

CLINICAL IMAGE

Tuberculous pleuroperitonitis

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Abstract

An 83-year-old man was diagnosed with tuberculous pleuroperitonitis on a thoracoscopic pleural biopsy. It may be due to endogenous reactivation of the foci in the pleura and peritoneum. Thoracoscopy, which can be performed under local anesthesia, should be considered when both pleural effusion and ascites are present.

KEYWORDS

ascites, pleural effusion, thoracoscopy, tuberculosis

1 | CASE PRESENTATION

An 83-year-old man presented with low-grade fever and anorexia. Computed tomography revealed left pleural effusion and minor ascites (Figure 1). Pleural fluid showed elevated adenosine deaminase (115.3 U/L); however, the pleural fluid culture was negative for *Mycobacterium tuberculosis* (TB). Thoracoscopy revealed multiple granular protruding lesions in the pleura, and epithelioid granulomas were confirmed pathologically (Figure 2). Pleural tissue culture was positive for TB, and anti-TB therapy, consisting of isoniazid, rifampicin, and ethambutol, improved chest and abdominal imaging findings.

2 | DISCUSSION AND CONCLUSION

This case proves two important clinical points. First, there are complicated cases of tuberculous peritonitis (TBP) and pleuritis. TBP is relatively rare, with a reported incidence of 0.1–0.7% among all forms of TB, and pleural effusions develop in 12–63% of patients.^{1,2}

Second, a thoracoscopic pleural biopsy is effective, even in the presence of concomitant ascites. Since the culture of both pleural effusion and ascites has low sensitivity, histological confirmation of granulomas is important for the diagnosis of TB. Although most reports of TBP are made by laparoscopy, it is invasive and requires general

