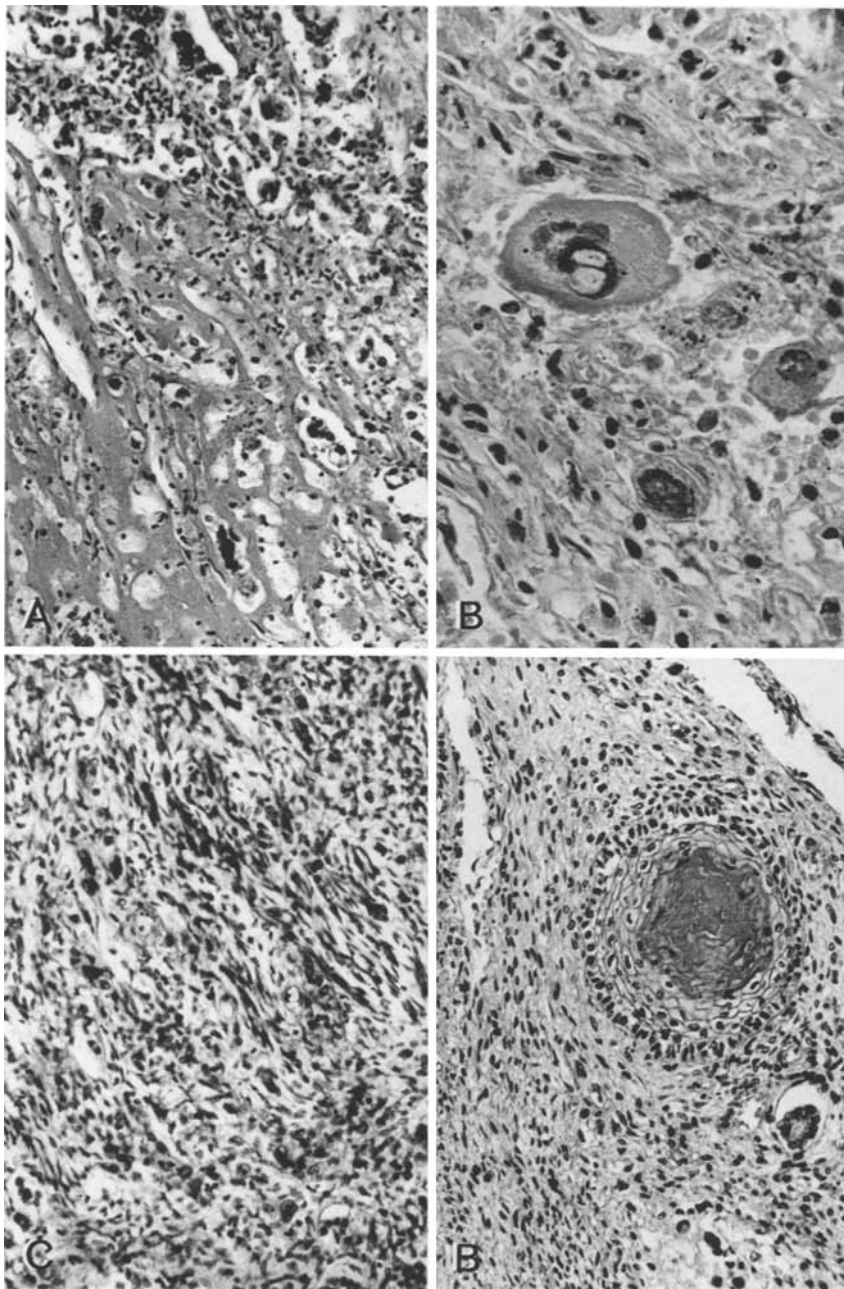


Fig. 3. **A.** Large necrotic area in the tumour with many bizarre giant cells (H&E, $\times 100$). **B.** Some tumour giant cells resembling choriocarcinoma (H&E, $\times 250$) **C.** Sarcomatous part of the tumour with slender, fusiform cells (H&E, $\times 100$) **D.** Mature hair follicle (H&E, $\times 100$)

Occasional associations with chronic ulcerative colitis and malignant lymphoma (Bartolo et al. 1982; Hope-Ross et al. 1985; Renton and Blackshaw 1976), carcinoid tumor (Hay and Curt 1979), Kaposi's sarcoma (Adlersberg 1970; Gordon and Rywlin 1966) have also been reported in the litera-

ture, but the causal relationship between them seems unlikely. Similarly, the teratomas which occurred in the large bowel were not associated with ulcerative colitis. We believe that this malignant colonic teratoma originated from a small, benign teratoma of the descending colon.

