Case Report

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An interesting case of subdiagphragmatic cold abscess: a case report

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ABSTRACT

Subdiaphragmatic abscess is rather common itself but a tubercular subdiaphragmatic abscess in the absence of coexisting tuberculous abdomen presenting as thoracic complication is extremely rare. A cold abscess is an abscess that commonly accompanies tuberculosis. It develops so slowly that there is little inflammation and it becomes painful only when there is pressure on the surrounding area. Here we report a case of isolated subdiagphragmatic tuberculous cold abscess in a 38-year-old female whose imaging of the abdomen revealed a hyperechogenic area involving segment 7 of liver adherent to rib cage and diaphragm, S/O ruptured liver abscess, subdiagphragmatic abscess. The pus drained from the abscess cavity at diagnostic laparoscopy proved Multidrug Resistant Tuberculosis. This case has been reported for the rarity of isolated subdiaphragmatic tuberculous abscess and the importance of microscopic or culture diagnosis in a suspected case of tuberculous abscess.

Keywords: ATT, Cold abscess, Gene expert, Subdiaphragmatic abscess, Tuberculosis

INTRODUCTION

Subdiaphragmatic abscess is a disease which is difficult to diagnose and is frequently confused with pyogenic or amoebic liver abscess. Tuberculous abscess is usually associated with foci of infection either in the lung and or gastrointestinal tract or with an immunocompromised state. Skeletal muscles are rarely involved in tuberculosis even in patients with widespread involvement of the disease. Tuberculosis can involve skeletal muscle by extension from bone, synovial lining of joints, or tendon sheaths; by direct inoculation; and by haematogenous dissemination. A few cases with intraperitoneal tuberculous abscesses have been previously reported, whereas diaphragmatic tuberculous abscess (DTA) is particularly rare. ²

CASE REPORT

A 38-year-old female came to our OPD with complaints of pain right upper abdomen and costal margin over the past

2 years on and off for which she was evaluated in a tertiary care hospital. Imaging with CECT was done which showed chest wall cyst for which she underwent incision and drainage under local anesthesia. Pus cultures were positive for AFB and patient was started on ATT and continued for 9 months. Patient improved and was asymptomatic during the course of ATT. 3 months later, she developed the same of pricking type of pain in right hypochondrium and came to us for further expert management. She was evaluated with USG and CT which showed a 3 × 3 cms hyperechogenic area involving segment 7 of liver adherent to rib cage and diaphragm S/O Ruptured liver abscess Subdiagphragmatic abscess. On a provisional diagnosis of subdiaphragmatic abscess TB relapse, diagnostic laparoscopy was planned which revealed a 3 × 3 cms loculated abscess adherent to the ribcage without any contact with the liver.

On exploring the abscess, thick caseating material was evident confirming it to be cold abscess. The cavity was thoroughly drained and cauterized. Pus, tissue debris was sent for cultures, gene expert and histopathalogical examination.



Figure 1: Laparoscopic view of subdiaphragmatic cold abscess.

HPE proved extensive granulomatous inflammation with Langhan's giant cells S/O Tuberculosis. Gene expert confirmed Multidrug resistant tuberculosis. Patient was started on MDR regimen ATT and followed up. Patient improved well. On follow up of 2 years, patient is asymptomatic with no evidence of relapse on imaging.

DISCUSSION

The incidence of primary muscular tuberculosis was reported as 0.015% by Petter.¹ The possible explanation for the rarity of muscle involvement in tuberculosis may be high lactic acid content, lack of reticulo-endothelial tissue in muscle, lack of lymphatic tissue, the abundant blood supply and the highly differentiated state of muscle tissue.3 Individuals with other systemic diseases like HIV infection, cirrhosis, diabetes, malignancy, and those receiving continuous ambulatory peritoneal dialysis are at high risk for tuberculous peritonitis. Low socioeconomic status is a major contributing factor.⁴ The symptoms and signs of tuberculous abscess are non-specific and include fever, vague abdominal pain, anorexia and weight loss. Confirmation of the diagnosis depends on demonstration of acid-fast bacilli (AFB) in the aspirated pus, pus culture showing Mycobacterium Tuberculosis, positive ELISA and PCR for Mycobacterium Tuberculosis. AFB is most easily found in caseous necrotic material but even the absence of AFB should not detract from diagnosis, especially in a high TB prevalence country such as ours, as is evident from some other studies.⁵ Anti tubercular therapy alone or percutaneous aspiration along with antitubercular therapy are the preferred therapeutic options.⁶ Quadruple therapy with antitubercular drugs is recommended for 1 year. 7 Surgery is reserved for cases in which percutaneous aspiration is not successful or not possible because of site and multiseptate nature of the abscess.⁸

CONCLUSION

In conclusion, isolated tubercular subdiaphragmatic abscess, although very rare, should always be considered in the differential diagnosis of atypical abscesses. Symptoms and radiological findings of the disease are commonly nonspecific, and the ultimate diagnosis depends upon the demonstration of AFB in pus, aspirate or biopsy specimen or the necrotic tissue. Gene expert is mandatory to identify and treat multidrug resistant tuberculosis.

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