CLINICAL CASE

Colo-urachal-cutaneous fistula in an adult: a case report


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Abstract The urachus is an obliterated fibrous cord that is embryologically derived from the allantois, and it disappears towards the fifth week of gestation. This cord extends from the bladder dome to the umbilicus. It is found in only one third of adults and very few cases of enteric urachal fistula have been described.

The aim of the present article is to describe the clinical case of a patient presenting with a persistent urachus with a fistula to the colon and diverticular disease, as well as to provide a review of the literature on the topic.

A 59-year-old man presented with a secretion at the umbilical level, urinary urgency, and pneumaturia. Physical examination revealed a light brown, fetid secretion at the umbilicus. A computerized axial tomography (CAT) scan showed a persistent urachus with a fistula to the colon, as well as diverticular disease. The urachus and bladder dome were resected, along with a low anterior resection of the colon, with an end-to-end anastomosis and ileostomy.

Urachal abnormalities are uncommon in adults. Patients with symptomatic abnormalities of the urachus usually present with infection or rupture of the urachal cyst and this cyst rarely fistulizes to the intestine or other adjacent viscera.
Fistula uraco-colo-cutánea en adulto. Reporte de un caso

Resumen El uraco es un cordón fibroso obliterado, que embriológicamente deriva del alantoi-des, y se oblitera hacia la 5° semana de gestación; este cordón transcurre desde la cúpula vesical hasta el ombligo. Sólo se encuentra en una 3° parte de los adultos. Se han descrito pocos casos de fistulas uraco entéricas.

El objetivo del presente trabajo es describir el caso clínico de un paciente que presenta persistencia de uraco, con fistula a colon y enfermedad diverticular, así como realizar una revisión de la literatura acerca del tema.

Se presenta masculino de 59 años de edad, quien inició su padecimiento con presencia de secreción a nivel umbilical, urgencia urinaria, así como neumaturia. A la exploración se encuentra cicatriz umbilical, con presencia de secreción color café claro, fétida. Se solicita tomografía axial computarizada (TAC), donde se apreciaba la persistencia del uraco con fistula a colon, así como enfermedad diverticular. Se le realizó resección del uraco y del domo vesical, más resección anterior baja del colon, con anastomosis término-terminal e ileostomía.

Las anomalías del uraco rara vez se presentan en el adulto, aquellos que padecen anomalías sintomáticas del uraco, usualmente se presentan con infección o ruptura del quiste uracal, este quiste rara vez fistuliza al intestino o a otras vísceras adyacentes.

Introduction

The urachus is an obliterated fibrous cord that is embryologically derived from the allantois, and that disappears toward the 5th week of gestation3,4; this cord extends from the bladder dome to the umbilicus. It is situated between the fascia transversalis and the peritoneum4, and is limited laterally by the 2 involuted umbilical arteries. Failure in the obliteration process of the urachal lumen presents in 4 variations: permeable urachus, urachal cyst, vesicourachal diverticulum, and urachal sinus5.

The urachus is present in children at birth and it gradually degenerates. A urachus is found in only one third of adults5.

The majority of anomalies are asymptomatic and do not require treatment, whereas the patients that present with symptoms often require surgical treatment. An uncommon complication of the symptomatic abnormalities of the urachus is produced when the cyst fistulizes toward the adjacent viscera. Only a few cases of enteric-urachal fistula have been described. The majority of reports refer to patients with Crohn’s disease6.

Case presentation

A 59-year-old man presented with a past medical history of smoking that began when he was 20 years old and continues up to the present; he also has a 7-year progression of type 2 diabetes mellitus treated with oral hypoglycemic agents. Disease onset was 6 months prior to his urologic examination. The patient presented with a secretion at the level of the umbilicus, urinary urgency, and pneumaturia. Physical examination revealed a lucid patient with no cardiopulmonary involvement, a distended abdomen, centripetal obesity, an umbilicus with a clear, brown, fetid secretion, an uncircumcised penis, and normal testes. Digital rectal examination revealed a grade I adenomatous prostate. Computerized axial tomography (CAT) scan identified a persistent urachus with a fistula to the colon, as well as diverticular disease (fig. 1).

The patient was protocolized and resection of the urachus and bladder dome (fig. 2), resection of the lower anterior colon with end-to-end anastomosis, and ileostomy were performed. The patient’s postoperative progression had no complications and he was released from the hospital one week after the procedure. Ileostomy reconnection was carried out 8 weeks later. The histopathologic report showed a urachal remnant measuring 2 cm in diameter, non-specific cystitis in the bladder dome, diverticulitis in the sigmoid rectum, and a colo-urachal fistula.

Discussion

Urachal anomalies rarely present in the adult7, but when they do, symptomatic abnormalities of the urachus usually manifest with infection or rupture of the urachal cyst. It is uncommon for this cyst to fistulize to the intestine or other adjacent viscera8.

In our case, the fistula presented between the sigmoid colon and the urachus due to diverticular disease, with no intestinal manifestation.

In fact, only 4 cases of urachal fistula involving the colon have been reported in the medical literature. Sawyer described a fistula between the sigmoid colon and a large urachal cyst due to diverticulitis, diagnosed by barium enema9. Flanagan reported a urachal-sigmoid fistula in an adult with no documented colon pathology 10, and Quek reported the case of a patient with a history of abdominal pain, fever, and fecaloid leakage from the umbilicus that had an intraoperative finding of an abscess with perforation of the sigmoid colon, diverticular disease, and fistula toward the urachus11. Peters reports the case of a colo-urachal-cutaneous fistula with diverticular disease in an 88-year-old patient with symptoms of intermittent bleeding and a gaseous discharge through the umbilicus12.
Ultrasound, CAT scan, and magnetic resonance imaging can be helpful for making the diagnosis. Due to the risk for recurrence and malignant transformation, complete surgical excision of the abnormality is the treatment of choice.

Conclusions

We described an uncommon case in adults of colo-urachal-cutaneous fistula with diverticular disease that was resolved satisfactorily through en bloc resection of the urachus with the bladder dome and lower anterior resection of the colon. The patient had a favorable postoperative recovery and the histopathologic report was negative for neoplasia.

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References