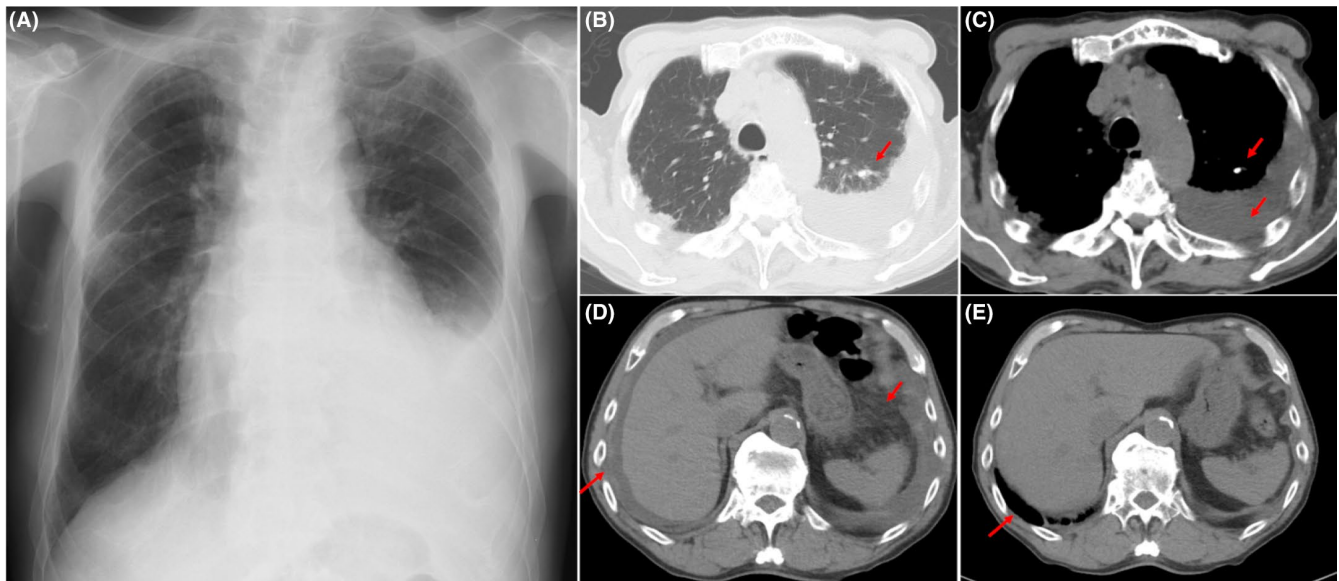


FIGURE 1 Chest radiograph shows the left pleural effusion and mild thickening of the minor fissure (A). Chest computed tomography (CT) reveals a calcified nodule in the upper lobe of the left lung and left pleural effusion (B, C). Abdominal CT reveals minor ascites, irregular thickening of the peritoneum, and thickened mesenteric soft tissue (D). Abdominal CT after 2 months of antituberculosis treatment reveals no ascites (E)

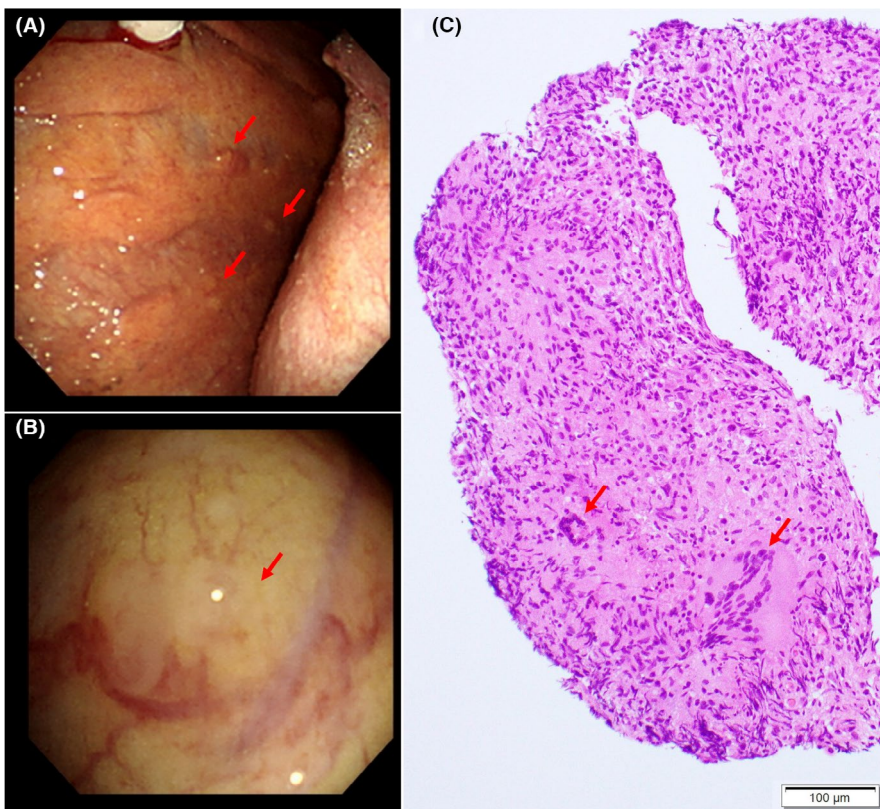


FIGURE 2 Thoracoscopy performed under local anesthesia shows multiple granular protruding lesions in the pleura (A, B). Pleural biopsy revealing epithelioid granulomatosis with multinucleated giant cells (arrows) (hematoxylin and eosin stain) (C). Although staining for *Mycobacterium tuberculosis* (TB) of the pleural tissue is negative, pleural tissue culture is positive for TB

anesthesia. Thoracoscopy, which can be performed under local anesthesia, should be considered when both pleural effusion and ascites are present.

ACKNOWLEDGMENTS

None.

CONFLICT OF INTEREST

None.

AUTHOR CONTRIBUTIONS

M.M. and A.O. wrote the initial draft of the manuscript. A.O. was responsible for the drafting and image modification. A.O. and N. Y. performed the thoracoscopy. All authors read and approved the final manuscript.

CONSENT

Written informed consent to publish this report was obtained from the patient before the submission process.

DATA AVAILABILITY STATEMENT

No datasets were generated or analyzed during this case report.

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