

Abscess and cecum carcinoma in inguinal hernia: case report

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SUMMARY: Abscess and cecum carcinoma in inguinal hernia: case report.

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Cecal adenocarcinoma within an inguinal hernial sac is an uncommon clinical condition. A primary adenocarcinoma of the cecum in a right sided inguinal hernia is presented and discussed. This case represents one of the unexpected findings in a hernia sac and also very rare septic evolution. This particular condition is a main diagnostic and therapeutic challenge.

RIASSUNTO: Accesso e carcinoma del cieco in ernia inguinale: caso clinico.

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Un adenocarcinoma del cieco all'interno di un sacco erniario è una condizione clinica di eccezionale riscontro. Ne viene qui discusso e presentato un caso in un'ernia inguinale, emblematico per la variabilità dei possibili contenuti di un sacco erniario e per l'eccezionale evoluzione settica che pone non semplici problemi soprattutto diagnostici.

KEY WORDS: Adenocarcinoma of the cecum - Hernia sac - Abdominal wall abscess.
Adenocarcinoma del cieco - Sacco erniario - Accesso della parete addominale.

Introduction

Inguinal hernia is generally present omentum and/or an intestinal loop. The presence of the appendix within an inguinal hernia is quite uncommon, about 1% of all external inguinal hernias (1).

Herniation of normally located cecum into the right inguinal canal is a fairly frequent surgical finding (2). The presentation of cecal carcinoma within an inguinal hernia is extremely rare.

The following report describes a case of an incarcerated cecal adenocarcinoma in an inguinal hernia.

Case report

A 79 years old man was admitted to hospital on July 2001

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with a painful mass in the right groin and fever. He had a medical history of diabetes for about 10 years, and hypertension for about 5 years. His past surgical history included transurethral prostatectomy about 3 years before. Physical inspection revealed the presence of a mass in the right lower abdominal quadrant, partially extended into the right inguinal canal, with reddened and warm skin, painful.

The patient had intermitted fever for about 8 days and an increasing constipation during the last 3 weeks, which gradually, in the last 3 days, turned into bowel obstruction. A broad spectrum intravenous antibiotic (Ceftazidime) was then administered in preparation to the surgical operation.

The ultrasonographic examination showed the presence of a solid mass of about 7.5 cm in diameter, with irregular borders, in the inguinal region and in the right iliac fossa of unknown origin. Drainage of the abscess was performed, which resulted in about 800 cc of purulent liquid. The cytologic examination revealed "a purulent flogosis with a carpet-granulocytes neutrophiles". An abdominal and pelvic CT scan with intravenous contrast medium (c.m.) and a complete colonoscopy were performed.

The CT scan showed the presence of a solid mass of dishomogeneous structure in the right iliac fossa probably originating from the cecum with a prevalent extraluminal development ad a maximum transverse diameter of about 10 cm and cranio-caudal extension of over 11 cm. The injection of c.m. confirmed the dishomogeneous architecture of the mass and delineated the relationship with the surrounding structures. The lesion involves the adjacent ileal anseae, comes into contact with the psoas muscle and with the



Fig. 1 - Specimen of right colon: in the middle it is showed the voluminous cecal neoplasm reduced from the hernia sac.

right common and external iliac vessels, compressing the right ureter and causing homolateral escretory delay and hydroureter; inferiorly the lesion extends into the right inguinal canal. No large lymph nodes are present, some small ones are shown in lombo-aortic area.

The endoscopy reveals normal epithelium of the rectal ampulla; at 10 cm it is present a double ulcerative lesion, each about 10 mm of diameter, covered by coat of fibrin; some biopsies are done. A vegetant mass is observed in the cecum, determining an alteration of the ileo-cecal valve; some biopsies were taken.

The colonoscopic biopsies showed no sign of malignancy in the lesions of the rectus. The cecal mass presents a villous neoplasia with a high grade dysplasia, but it was not possible to distinguish between villous adenoma or adenocarcinoma.

Previous bowel preparation the patient is underwent operation under general anaesthesia. At a median laparotomy a voluminous cecal neoplasia (Fig. 1) adherent to the adjacent structures and partially incased in the right inguinal canal was found. After a viscerolysis, the cecum was reduced into the abdomen and was performed. The internal inguinal ring was closed with a plug of polypropilene.

The histological examination revealed a moderately differentiated adenocarcinoma infiltrating the whole thickness of the cecal wall and extending into the visceral peritoneum with a reactive lymphadenitis (pT4N0M0).

