

Case Report on Gall Bladder Malignancy with Tuberculosis

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Abstract:

Introduction: In an endemic area, gallbladder tuberculosis is a frequent infectious aetiology affecting an uncommon organ. The high prevalence of carcinoma gallbladder in tuberculosis infected areas, such as India, creates diagnostic challenges. The gallbladder is a hollow organ located beneath the liver's right lobe. The form of the gall bladder is similar to that of a taper sac. The gallbladder is a tiny organ that stores bile. Although gall bladder tuberculosis is uncommon and treatable, it might be confused with other clinical diagnoses, such as carcinoma tuberculosis of the gall bladder, which can mirror cancer clinically. Gall bladder tuberculosis is extremely rare. Symptoms include severe stomach pain, pain that may extend beneath the right shoulder blade or to the back and pain that lasts for many days.

Clinical Finding: Abdominal discomfort, Losing weight, Consistent ache in upper right abdomen, stomach ache, Dyspepsia is a digestive disorder (gas), bilious vomit, bilious vomit, bilious vomit, Deficiency, Appetite loss. Losing weight, Obstruction causes jaundice and vomiting.

Diagnostic Evaluation: Chemotherapy and Radiation Therapy, TLC-16,200, Platelet-15000, MCV-67.0, Bilirubin-0.7, Hemoglobin-12.2GM%, WBC-15,580, TLC-16,200

Therapeutic Intervention: Syp. Oroferxy 2tsp BD, Syp. lypisyme 2tsp TDS, Protein Powder 2tsp TDS, Cap. Becolin OD

Outcome:: Painkillers for the stomach, Losing weight, Consistent ache in upper right abdomen, Dyspepsia, indigestion (gas), bilious vomit, bilious vomit, bilious vomit, Deficiency, Appetite loss. Loss of weight. The patient's condition has stabilized and is currently being closely followed.

Conclusion: The patient has been admitted to AVBRH's Surgery Department, where he will continue to receive medical and nursing care. His status is stable and being closely watched.

Keywords: Gallbladder Cancer, Polyps, Gallbladder, Pseudo Polyps, True Polyps, Tuberculosis

INTRODUCTION:

Gallbladder tuberculosis is quite uncommon.¹ Gaucher reported the first case of gall bladder tuberculosis in 1870.² A presumed cancer gallbladder tumour may occasionally turn out to be TB.³ Because radiographic examinations sometimes fail to distinguish between the two, postoperative histopathological evaluation is the diagnostic technique.⁴ In Pakistan, tuberculosis is fairly common. As a result, the incidence of gallbladder tuberculosis is likely to be higher than that reported in the Western literature. In cases of gallbladder mass where malignancy is not proven preoperatively, TB of the gallbladder should be investigated. Gallbladder tuberculosis (GT) is a very uncommon disease. Hematogenous tuberculosis or other intra-abdominal tuberculoses are the most common infections in the gallbladder.^{5,6} It's rare to have a correct preoperative diagnosis of GT, which might be difficult to distinguish from other gallbladder illnesses. Since Gaucher described the first incidence of GT in 1870.⁷

In the literature, just a few examples have been described. We provide a case of a patient who had surgery after a computed tomography (CT) scan revealed a preoperative diagnosis of gallbladder cancer. We also stress the necessity of distinguishing between two or more diseases with similar indications or symptoms. Infection with tuberculosis has been studied as a possible cause of cancer. TB has lately been linked to the development of pyothorax-associated lymphoma (PAL) in this regard.^{8,9} This lends credence to the well-documented formation of malignant tumours in the peripheral lungs at the site of scars left over from old-healed mycobacterial infections. However, one study found that having a history of tuberculosis was only coincidental with the development of cancer.¹⁰

Notably, malignancies and the medicines used to treat them appear to produce the ideal environment for the reactivation of a latent tuberculosis infection or, in rare cases, the acquisition of a primary mycobacterial infection. Mycobacterial infections are linked to immunosuppression, particularly the suppression of T-cell defensive mechanisms. The majority of leukemias and lymphomas are linked.^{11,12}

When two more variables are taken into account, the association between tuberculosis and malignancy becomes much more difficult to understand. First, multiple investigations have shown that tuberculosis inflammatory alterations and malignant cells coexist in tissue biopsies. Furthermore, despite the fact that novel radiological imaging studies such as combined PET and computed tomography. Despite the fact that tuberculosis and cancer are both highly frequent diseases, the pathophysiological and practical implications of their coexistence have received little attention. We wanted to look over the research and find data on the link between tuberculosis and cancer in order to bring attention to under-appreciated parts of this link and possibly extract clinically important information.

Patient Information:

On May 8, 2021, a 65-year-old male patient was admitted to AVBRH with complaints of vomit, weakness, loss of appetite, weight loss, jaundice and vomiting, indigestion and dyspepsia, and certain investigations with gall bladder malignancy were performed, including radiotherapy, MRI, CT scan, and other tests.

Family history: The family consists of six members. Everyone in my patient's family is in wonderful health, with the exception of my patient, who was admitted to the hospital. The other members did not have any health issues.

Past history: .There is no relevant medical or surgical history for the patient.

Clinical finding: Abdominal pain, Losing weight, Consistent ache in upper right abdomen, stomach ache, Dyspepsia is a digestive disorder (gas), bilious vomit, bilious vomit, bilious vomit, Deficiency, Appetite loss. Losing weight, Obstruction causes jaundice and vomiting.

Physical Examination: My patient is experiencing body redness, Necrosis on stomach, and dry mouth.

