Spontaneous abdominal wall abscess mimicking urachal malignancy

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Abstract

Introduction

An abdominal wall abscess is a rare entity that can present as an acute abdomen. There are many possible aetiologies for an abdominal wall abscess. In general, there is an underlying lesion such as a malignancy or intra-abdominal inflammatory condition, which partially explains why spontaneous abdominal wall abscesses are rare. Here, we present a rare case of a spontaneous abdominal wall abscess mimicking an urachal malignancy.

Case report

A 55 year-old man was referred, complaining of lower abdominal distention and fever. On physical examination, he had a healed scar in the lower abdominal midline, which was distended and erythematous with tenderness to palpation. A contrast enhanced abdominal computed tomography (CT) scan was obtained, which revealed a lower abdominal wall abscess surrounded by an enhancing capsule. Due to the possibility of an urachal malignancy, we performed an exploratory operation. The intra-operative findings were unremarkable and finally diagnosed as spontaneous abdominal wall abscess.

Conclusion

Although rare, an abdominal wall abscess is an important entity for surgeons, and a thorough evaluation to determine the underlying cause is mandatory.

Introduction

Abdominal wall abscess is an uncommon condition. The aetiologic factors associated with abdominal wall abscesses are wide-ranging. Goodman and Raval reported that an abdominal wall abscess usually results from a postsurgical wound infection or extension of an intra-abdominal abscess1. Intra-abdominal malignant diseases or an abscess of an urachal remnant can also present as an abdominal wall abscess2-4. However, spontaneous abdominal wall abscess is quite rare. We present a case of a spontaneous abdominal wall abscess mimicking an urachal malignancy.

Case report

A 55 year-old man was referred, complaining of lower abdominal distention and fever. Two weeks prior to admission, he noted general fatigue and a decreased appetite. He also felt lower abdominal distention, which had gradually increased.

One week prior to admission, he visited his general practitioner, who prescribed non-steroidal anti-inflammatory drugs but his fever persisted. Four days prior to admission, he visited another hospital and was treated with antibiotics. However, his symptoms persisted. His lower abdominal skin became erythematous, associated with tenderness to palpation, and he was referred to our hospital for further investigation. He had a history of rectal cancer 14 years before (T2N0M0 Stage 1) and underwent appendectomy 40 years previously.

On admission, his temperature was 39.0°C. On physical examination, he had a healed scar in the lower abdominal midline, which was distended and erythematous with tenderness to palpation. A contrast enhanced abdominal computed tomography (CT) scan was obtained, which revealed a lower abdominal wall abscess surrounded by an enhancing capsule (Figure 1). The radiologist suggested the possibility of urachal malignancy, based on the CT scan findings. We inserted a pig-tail catheter into the abscess cavity for drainage and began antibiotic therapy. A follow-up CT scan was obtained with dye directly injected into the abscess cavity, which showed no evidence of a fistula between the abscess cavity and the umbilicus, bladder, or intestine. (Figure 2) Cystoscopy was performed with no abnormalities seen. The drained pus was evaluated for cytology and was negative for malignancy. On the eighth hospital day, a follow-up CT scan was obtained which revealed no remnant of the abscess cavity and we removed the drainage catheter.

There was no evidence of recurrent rectal cancer on any study. We could not obtain evidence of an urachal remnant. Due to the possibility of an urachal malignancy, we performed an exploratory operation three months later. The intra-operative findings were unremarkable and there was no evidence of an urachal remnant or suture abscesses.

Discussion

The causes of abdominal wall abscess are very varied and include malignant diseases such as colon cancer, inflammatory diseases such as acute cholecystitis, acute appendicitis, and diverticulitis, retained gallstones, retained clips or suture material, foreign bodies such as fish bone, endometriosis, actinomycosis, and urachal remnants2,3,4,5,6,7.

Tamura et al. reviewed 53 cases of abdominal wall abscesses in the Japanese literature and reported just three (6%) spontaneous abdominal wall abscesses5. Thirty-one cases (61%) were due to malignant diseases, followed by inflammatory diseases such as acute appendicitis. The present patient had a previous history of rectal cancer although there was no evidence...
of recurrent disease found on CT scan, colonoscopy, or at laparotomy. Some case reports have described abdominal wall abscesses occurring several years after surgery due to gallstones. Another report described a case of a suture granuloma 12 years after open appendectomy.

The elapsed time from a previous operation might not affect the occurrence of this complication. In the present patient, the etiologic factor still remains unknown. He had a history of abdominal surgery 14 years before, so this could have represented a stitch abscess. However, during the surgical exploration, no stitches or other retained material was present.

An infected urachal remnant can present similarly to an abdominal wall abscess. In the present patient, although there was nothing specific to suggest a urachal remnant such as umbilical discharge or haematuria, the fact that the abscess was located in the lower abdominal midline was suggestive of a urachal remnant. Furthermore, the size of the abscess was large, suggesting a malignancy.

The risk of urachal malignancy in adults is high and the prognosis is poor. Ashley et al reported that 51% of 130 adult patients with an urachal remnant contained malignancy. In patients with an abdominal wall abscess located in the lower midline, the possibility of a urachal malignancy, surgical intervention should be considered.

Appropriate treatment of an abdominal wall abscess depends on the aetiology. When foreign bodies exist, they should be removed. If there is a malignancy present, definitive treatment is indicated. However, in cases where an infection is present, percutaneous drainage and subsequent surgical drainage are considered to be most effective.

**Conclusion**

Spontaneous abdominal wall abscesses are rare. The differential diagnosis of abdominal wall abscesses includes many possible aetiologies. Malignancies are a well-known cause, suggesting the need for a thorough diagnostic evaluation.

**Figure 1:** Abdominal computed tomography scan revealed an abscess in the abdominal wall.

**Figure 2:** Abdominal computed tomography scans (axial and sagittal views) with contrast material in the abscess cavity. There was no evidence of a fistula between the abscess cavity and umbilicus or bladder.

**Consent**

Written informed consent was 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.

**References**