The postoperative course was uncomplicated, except for a mo-

derate flogosis on the lower end of the laparotomy. The patient was kept on total parenteral nutrition for 6 days after the operation and the antibiotic and antithrombotic prophylaxis was continued for all the postoperative course.

The patient was discharged on the 12th postoperative day. At the 6 month and 1 year follow-up visits, CEA levels, colonoscopy and ultrasonography of the liver were performed and no evidence of tumour recurrence was found.

Discussion

Although the cecum has been frequently described in a hernia sac, there are few reports in the available medical literature of cecal carcinoma incarcerated in an inguinal hernia (3-6). Incarcerated appendiceal tumours are certainly observed more frequently (7-10). In 1978 Klein et al. described a case of cecal carcinoid in an incarcerated inguinal hernia (11).

A cecal carcinoma in hernia sac can be diagnosed only with a high clinical suspicion. In our case, the associated symptoms mainly depended on the presence of an abdominal wall abascess, due to the partial necrosis of the cecum within the hernia sac, with a consequent fecal contamination. The drainage of the abscess led to an improvement of the patient's condition and to a better diagnostic evaluation. In particular, endoscopy and CT scan allowed a correct preoperative diagnosis. The differential diagnosis for this condition included incarcerated or strangulated inguinal hernia, inguinal lymphadenitis, testicular torsion, acute epididymitis, acute hydrocele, and focal panniculitis (12).

The age of the patient and the associated diseases (diabetes mellitus and hypertension) didn't represent important prognostic factors. Several recent studies demonstrated that age per se should not be considered as a surgical risk factor. Colon resections mortality in patients above 70 years is about 2% if only one comorbid condition is present, whereas it raises to 16% if two or more conditions are present (13, 14). Probably, the herniation of the cecum through the right inguinal canal due to hypermobility of the cecum and the ascending colon has avoided the perforation in the peritoneal cavity that represents an high risk factor quoad vitam in the elderly patients.

References

1. House M, Goldin BS, Chen H. Perforated Amyand's hernia. *Southern Medical Journal* 2001; 94: 496-498.
2. Ceraldi A, Easley G, Gerwig W jr. Left inguinal herniation of the cecum. *Arch Surg* 1967; 94: 25.
3. V. A. Silberman. Cecal carcinoma incarcerated in an inguinal hernia. *Intemational Surgery* 1969; 51 (6): 515-519.
4. Dross VP, Hipsley RW, Tarasidis GC. Irreducible inguinal hernia due to carcinoma of cecum. *West Virginia Medical Journal* 1973; 69 (4): 86-87.
5. Sriram K, Nichols RL. Colon carcinoma in inguinal hernia. *Illinois Medical Journal* 1986; 169 (3): 165-166.
6. Podkur PE, Chernous MA. Right-sided hemicolectomy in an

- accidentally detected cecal tumor in the hernial sac. *Vestnik Khirurgii Imeni I. I. Grekova* 1994; 152 (5-6): 65.
7. Edwards DP, Scott HJ. The use of laparoscopy in a case of appendiceal cystadenoma presenting as pseudomyxoma peritonei in an inguinal hernial sac. *J Royal Coll Surg Edinburgh* 1998; 43 (2): 112-113.
 8. Young RH, Rosemberg AE, Clement PB. Mucin deposits within inguinal hernia sacs: a presenting finding of low-grade mucinous cystic tumors of the appendix. A report of two cases and a review of the literature. *Modern Pathology* 1997; 10 (12): 1228-1232.
 9. Bolton DM, Collopy BT, Tobin SA. Primary adenocarcinoma of the appendix in an inguinal hernia. *Australian and New Zealand Journal of Surgery* 1998; 58 (7): 591-593.
 10. Di Bartolomeo N, Lanci-Lanci C, Marchese E, Staniscia G, Craboledda P. Appendicite acuta flemmonosaa da adenoma villosa in sacco erniario, descrizione di un caso. *Min Chir* 1993; 48: 431-434.
 11. Klein E, Haspel L, Ben-Ari G. Carcinoid tumor of the cecum presenting as incarcerated inguinal hernia. *Harefuah* 1978; 95 (3-4): 110-111.
 12. Carey LC. Acute appendicitis occurring in hernias: a report of 10 cases. *Surgery* 1967; 61: 236-238.
 13. Giovinetto A, Benfatto G, Mattina A, Di Natale C, Benfatto S. Conceptual problems of colon pathologies of surgical interest in the elderly. *Arch Gerontol Geriatr* 1996; suppl. 5: 477-484.
 14. Boyd JB, Bradford B, Watne A. Operative risk factors of colon resection in the elderly. *Ann Surg* 1980; 192: 743-746.
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