Case Report

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Sigmoid colon cancer presenting as a left inguinal hernia: a case report

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Introduction: Inguinal hernias are common and typically include a portion of abdominal organs. However, there have been reports of additional peculiar content.

Case presentation: The authors present the case of a 68-year-old man with sigmoid colon cancer presenting as a left inguinal hernia.

Discussion: Colorectal cancer is a unique component that can be identified within inguinal hernias and is a prevalent problem among affected individuals because such a presentation is unusual.

Conclusion: Surgeons should be aware of this risk when operating on inguinal hernias in order to prevent ineffective care. The best course of action may be appropriate exploration and oncological excision when underlying colon cancer is suspected after a hernial procedure.

Keywords: case report, colon cancer, inguinal hernia, obstructed colorectal cancer, sigmoid cancer

Introduction

An inguinal hernia is a common ailment that occurs when a portion of an internal organ or tissue breaks through the abdominal wall[1]. Inguinal hernias are mostly manually reducible and asymptomatic; however, a small number of inguinal hernias, about 10%, become incarcerated[2]. Imaging is typically used only to confirm the diagnosis of inguinal hernias in more complex cases.

Inguinal hernial sacs have been found to contain a number of unusual occurrences, such as malignancies, which can be classified as saccular, intrasaccular, or extra-saccular, depending on their location[3]. Colorectal cancer can occur infrequently in inguinal hernia[4]. Currently, there is no agreement regarding the most effective treatment option for these patients because such a presentation is unusual and the diagnosis is typically made intraoperatively.

Here, we describe a case of a left inguinal hernia containing an undiscovered sigmoid colon malignancy.

HIGHLIGHTS

- Colorectal cancer can infrequently present as an inguinal hernia.
- Undetected sigmoid cancer was discovered intraoperatively, which is uncommon.
- When encountered during hernia surgery, surgeons should attempt oncologic resection.
- Managing this case by resection and colostomy from the same hernia incision is a safe and accepted means.

Case presentation

A 68-year-old man presented to our hospital with left inguinal swelling for several years without medical follow-up, which had increased in size in the previous month and was associated with discomfort in the area. And dysuria in the last month.

Physical examination revealed extensive left inguinal swelling, reducibility, and a soft consistency. Mild tenderness to deep palpation extended downward to the upper one-third of the thigh with a buried penis. The patient was diagnosed with an uncomplicated left inguinal hernia. Laboratory results showed normal white blood cell count (11×10^3/μl) and hemoglobin level (14 mg/dl).

The patient underwent an elective hernia repair. During the operation, the sigmoid colon was identified in the contents of the hernial sac, and the lumen was nearly obstructed by a hard mass. The sigmoid mass was resected from the same hernia defect with a safety margin of 15 cm proximally and 5 cm distally, followed by colostomy creation in the left iliac fossa (Fig. 1). The colostomy site and distal part of the colon were closed, and hernial repair was performed without a mesh at the hernia site (Fig. 2).

In the pathology report, macroscopic findings of the resected mass revealed ulceration (measuring $7 \times 4 \times 1$ cm), located 3 cm from the nearest margin. The tumor had invaded the muscularis propria in the pericolic fat, and multiple lymph nodes were identified (the largest measuring 0.6×0.6 cm). Macroscopic tumor perforations were not observed. The malignancy was diagnosed histologically as a moderately differentiated adenocarcinoma (G2) invading the muscularis propria in the pericolic fat with regional lymph node involvement (5/12 nodes). The

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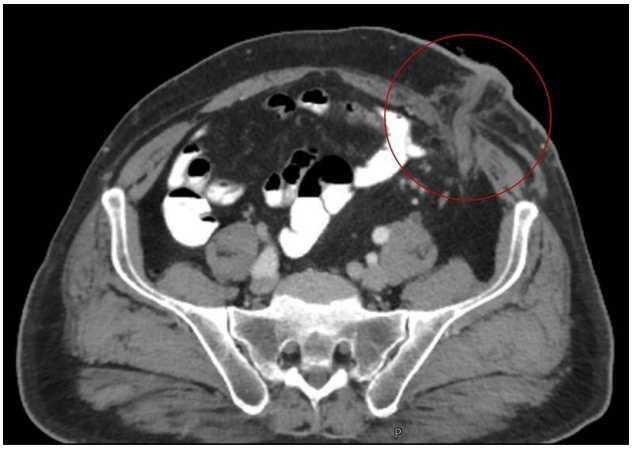

Figure 1. Postoperative colostomy site.

pathologic stage of the tumor was PT3N2Mx, with mild peritumoral and intramural lymphatic responses.

Postoperatively, we performed a computed tomography CT scan that showed no distant metastasis. The patient was good postoperatively with a regular diet, a functioning colostomy, a clean wound, and subsiding upper inner thigh swelling. He was discharged on the third day post-operation, and he returned to the outpatient surgical clinic with a clean wound without evidence of hernia recurrence as we followed up for about a 1 year. Subsequently, the patient was examined by the oncological team; evaluation showed no metastasis, and the patient was diagnosed with stage 3 colon cancer.

The patient received an uneventful course of chemotherapy and did not exhibit a hernia or tumor recurrence, either clinically or via CT scan (Fig. 3). The patient underwent subsequent colostomy closure after 1 year of the first surgery without complication.

