Renocolic fistula secondary to colon adenocarcinoma

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**ABSTRACT**

**Introduction:** Renocolic fistula development is rare. A little more than 100 cases have been reported in the literature. Symptomatology is insidious rather than specific. Diagnosis is made through radiological studies and management is generally surgical.

**Objective:** To present a rare case of renocolic fistula secondary to colon adenocarcinoma and to provide a review of the international literature.

**Conclusions:** Renocolic fistula is a rare entity. However, it is important to be familiar with its clinical symptoms so that diagnosis can be suspected and adequate diagnostic and therapeutic approaches can be carried out. Prognosis is dependent on the disease causing the fistula.

**Key words:** renocolic fistula, adenocarcinoma, colon, Mexico.

**RESUMEN**

**Introducción:** El desarrollo de una fístula renocolónica es un evento infrecuente. Se han informado poco más de 100 casos en la bibliografía. La sintomatología no es específica, sino insidiosa. El diagnóstico se realiza con estudios radiológicos y el manejo por lo general es quirúrgico.

**Objetivo:** Presentar un caso de fístula renocolónica secundaria a un adenocarcinoma de colon, ya que es de muy rara presentación, así como realizar revisión de la bibliografía mundial.

**Conclusiones:** La fístula renocolónica es una entidad que se presenta muy raramente, sin embargo es importante conocer el cuadro clínico que puede presentar, para con ello tener una sospecha diagnóstica y poder realizar un abordaje diagnóstico y terapéutico adecuados. El pronóstico dependerá de la enfermedad que dio origen a la fístula.

**Palabras clave:** Fistula renocolónica, adenocarcinoma, colon, México.
INTRODUCTION

Renocolic fistula is a rare event with a little over 100 cases reported in the literature.\(^1\)\(^-\)\(^4\) It frequently presents in the ascending and descending colon and the majority of reports refer to the left side as the most affected.\(^1\)\(^,\)\(^5\)\(^-\)\(^10\)

It extends to the cutaneous level in 10% of cases.\(^11\)\(^-\)\(^17\) Diagnosis is made through radiological studies and management is generally surgical.\(^4\)\(^,\)\(^6\)

CLINICAL CASE PRESENTATION

The patient is a 50-year-old man with a history of smoking 5 cigarettes per day over a period of 25 years. His illness began nine months prior to hospital admittance and was characterized by asthenia, adynamia and hyporexia. Two months later he presented with attacks of humid cough with yellow expectoration that did not produce cyanosis, chest pain and fever for which he was admitted into a different public institution where he was treated for pneumonia. During hospital stay, tumor was detected in the right lumbar region that presented with gradual increase in size until reaching 12 cm x 10 cm under the costal arch. Points of reference were the midclavicular and anterior axillary lines. Tumor presented with poorly defined edges, was painful upon palpation and emitted fetid yellow exudate from fistulous opening in right lumbar region with later spontaneous closure. Patient was treated as an outpatient and given oral medication. Patient’s general health status deteriorated gradually and fistulous opening recurred. Five months later he began to have liquid non-fetid evacuations with no mucous or blood 10-12 times in a 24-hour period. Overall weight loss since illness onset was 25 kilograms. A week before his admittance to the authors’ institution his symptoms became worse with the addition of nausea, vomiting and urinary storage symptomatology. Patient sought medical attention in the emergency room of the authors’ institution where upon physical examination he was conscious, dehydrated, cachexic and had a large and fallen abdomen with increase in peristaltic sound frequency. An approximately 10 cm x 10 cm mass was palpated in the right flank and hypochondrium under the costal arch. It was hard, fixed and non-painful and there were no changes in skin coloration. Laboratory workup reported leukocyte count 6900, hemoglobin 6.8, hematocrit 22%, platelets 196,000, glucose 116, uric nitrogen 7.3, creatinine 1.02, urea 32, Na 135, K 1.67, Cl 109, Ca 6.6, proteins 4.72, albumin 1.39, total
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bilirubin 1.1, AST 29, ALT 26, ALP 404, LDH 533, PT 20 seconds, PTT 35 seconds, HIV 1/2 antibody test negative. Urinalysis reported pH 5.0, density 1.010, leukocytes one per field, scant yeast, no proteinuria, nitrates, and erythrocytes. Helical tomography of the abdomen in oral contrast phase showed the contrast medium passing into superior renal cavities with air-fluid level (Image 1), confirming fistulous opening from colon to kidney in endovenous contrast phase (Image 2). Colonoscopy revealed presence of irregular, exophytic newly formed tissue with multiple areas of necrosis at the ascending and transverse colon junction. Histopathological study reported moderately differentiated colon adenocarcinoma. Patient’s general health continued to decline during hospital stay and he died before definitive treatment was begun. Autopsy confirmed clinicroadiological diagnosis revealing a fistulous tract between the colon and right kidney (Images 3 and 3A). Microscopic specimen evaluation showed adenocarcinoma arising from the epithelium of the colon mucosa invading the renal parenchyma (Images 4 and 5).

