

Colovesical Fistula Revealing Sigmoid Colon Cancer: A Case Report and Literature Review

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DOI: <https://doi.org/10.36347/sjmcr.2026.v14i05.063> | Received: 28.03.2026 | Accepted: 13.05.2026 | Published: 22.05.2026

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Abstract

Case Report

Colovesical fistula (CVF) is a rare but serious complication of advanced colorectal cancer. Clinical presentation typically includes pneumaturia and fecaluria. However, it can present with nonspecific symptoms, leading to delayed diagnosis. Imaging, particularly computed tomography (CT), plays a crucial role in detection and characterization. We report the case of a 74-year-old patient found to have a colovesical fistula secondary to sigmoid colon cancer, which was accurately diagnosed by radiological images. This case highlights the diagnostic value of CT in identifying both the tumor and associated fistula. Recognition of key imaging features is essential for early diagnosis and optimal management.

Keywords: Colovesical Fistula, Sigmoid Colon Cancer, Fecaluria, CT Imaging.

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INTRODUCTION

Colovesical fistula (CVF) is defined as an abnormal communication between the colon and the urinary bladder [1, 2]. It is a rare complication of various colorectal diseases, most commonly sigmoid diverticulitis, followed by malignancy [1-3]. Patients with malignant CVF usually present in advanced stages of their cancer due to direct tumor invasion of adjacent structures [4, 5].

Clinical presentation is often non-specific and may include pneumaturia, fecaluria, and recurrent urinary tract infections, significantly reducing patient's quality of life [3-6]. Among these, fecaluria is considered one of the most specific symptoms, strongly suggesting the presence of a fistula [7].

The diagnosis of CVF is challenging and relies heavily on imaging techniques. Computed tomography (CT) is currently considered the primary imaging investigation, as it allows simultaneous visualization of the tumor, fistulous tract and associated complications [3-6].

We present a case of a 74-year-old man found to have a colovesical fistula secondary to sigmoid colon cancer, which was accurately diagnosed by radiological images.

CASE REPORT

A 74-year-old man with a history of hypertension under treatment, presented to the hospital with abdominal pain and fecaluria. Patient interview elicited disturbed intestinal transit with occasional per-rectal bleeding. He also complained of significant weight loss for the past three months.

Physical evaluation revealed mild abdominal distension with tenderness in the lower abdominal region. On rectal examination, there was no palpable mass.

Abdominal contrast-enhanced CT scan demonstrated circumferential and irregular wall thickening of the rectosigmoid junction causing luminal narrowing and upstream dilation. A fistulous tract was observed communicating between the involved section of the sigmoid and the bladder which contained an air-fluid level. In addition, adjacent colonic diverticulosis was noted. (Figure 1).

Decompressive colostomy was performed before colonoscopy, that revealed a tumor at the rectosigmoid junction. Histopathological examination confirmed colonic adenocarcinoma complicated by CVF.

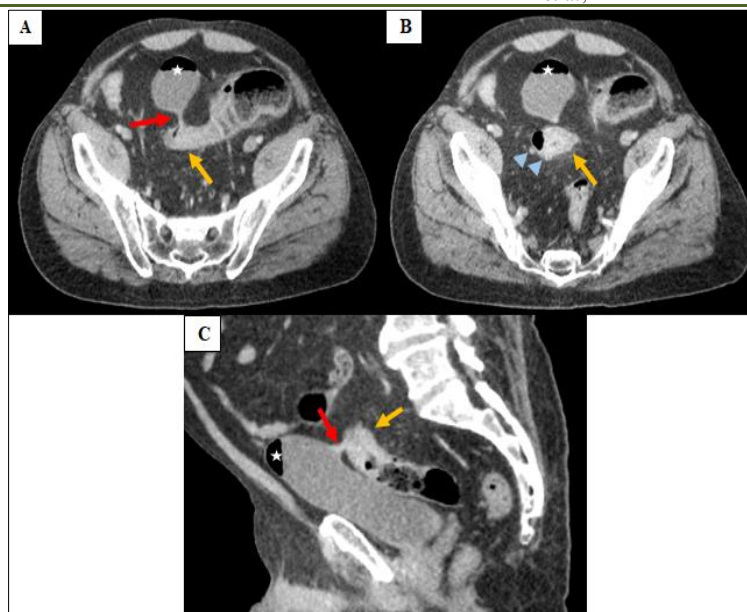


Figure 1: Abdominal contrast-enhanced CT scan in axial (A, B) and sagittal (C) plans demonstrating circumferential and irregular wall thickening of the rectosigmoid junction (yellow arrows) causing luminal narrowing and upstream dilation, associated with a fistulous tract communicating between the involved section of the sigmoid and the bladder (red arrows) which contained an air-fluid level (white asterisk). Adjacent colonic diverticulosis was noted (blue head arrows)

DISCUSSION

CVF represents a pathological communication between the colon and urinary bladder [1].

The most common etiologies include diverticular disease, followed by neoplasms of the colon with adenocarcinoma being the most frequent type, Crohn disease, pelvic radiation therapy, traumatic and iatrogenic injuries [1-8].

Due to anatomic reasons, the probability of CVF in women is lower [4-9], and most cases occur in sigmoid colon due to anatomical proximity to the bladder [3-10].

CVF in colorectal cancer is a result of tumor progression, direct invasion of bladder wall, necrosis and inflammatory processes [2-6].

Clinically, patients with CVF usually present with pneumaturia, fecaluria and urinary tract infections [2-11]. Fecaluria, presented in our case, is reported in up to 68% of cases and is highly suggestive of CVF [3]. Also, a classical presentation is Gouverneur syndrome, characterized by suprapubic pain, frequency, dysuria, and tenesmus [3-8].

However, symptoms may be misleading causing delayed diagnosis. Skierucha *et al.*, reported a case where CVF manifested with diarrhea. In fact, the formation of a fistula causes a misleading urine passage through the digestive tract, which appears as diarrhea [4].

CT is considered the suitable first line imaging modality recommended by the American College of Radiology, due to its high sensitivity and ability to simultaneously assess both tumor and fistula [6-12]. Typical CT findings include the presence of air in the bladder in patients without recent urinary instrumentation, irregular colonic thickening adjacent to an area of local bladder thickening, and fistulous tract [2-6].

Although magnetic resonance imaging (MRI) is not used as a routine imaging tool, several previous studies have recommended it, due to its high intrinsic soft-tissue resolution [2-6].

Furthermore, Yang *et al.*, have strongly defended the use of sonography in suggesting CVF diagnosis. It may show reverberation artifacts caused by air and the presence of echogenic material within the bladder, besides an echogenic beak connecting the bowel lumen with the bladder [2-8].

The management of a malignant CVF is widely dependent on the tumor stage and the general condition of the patient [5]. Surgical treatment remains the mainstay achieving excellent clinical outcomes [1]. On the other hand, conservative management is associated with poor outcomes [5, 6].

CONCLUSION

CVF is a rare but serious complication of advanced sigmoid colon cancer.

CT imaging is essential for diagnosis, allowing identification of both tumor and fistulous communication. Recognition of key imaging features is crucial for early diagnosis and optimal management.

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