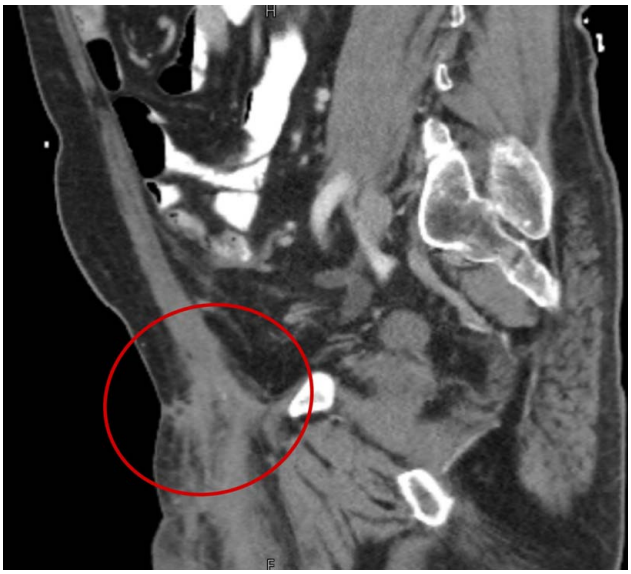

Figure 2. Postoperative hernia site.

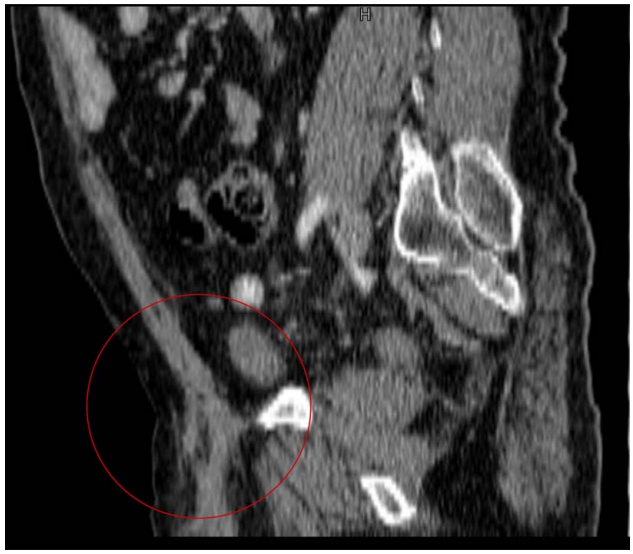

Figure 3. Post-closure colostomy after 1 year without hernia or tumor recurrence.

Methods

The work has been reported in line with the SCARE criteria[5].

Discussion

Adults over the age of 45 frequently develop inguinal hernias, with a 4% prevalence rate for those over the age of 45[6]. Surgeons repair inguinal hernias on a regular basis; every year, approximately 800 000 repairs are performed[7]. It is a herniation of intra-abdominal or extraperitoneal organs caused by a rupture in the myofascial plane of the oblique and transversalis muscles.

Malignant tumors in inguinal hernias are uncommon, accounting for less than 0.4 percent of all cases. A malignancy can be classified as a saccular tumor (e.g. mesothelioma), metastatic sickness impacting the hernial sac, or an intrasaccular tumor, which refers to an organ within the hernial sac that contains a primary malignancy[8].

Colon cancer is the third most prevalent cancer worldwide, and intrasaccular colon cancer is the most prevalent type of malignancy. According to a literature survey, rare occurrences have been recorded; the majority have been sigmoid adenocarcinomas in older people, similar to our patients. However, having these concomitant diseases in conjunction with no blockage or perforation of the colon or any other consequence of known metastases, as in our patient, is a highly unusual occurrence.

The situation described in this report was unique in that the cancer had developed as a large mass (7 cm × 4 cm × 1 cm) inside the hernial sac without obstruction. Although the patient's condition caused considerable swelling (rising to the first portion of the thigh and causing a buried penis) and dysuria, the cancer was serendipitously detected during the procedure.

Owing to poor bowel preparation and bacterial contamination, emergency colorectal surgery has a significant risk of complications and fatality[9]. However, if the breach is restricted to the scrotal sac and there is no peritoneal contamination, the

prognosis is relatively favorable. On the other hand, any delay in identification and treatment may result in lethal consequences, such as necrotizing fasciitis of the genitalia. No abscesses or perforations were observed in our patient. Our patient showed no signs of infection or hyperglycemia, which are risk factors for Fournier's gangrene.

Conclusions

Herniation through inguinal defects is a rare type of colorectal cancer. In our patient, undetected sigmoid cancer was discovered intraoperatively, which is uncommon. Surgeons should be aware of this risk when operating on inguinal hernias in order to prevent ineffective care. Managing this case by resection and colostomy from the same hernia incision is a safe and accepted means of managing hernias with incidental colon cancer.

Ethical approval

This study is exempt from ethical approval in our institution.

Consent

We obtained verbal and written informed consent from the patient for this case report. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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Author contribution

M.E.A.M. and S.R.: data collection; M.E.A.M. and M.N.E.: study concept or design; M.E.A.M., M.N.E., A.I.A.-j., T.M.A., I. H.K., Q.Y.A.J., R.M.D., and F.J.: writing the manuscript; M.E.A. M., M.N.E., and S.R.: review and editing the manuscript.

Conflicts of interest disclosure

There are no conflicts of interest.

Research registration unique identifying number (UIN)

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