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ANTERIOR ABDOMINAL WALL ABSCESS: A RARE CASE REPORT

General Surgery

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KEYWORDS

INTRODUCTION

Abscess is a pouch of pus ,due to insult of bacterial infection.It can occur any where in body. Abscess can be primary or secondary to some underlying pathology.Primary anterior abdominal wall abscess is a rare condition because of limited vascularity of the anterior abdominal wall.It may present as abdominal disorder and diagnosis may be difficult for even experienced clinician. Most of the cases are secondary to intra-abdominal pathology like crohn's disease,colo rectal carcinoma etc.Very few primary cases of anterior abdominal wall abscess may present with underlying etiology of actinomycosis , tuberculosis and of unknown etiology in the literature. Primary AAW abscesses may appear as a solitary pathology without any intra-abdominal pathologic findings and may be associated with diabetes, immunocompromised status, etc. The abscess if left untreated can grow and damage near by blood vessels and organs.Such spread is fatal.We present a case of a 71-year-old man who presented with abdominal mass which was further investigated and diagnosed to be of unknown etiology which was incised and drained.

Case Report

A 71-year-old man presented to the emergency department of our hospital with left sided abdominal pain and swelling for about one month. The pain was aggravated by movement and not related to food intake. He also had a history of chronic cough, weight loss. He was tolerating oral diet.No other significant past and personal history. No history of nausea, vomiting, or urinary symptoms was noted.

Investigations

On general examination, the patient was poorly built and nourished. Vitals were within normal limits. No abnormality was found on examination of other systems.

On physical examination,

- There was a swelling on the abdomen on leftside, measuring around 15 x 10 cm with irregular margins.
- The swelling was fluctuant in nature, not fixed to the skin.The swelling was tender. No discharge from the swelling or any cutaneous scar was present.
- With contraction of the abdominal muscles, the swelling became fixed and more pronounced. There was no cough impulse (Fothergill's sign).

Basic laboratory tests were within normal limits.
Ultrasound whole abdomen showed :

- mixed solid and cystic lesion with irregular margins in the deep anterior abdominal wall on left paraumbilical side with mild extension seen into prevesical space and mid lower abdominal wall.
- Minimal peripheral vascularity was noted with no obvious internal vascularity.
- Ultrasound features were suggestive of a complex cystic lesion.
- Differential diagnosis based on ultrasound were abscess and hematoma. Other rare differential diagnoses like mixed solid and cystic abdominal wall neoplasm, lymphovenous malformation, and cold abscess were also considered.
- NCCT scan of the abdomen demonstrated:
- Ill-defined emphysematous collections (300-400cc) involving left anterior parietal wall, mid lower abdominal/pelvic parietal wall with intra abdominal extension along the properitoneal plane/prevesical space and tracking posteroinferiorly to left ischiorectal/ischioanal fossa.
- Ill defined air containing collections also noted in the left iliac fossa tracking along the distal iliopsoas muscles.
- The findings were suggestive of abscess formation

Treatment:

- The patient was started on intravenous Cefoperazone and Sulbactum
- Incision and drainage of the abscess on the left side found a large pus cavity extending into lower mid abdomen and to prevesical space. Laparotomy was done which showed extension of abscess into pelvic wall upto ischiorectal fossa.
- Approximately 400 mL of foul-smelling greenish-colored pus was evacuated by midline laparotomy and incision over perineum. Adjoining muscles were eroded and necrotic tissue was evident. Posterior rectus sheath was found to be intact.
- Post operatively patient was started on intravenous piperacillin and tazobactum thrice daily for seven days
- Histopathology demonstrated fragments of subcutaneous tissue of abscess cavity containing acute inflammatory infiltrate with abundant neutrophils and necrotic debris. The abscess cavity was surrounded by chronic inflammatory infiltrate .
- Histopathological diagnosis was pyogenic anterior abdominal wall abscess with inflamed subcutaneous tissue and granulation tissue with rare giant cell reaction. No evidence of granulomatous infection was found.
- Post-procedure hospital stay was uneventful, and he got discharged home with follow up in the surgical outpatient clinic.
- Wound culture report revealed that there is no growth of micro organisms and is negative

DISCUSSION:

Intra abdominal abscesses can be caused by bacterial infection .Usually it presents as a collection of pus surrounded by inflamed tissue.It may involve any abdominal organ or may settle in the folds of bowel.In many cases it may happen after surgery or trauma or certain conditions like diabetes, inflammatory bowel disease. Secondary intra abdominal abscess is usually reported in variety of conditions. Primary abscess of anterior abdominal wall is usually uncommnon. Therefore the diagnosis is done on basis of exclusion criteria. Usually the predisposing factor for primary anterior abdominal wall abscess is immunocompromised status.In our case, a pyogenic abscess developed in the anterior abdominal wall without any other infective pathology. Anterior abdominal wall abscess may present as high spiking fever, chills, tachycardia, tachypnoea, leucocytosis, localised abdominal pain.In our case there is history of chronic cough,weight loss ,pain and swelling since 1 month and this is aggrevated by movement. Weiner et al. reported a case of primary AAW abscess and made a literature review of secondary abdominal wall abscesses in 1975. According to the study, inflammatory process may not show the classic symptoms of inflammation clinically when the abscess is deep in the fascial planes of the abdominal wall, making the diagnosis more difficult. There may be little tenderness even if the mass is apparent and palpable. They also found that fever might be present or absent, and leucocytosis of varying levels is common .

Panchagnula et al. presented a rare manifestation of colon cancer in a patient with AAW abscess. It demonstrated an abscess due to the perforation of a malignant mass, as well as bacteraemia and sepsis that followed. AAW mass can be due to cellulitis (in diabetic patients) or hematoma (in anticoagulated patients after trivial trauma or chronic cough. The radiological examination of lesions of the abdominal wall helps to identify the nature of the disease. Palpation and other forms of physical examination frequently fail to specify the exact location and extent of a lesion. Forceful or repeated manipulation of abdominal wall masses should be avoided, if possible, as this might lead to rapid spread of the disease in case of malignant masses Ultrasound imaging can be used to locate lesions that are clinically assumed to be within the abdominal cavity. Weiner et al. concluded that ultrasound B mode scanning was an accurate diagnostic test that was particularly useful in demonstrating disease of the anterior abdominal wall because it had no known adverse effects. The hallmark characteristics of an AAW abscess,like mottled gas appearance and air fluid level,can be demonstrated using multiple X-ray views Further investigations using CT and MRI help to assess the extent, depth of involvement, and to rule out other causes of abdominal abscess. The most common cause of death is multiple organ failure.

The severity of the underlying cause, a delayed diagnosis, poor drainage, and undetected foci of infection in the peritoneal cavity or elsewhere are all linked to death. These imaging modalities for diagnosing and draining intra-abdominal abscesses have resulted in a significant decrease in mortality.Hence the advancement in diagnostic imaging like ultrasound, CT, MRI allow non invasive examination of anterior abdominal wall abscess complementing the clinical evaluation of patient.

CONCLUSION

This article underlined the need for early detection and attribution of such an atypical finding to colorectal cancer as a differential diagnosis to prevent patient mortality due to sepsis in the hospital setting. If the abscess is accompanied by bowel symptoms, colonic carcinoma should be included in the differential diagnosis.

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