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Case Report
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Right Pelvis Wall Encapsulated Fat Necrosis Mimics Malignancy Change: A Case Report

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Abstract

Introduction: We report one case that the patient who had sigmoid adenocarcinoma 13 years ago post left colectomy and chemotherapy therapy had one mass of encapsulated fat necrosis extremely similar to malignancy. Because of the special image, we though this case should be published.

Case Presentation: One 75 years old male oriental had a history of hypertension and sigmoid adenocarcinoma, stage IV with lung metastasis. He received left colectomy and chemotherapy therapy 13 year ago. He returned our hospital because acute abdominal pain. The computed tomography showed a fusiform shaped well encapsulated mass with increased soft tissue density in subcutaneous regions of right pelvis wall region. This looked like infectious process or malignant recurrent. Pathology specimen reported soft tissue and fat necrosis.

Conclusion: Local abdominal encapsulated fat necrosis could be mimicking local colon cancer recurrent. Laparoscopy or excisional biopsy for taking pathology specimen can be used for the same cases for study and diagnosis.

Keywords: Encapsulated fat necrosis; Sigmoid colon adenocarcinoma

Abbreviations

CT: Computed Tomography; CEA: Carcinoembryonic Antigen; CRP: C-Reactive Protein; WBC: White Blood Cell

Introduction

Patients who had sigmoid colon adenocarcinoma with metastasis received successful resection. Thus, chemotherapy should be closely coursed. We often trace checks these patients by tumor marker CEA or image of radiology, especially by computed tomography. Sometimes tumor recurrent could be noted from computed tomography because of findings of recurrent abnormal mass lesion or lymphadenopathy. But fat necrosis could be mimicking acute abdomen or tumor recurrent in seldom condition. We report one patient, having sigmoid colon adenocarcinoma history post left colectomy and chemotherapy, had one mass of fat necrosis extremely similar to malignancy.

Case Presentation

This 75 year old male oriental had a history of hypertension and sigmoid colon cancer, stage IV with lung metastasis. He received left colectomy and under chemotherapy therapy (Oxaliplatin-based chemotherapy) 13 year ago. He received regular blood tumor marker and radiological image followed up. He received abdominal CT half year ago and one right inguinal lymph node was noted but patient refused resection or biopsy. Six months passed, he returned to our hospital because of right lower abdominal pain. So he received CT scan for further study. It showed one fusiform encapsulated mass with increased soft tissue density in subcutaneous regions of right pelvis wall region (12.86 cm × 6.5 cm) surrounding infiltration into anterior abdominal wall muscles and subcutaneous tissues, in favor of malignant change or infection. According to our radiologist's opinion, malignancy change couldn't be ruled out. Sonography couldn't identify the lesion. No adjacent organs invasion was found. Enlarged lymph nodes at bilateral inguinal regions were noted. So he admitted to hospital ward and antibiotics treatment was applied at first. He received tumor resection and excisional biopsy two days after admission. The post-operative course was smoothly. Histology confirmed the macroscopic findings of soft tissue and fat necrosis at right

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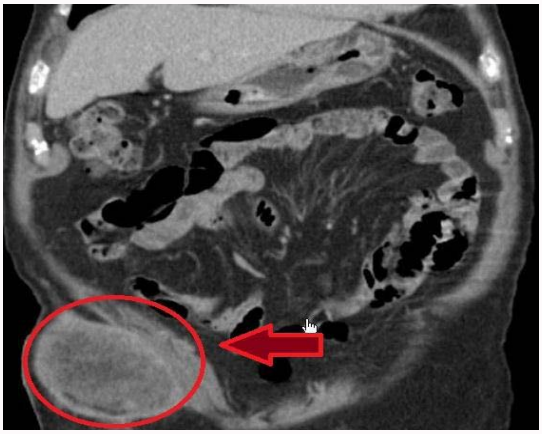

Figure 1: Abdominal fat necrosis before operation (Coronal section).