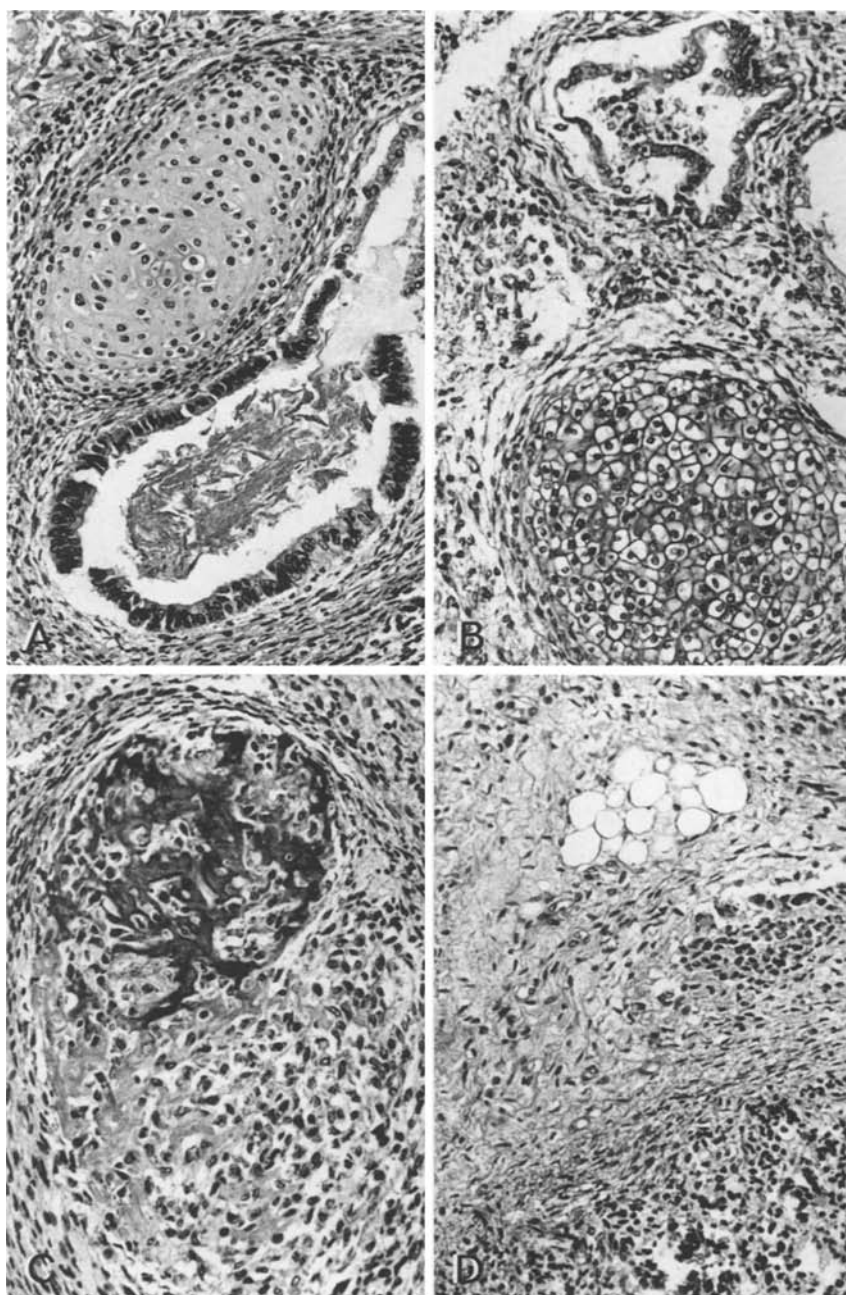


Fig. 4. A. Primitive bronchus with cartilage and columnar epithelium (H&E, $\times 100$) B. Duct-like structure and immature cartilage (H&E, $\times 100$) C. Focus of ossification within the cartilage (H&E, $\times 100$) D. Mature adipose tissue and clusters of anaplastic tumour cells (H&E, $\times 100$)

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