Case report

# Perforated cecal carcinoma presenting as a retroperitoneal abscess

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## SUMMARY

**Cecal adenocarcinoma may present with atypic symptoms, mainly in the oldest patients, having a worse prognosis than other colon carcinomas. The most common complication of colorectal carcinoma is obstruction and bleeding,whereas bowel perforation is reported in less than 4% of cases in 1/3 of which it is located in the right colon.[1,2] The following study is a case report of a retroperitoneal abscess due to a perforated cecal carcinoma. In the beginning, this abscess was considered to be of tuberculous etiology. In adition, a review of the relevant literature is presented in the following study. The clinical symptoms and signs of a retroperitoneal abscess may be obscure, and despite the large use of image studies, the resulting delay in diagnosis and treatment may lead to a high index of morbidity and mortality.**

**Key words:** cecal carcinoma, retroperitoneal abscess

## INTRODUCTION

According to epidimiological data, cecal carcinoma is the third most common colorectal cancer and the clinical presentation and prognosis is similar to other types of large bowel carcinomas. It affects men and women in their last decades of life. Main symptoms include bowel obstruction and chronic anemia. In elderly patients, symptomatology may be obscure, therefore leading the diagnosis towards other benign or malignant types of diseases.

The following case study is a report of an 87-year-old patient with cecal carcinoma leading to perforation and inflammation of the cecal wall, that was undiagnosed until a retroperitoneal abscess formed. The abscess was located in the iliac retroperitoneal area and was misdiagnosed at the beginning as a tuberculous abscess.

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## CASE REPORT

An 87-year-old female was admitted to the hospital complaining of fever episodes ranging between 38 and 38.5°C that had begun one week earlier.

According to her past medical history: bronchiectasis recorded 40 years earlier, with several episodes of acute bronchitis per year, cholocystectomy before 30 years, hip joint replacement 15 years earlier, tuberculosis 3 years earlier when the patient had been under medical treatment for 9 months, a follicular carcinoma of the thyroid gland had been diagnosed 4 years earlier without any surgical intervention.

On physical examination the patient was light in weight with a mild fever of 37,6°C. During examination of the right lower abdominal quadrant, tenderness was found without any signs of induration, erythema or peritoneal irritation. Finger rectal examination was with no findings.

In blood laboratory data leukocytosis (13.000/$mm^3$) and moderate anemia (Hct 29%) were found, thyroid gland blood tests were within normal limits.The carcinoembryonic antigen blood levels were 9.2 ng/ml and the fecal haemocult test was positive. Culture of the sputum specimen for B. Koch was negative. X-ray examination study was performed. CT scan of the abdomen showed an abscess located in front of the right iliac muscle (Figure 1) and the CT-guided needle aspiration of the abscess failed.

The patient underwent surgical exploration under epidural anesthesia. The abscess was drained through an extraperitoneal incision. Pus, gas and fecal odor fluid were extracted and a fistula between the abscess cavity

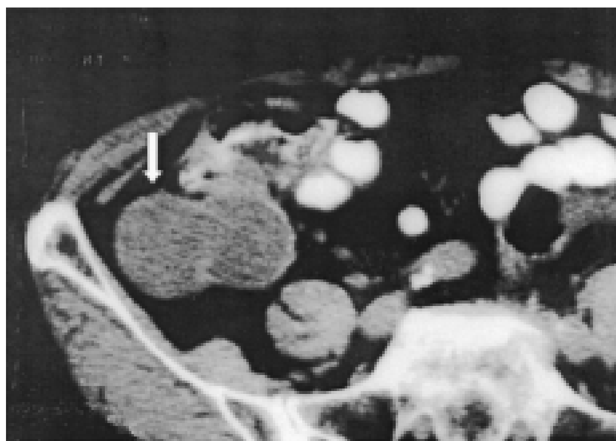

**Figure 1.** Abscess in front of the right iliac muscle (arrow).

and the cecal lumen was formed. Therefore, the abdominal cavity was explored by surgery through a transverse incision below the umbilicus. A cecal carcinoma with a posterior perforation of the bowel wall at the retroperitoneal space were found. During surgical operation a right hemicolectomy and an end to end iliotransverse anastomosis was performed. The histology report of the surgical specimen showed a poor differentiated carcinoma grade C, according to Dukes classification.

The patient recovered and was killed in during a car accident 9 months later.

## DISCUSSION

Colorectal cancer is one of the most common types of neoplasia in the Western countries.Cecal and right-colon sided adenocarcinomas comprise approximately 20% of large bowel cancers.

They are often silent with multiple clinical presentations, including anemia, appendicitis, and pelvic mass.[3-5] The posterior cecal wall perforation is a sealed one, leading to an abscess on the psoas muscle in the retroperitoneal space, as in the case report mentioned.[6] In the clinical examination, a painful mass in the right iliac fossa may appear, although sometimes symptoms may be attenuated. The pain radiates in the upper thigh , hip joint or to lumbar muscle area. Sometimes peritonitis may even occur due to a free perforation of the cecum.[7,8] Fever of unknown origin may be the only symptom and may originate from a small occult, unpalpable retroperitoneal abscess or an advanced tumor with multiple liver metastases. Metastases when grow rapidly, may undergo necrosis or bleeding with hepatomegally as well as generalized pain and weakness.

Cecal tumors may also spread locally and through the peritoneal way before giving bowel symptoms.The cecal perforation,is the most severe complication due to the liklihood of sepsis, increasing morbidity and mortality.[9]

The tuberculous etiology of the abscess was possible due to the past medical history of tuberculosis, even though tuberculous spondylitis signs were absent in the X-ray of the spinal vertebral column.

The physical signs (e.g. psoas rigidity sign, palpable mass, costolumbar sensitivity) play a significant role in diagnosis[10] and the differential diagnosis of retroperitoneal abscesses may often be challenging.The retroperitoneal abscess may be of multifactorial origin and can be secondary to gastrointestinal, genitourinary infections and other adjacent infected organs. Otherwise it can be characterized as primary, with no definite etiology. Important predisposing factors are considered to the diabetes mellitus, muscle trauma, even that microscopic and HIV positive individuals. The most common causes of retroperitoneal abscesses are infections of the duodenum (e.g. diverticulosis), pancreas, terminal ileum, appendix, ascending and descending colon. Retroperitoneal abscesses, in addition, may result from microbial agents such as tuberculosis, staph. Aureus, E. coli, Bacteroides species or other more rare bacterial factors, like actinomycosis.[11]

Ultrasound examination of the abscess may be of valuable use in diagnosis, but the diagnostic study with the greatest sensitivity is computed tomography.

CT-guided drainage of the abscess with broad spectrum antibiotic coverage is the main treatment. Sometimes surgical intervention may be needed in order to explore the abdomen and/or even excise any primary neoplastic lesion causing the abscess. When surgery is performed early in the course of the disease, the prognosis may be quite good, otherwise mortality is high (2.5%-20%) due to lethal sepsis.[12]

Treatment of choice for cecal carcinoma is right hemicolectomy, which is performed as soon as the diagnosis has been made.[13]

## CONCLUSION

Cecal carcinoma is one of the most common cancers despite medical progress. Although bowel perforation is a well-recognized complication of cecal carcinoma, symptoms and physical findings may be misleading, mainly in

elderly people or when the patient's past medical history includes confounding factors, such as tuberculosis. Perforated cecal carcinoma may mimic many other diseases and should always be kept in mind during the differential diagnosis of retroperitoneal abscesses.

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