



A Sigmoid-Urachal-Cutaneous Fistula after Acute Diverticulitis

Akut Divertikülit Sonrası Gelişen Sigmoido-Urako-Kutan Fistül

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ABSTRACT

The urachus is an embryonic remnant of communication between the bladder and the umbilicus; it usually obliterates and becomes a fibrous cord, but the incomplete obliteration or partial recanalization leads to the development of anomalies such as urachal cyst or patent urachus. As a consequence of the diverticulitis episode, the sigmoid colon or peridiverticular abscess may adhere to the patent urachus and develop a colourachal fistula with feculent umbilical drainage. Here, we evaluated a case of sigmoid-urachal-cutaneous fistula in the light of the current literature. (*JAREM* 2015; 5: 83-4)

Keywords: Acute diverticulitis, urachus, sigmoid-urachal-cutaneous fistula

ÖZET

Urakus mesane ile umblikus arasında uzanan ve normal şartlarda bir fibröz bant haline gelmesi gereken, bir embriyolojik kalıntıdır; ancak tamamen oblitere olmaması veya kısmi olarak rekanalize olması, urakal kist veya patent urakus gibi anomalilere yol açmaktadır. Gelişen bir divertikülit atağı sonrası sigmoid kolon veya peridivertiküler abse açık olan urakus kanalına açılmakta ve göbekten fekaloid akıntılı bir kolo-urakal fistül gelişir. Sigmoido-urako-kutan bir fistülü güncel literatür ışığında değerlendirdik. (*JAREM* 2015; 5: 83-4)

Anahtar Sözcükler: Akut divertikülit, urakus, sigmoido-urako-kutan fistül

INTRODUCTION

The urachus is an embryonic remnant of communication between the bladder and the umbilicus (1, 2); usually, it obliterates and becomes a fibrous cord (3, 4), but the incomplete obliteration or partial recanalization leads to the development of anomalies such as urachal cyst or sinus, patent urachus, and urachal diverticula (4). The urachal rest may become infected or ruptured and fistulize to the adjacent organs (2). As a consequence of the diverticulitis episode, the sigmoid colon or peridiverticular abscess may adhere to the patent urachus and develop a colourachal fistula with feculent umbilical drainage, pneumaturia, and fecaluria; the colourachal fistula is very rarely reported in the present literature (1-6).

CASE PRESENTATION

A 54-year-old male presented with feculent and gassy discharge from his umbilicus, pneumaturia, and blurines of urine; the discharge had started 3 months ago, and his history revealed an undefined abdominal pain at the right quadrant. Physical examination showed only limited periumbilical erythema and feculent discharge. The urinalysis revealed a small amount of leucocytes and erythrocytes, and the microscopic examination showed bacteriuria. The ultrasonography and magnetic resonance imaging showed a urachal remnant containing a cystic lesion and an adjacent mass from the colonic segment. Cystoscopy demonstrated an ostium with feculent drainage, and colonoscopy showed diverticular disease and obstruction at the level of sigmoid colon.

After an infraumbilical midline incision, the exploration of the abdomen revealed a fistulous tract from the umbilicus to the bladder dome in close vicinity with the sigmoid colon. We performed an "en bloc" resection of the involved sigmoid colon, excision of the urachal remnant with the umbilicus and the bladder cuff with end-to-end colonic anastomosis. The bladder was closed in two layers. Pathological examination demonstrated an inflamed fistula tract between the umbilicus, bladder, and sigmoid colon (Figure 1). Written informed consent was obtained from the patient described in this case report.

DISCUSSION

The urachus is an embryonic remnant of the communication between the bladder and the umbilicus; the persistence of this communication is a 1 in 5000 incidence of urachal anomalies (1). Usually, the urachus obliterates prenatally or, sometimes, during the first year after birth; the obliterated urachal tube forms the median umbilical ligament; in the inner contain a epithelium similar to the urothelium.

Usually, urachal anomalies remain asymptomatic, and most symptomatic anomalies are present in the early childhood period. In a patent urachus, urachal cyst, or urachal sinus, the patient can present with an umbilical discharge or a sign of omphalitis; in cases of infected cysts, they present with an infraumbilical midline painful mass or peritonitis during the rupture of the cyst (1, 4, 5).



Figure 1. The fistula tract between the umbilicus, bladder, and sigmoid colon

Adenocarcinomas are frequent in urachal rests, and the excision of the urachal rest must be accompanied by bladder cuff excision (5).

CONCLUSION

Adults with urachal anomalies present with symptoms of complicated urachal cyst; these cysts can fistulize to the adjacent bowel, and the majority of reported entero-urachal fistulae were associated with Crohn's disease. Only few cases of urachal-sigmoid fistulae have been reported (1). Most of these cases were without any obvious colonic pathology; our case is of one of the rarely reported sigmoid urachal cutaneous fistula associated with diverticulosis. We suppose that the cutaneous fistula between the sigmoid colon and patent urachus developed after a complicated diverticulitis episode.

Informed consent: Written informed consent was obtained from patient who participated in this case.

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