• DISCUSSION

Fistulous communication between the urinary and gastrointestinal tracts can present at different anatomical sites of the urinary apparatus from the kidney to the urethra, including the renal pelvis, ureter and bladder. Renocolic fistulas were described in 1960 by Hobson who reported on the first case from the urinary tract to the intestinal tract secondary to tuberculosis. Fistulas can be classified as traumatic or spontaneous. Traumatic fistulas are those that are usually iatrogenic, secondary to open or percutaneous procedures. Spontaneous fistulas are those that usually present as a consequence of infectious inflammatory processes or secondary to neoplasia. The pathological entities that most frequently cause spontaneous fistulas are genitourinary tuberculosis and pyonephrosis with calculi. Origin in the gastrointestinal tract is less frequent than in the urinary tract and it involves the small intestine, the ascending, transverse and descending colon, and the rectosigmoid colon. This type of fistula is caused by neoplasia or by diverticular disease of the colon. In 1974 Brust reported a case caused by colon neoplasia, as in the present case. The physiopathological sequence for fistula formation is based on the development of an acute inflammatory process forming an abscess that spontaneously drains into the neighboring organ which usually becomes infiltrated by the inflammatory process. The natural anatomical relation between the urinary tract and the colon makes fistulous tracts more frequent in the ascending and descending colon when communication with the upper urinary tract is involved. Regarding renocolic fistula frequency on the right or left side, reports state that presentation on the left side is more common due to natural anatomic distribution of the primary foci of colon cancer on that side. The present case presented in the ascending...
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colon. Diverticular disease in the sigmoid colon communicating with the bladder is the most common cause of this pathology. Clinical presentation of renocolic fistula can vary widely, from general symptoms such as progressive weight loss, asthenia, adynamia, hyporexia and dehydration. Gastrointestinal symptoms are persistent diarrheic evacuations, rectal tenesmus, and on rare occasions there can be acute abdomen secondary to intestinal obstruction. Urinary symptoms can be pneumaturia and fecaluria and 10% of cases present with spontaneous fistula opening and closing at the skin. In the present case a mass was identified in the right lumbar region. Signs of pneumonia and chronic diarrhea led to the suspicion of HIV and this was ruled out by means of the appropriate tests. Diagnosis was made through imaging studies. Barium enema and ascending pyelography were useful and showed the passage of contrast medium between the cavities and colon, although at times it was not able to be observed. Computed tomography is an excellent definition study and, as reported by Blatstein and Parvey, the fistula, the course of contrast medium from the colon to the renal cavities and to air-fluid levels, and perinephretic inflammation that extends to the skin can all be observed. This was seen in the present case. When fistula extends to the skin, fistulography is an excellent tool. Management of cases caused by instrumentation is generally conservative. However, in the remaining cases management is always surgical and nephrectomy and intestinal resection with primary anastomosis should be performed. In the present case the patient could not be operated on due to his poor condition of health. In the case of patients with tuberculosis, they should be managed with specific treatment. Laparoscopic management based on nephrectomy and fistula closure has been reported on. Prognosis depends on etiology, the duration of the disease, the degree of renal deterioration and the general health conditions of the patient.

CONCLUSIONS

Renocolic fistula is a rare entity. It is important to know the clinical symptoms that can present in order to suspect diagnosis and carry out adequate diagnostic and therapeutic approach. Prognosis will be dependent on the disease that has caused the fistula.
BIBLIOGRAPHY