

Letter: Think (and tap) Thrice before Diagnosing Tuberculous Peritonitis by Ascitic Adenosine Deaminase Alone

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Editors

We read with interest the commentary by Dalal et al regarding the use of ascitic adenosine deaminase (ADA) for diagnosing peritoneal tuberculosis.¹ A 37-year-old male who never consumed alcohol presented with abdominal pain and progressive abdominal distension for the last 3 months. He had anorexia, weight loss, but denied a history of fever, altered bowel habits, or gastrointestinal bleeding. On examination, he was cachexic (body mass index: 16.8 kg/m²) and pale, with no features suggestive of chronic liver disease. He had gross tense ascites, which was confirmed with ultrasonography. Contrast-enhanced computed tomography of the abdomen revealed gross ascites (►Fig. 1A) with thickened and enhanced peritoneum and

thickening of the ileocecal region (►Fig. 1B) and multiple mildly enhancing mesenteric, ileocolic, gastro hepatic, and lesser omentum lymph nodes. His ascitic fluid analysis revealed low serum-ascites albumin gradient (SAAG; 0.8 mg/dL) ascites with ADA of 37 IU/L. Cultures for mycobacterium tuberculosis and Xpert Mtb/Rif were negative. Anti-tuberculous therapy was started in view of high ADA and low SAAG ascites. His initial ascitic fluid cytology for malignant cells was negative, but the second analysis showed the presence of atypical cells. A colonoscopy showed growth in the caecum, with a biopsy showing adenocarcinoma of the caecum.

Although ADA levels have shown high sensitivity (100%) and specificity (97%) using cutoff values from 36 to 40 IU/L

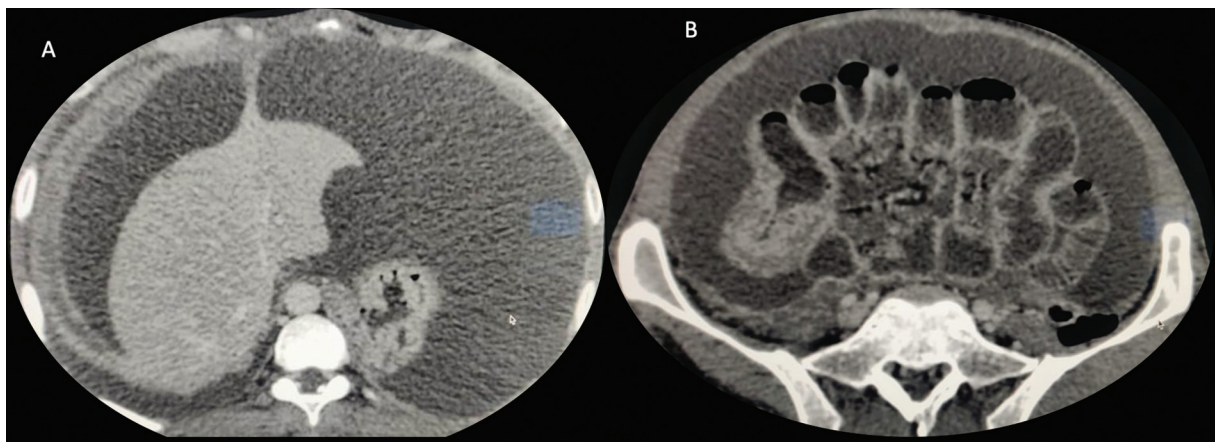


Fig. 1 Computed tomography showing (A) ascites with (B) thickened bowel loops.

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for the diagnosis of peritoneal tuberculosis, false positives have been reported.² Reported causes of false-positive elevation of ADA are peritoneal carcinomatosis, lymphoma, and other conditions.¹ Therefore, it has been suggested that in cases the diagnosis of tuberculous peritonitis is based solely on elevated ADA in ascitic fluid (in the absence of microbiological positivity), abdominal paracentesis should be sent for malignant cytology at least thrice.^{3,4}

Data Availability

No additional data are associated with this submission.

Informed Consent

Consent to publish was obtained from the patient.

Conflict of interest

None.

References

- 1 Dalal A. Evidence based commentary: ascitic adenosine deaminase in the diagnosis of peritoneal tuberculosis. *J Gastrointest Infect* 2022;12:57–60
- 2 Shen YC, Wang T, Chen L, et al. Diagnostic accuracy of adenosine deaminase for tuberculous peritonitis: a meta-analysis. *Arch Med Sci* 2013;9(04):601–607
- 3 Sharma V Peritoneal tuberculosis. Accessed January 20, 2023 at: https://www.clinicalkey.com/now/in/content/76-s2.0-in_en_peritoneal_tuberculosis
- 4 Ahamed ZR, Shah J, Agarwala R, et al. Controversies in classification of peritoneal tuberculosis and a proposal for clinico-radiological classification. *Expert Rev Anti Infect Ther* 2019;17(08):547–555