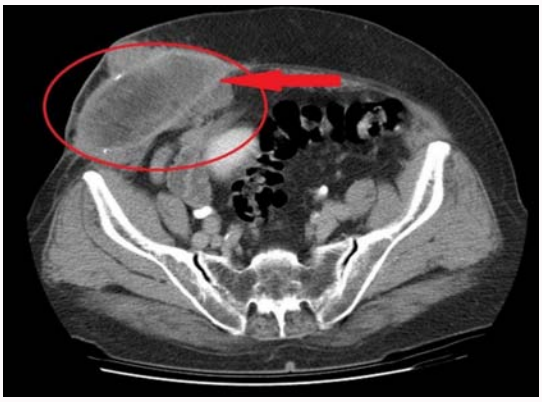

Figure 2: Abdominal fat necrosis before operation (Transverse section).

lower abdominal wall with giant cell reaction. Pus culture was *Staphylococcus epidermidis*.

Discussion

The incidence of recurrent colon cancer is high if patient's cancer has lymph node involvement. The sensitivity for detecting early recurrences is 61% combining with CT and CEA study. Therefore patient needs regular CEA examination and CT study at regular intervals. CT can be especially useful in examination the pelvis for recurrence after resection of rectosigmoid tumors. One patient who had past history of colon cancer resection surgery history need further study, if CT found abnormal finding. Encapsulated fat necrosis may be found all body. It was first mention in the breast in 1975 [1]. Abdominal fat necrosis sometimes mimics findings of acute abdomen [2]. Sometimes torsioned appendix epiploica and fat necrosis mimics appendicitis [3]. By literature searching, one case of renal cell carcinoma history had extensive intra-abdominal-retroperitoneal fat necrosis can be found [4]. In our case, encapsulated fat necrosis was simulated malignancy, especially weakly enhance after administration. Because the mass didn't invade adjacent organs, it was unlike liposarcoma. Finally, our patient was diagnosed as pathological result from Laparoscopy resection and excisional biopsy. Abdominal fat necrosis is one cause of acute abdominal pain [5]. Common processes that occur in fat necrosis include torsion of epiploic appendage, pancreatitis [6], infection, renal cryoablation [7], and infraction of greater omentum. Sometimes fat necrosis can *occur following* after surgery [8,9]. Because fat necrosis and

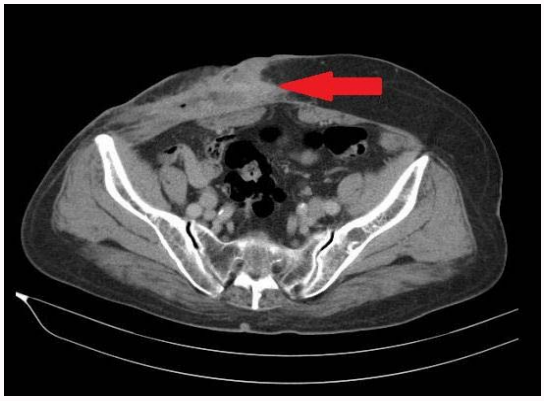

Figure 3: Post operation (Transverse section).

malignant change such as liposarcoma and peritoneal carcinomatosis may mimic one another, patient's clinical history, surgery history, and prior imaging study is necessary for diagnosis [10]. If patient had colon adenocarcinoma history and received image follow up regularity, abdominal fat necrosis mimicking colon adenocarcinoma recurrent must be one of differential diagnosis (Figures 1-3).

Conclusion

In this case report, fat necrosis mimicked sigmoid colon cancer was recurrent. But CT couldn't be made accurately diagnosis. So fat necrosis might mimic malignant process, knowledge of one patient's past history and prior imaging studies was essential for first diagnosis. Pathology result for final diagnosis was necessary.

Consent

Written informed consent is obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the editor in chief of this journal.

Author's Contribution

LK treated the patient and carried out the surgical excision and the manuscript demonstration. CC and HC participated in draft the manuscript. All authors read and approved the final manuscript.

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