Diagnostic assessment: TLC:-16, 200, PLT:-15, 000, MCV:-67.0, HB-.12.2, Total Wbc count -15580, TLC:-16, 200, PLT:-15, 000, MCV:-67.0SR. BILIRUBIN:-0.7, SR. BILIRUBIN:-0.7, SR. BILIRUB Renal function test and liver function test.

Therapeutic Intervention :- Inj .Manintol100ml STAT, Inj.Levipril 1gm STAT, InjPcm 100ml STAT, Inj Pan 40mg STAT, Tab Amlodepine 5mg STAT, InjLabetatol 100mg, Inj.Cefrixone 2mg BD, Inj.Emset 4mg SOS

Discussion:

The growth of tubercle bacillus is inhibited by the high alkalinity of bile and bile acids, hence GBTB is uncommon. However, GBTB is predisposed to by cystic duct obstruction, which results in low bile acid concentration and injury to the gallbladder mucosa. By hematogenous or lymphatic spread from neighboring positive foci, serosal spread from a peritoneal lesion, or canalicular dissemination, tuberculosis can affect the gallbladder.¹³

The obstruction of the cystic duct in this case most certainly made tuberculosis more prevalent. Furthermore, cholelithiasis, which acts as a Indus for the development of TB, has been documented in nearly two-thirds of GBTB patients, but not in our case. In immunocompromised individuals, GBTB can manifest in a variety of ways as a component of miliary or disseminated abdominal TB.¹⁴

Despite sophisticated imaging modalities, GBTB provides a diagnostic difficulty prior to surgery, resulting in missed diagnoses. Thickened gallbladder wall, nodular lesion with homogenous enhancement, calcify flecks, and necrosis can all be seen on contrast-enhanced computed tomography imaging of GBTB.¹⁵

The literature on magnetic resonance imaging (MRI) for biliary TB is limited and largely describes biliary strictures. We believe that T2 hypo intense nature, diffusion limitation, and peripheral augmentation of soft-tissue thickening could have been a clue for a differential of biliary TB based on a retrospective examination of MRI results in this patient. The diagnosis of gallbladder cancer with periodical dissemination was made because biliary tumours with sclerosing components often have comparable

characteristics. All of these features are well characterized for hepatic tuberculomas, we believe. ¹⁶ as proven in our situation can be extrapolated to biliary tubercular lesions. In a contrast-enhanced CT scan, the micro nodular type is identified by a polypoid or micro nodular lesion with a uniformly increased gallbladder wall. The thickened-wall kind of GT is the most prevalent, and it's often mistaken as GC or cholecystitis. ¹⁷. The mass-forming type's CT presentation is comparable to the GC, which displays flecked calcification of the gallbladder wall. ¹⁸. A number of studies on extrapulmonary tuberculosis were reported¹⁹⁻²³. Few of the complicated cases were reviewed²⁴⁻²⁷. To differentiate gallbladder tuberculosis from XGC and gallbladder cancer, a tissue mass with multicentre necrosis or multiple calcifications on enhanced CT scan may be relevant.

Conclusion:

Gallbladder tuberculosis looks like gallbladder cancer. A differential diagnosis of gallbladder tuberculosis should be explored in individuals with gallbladder masses who have a history of tuberculosis or who come from endemic areas. Antitubercular medication should be given to all individuals who test positive for acid fast bacilli. Anti tubercular medications should be customized to the patient's specific needs. In individuals with histological findings indicative of tuberculosis but no acid fast bacilli, antitubercular treatment should be explored in the presence of risk factors. Gallbladder TB manifests itself in a variety of ways on CT, and the increased CT findings correlate well with pathological characteristics. A gallbladder wall with uneven thickening or a gallbladder with a gallbladder with a gallbladder with a gallbladder. A history of TB or concurrent tuberculosis in other locations may help to diagnose biliary tuberculosis. Following surgery, antitubercular medication is critical for preventing future spread.

References:

1. Bergdahl L, Boquist L. Tuberculosis of the gall-bladder. *Journal of British Surgery*. 1972 Apr;59(4):289-92.
2. Saluja SS, Ray S, Pal S, Kukeraja M, Srivastava DN, Sahni P, Chattopadhyay TK. Hepatobiliary and pancreatic tuberculosis: a two decade experience. *BMC surgery*. 2007 Dec;7(1):1-9.
3. Rejab H, Guirat A, Ellouze S, Trigui A, Mizouni A, Triki H. Primitive gallbladder tuberculosis: a case report with review of the literature. *Ann Ital Chir*. 2013 Feb 5;84:1-3.
4. Kumar K, Ayub M, Kumar M, Keswani NK, Shukla HS. Tuberculosis of the gallbladder. *HPB Surgery*. 2000;11(6):401-4.
5. Chen CH, Yang CC, Yeh YH, Yang JC, Chou DA. Pancreatic tuberculosis with obstructive jaundice—a case report. *The American journal of gastroenterology*. 1999 Sep 1;94(9):2534-6.
6. Blumgart LH. Liver resection-liver and biliary tumors. *Surgery of the liver and the biliary tract*. 1994.
7. Bergdahl L, Boquist L. Tuberculosis of the gall-bladder. *Journal of British Surgery*. 1972 Apr;59(4):289-92.
8. Aozasa K. Pyothorax-associated lymphoma. *Journal of clinical and experimental hematopathology*. 2006;46(1):5-10.

9. Aozasa K, Takakuwa T, Nakatsuka SI. Pyothorax-associated lymphoma: a lymphoma developing in chronic inflammation. *Advances in anatomic pathology*. 2005 Nov 1;12(6):324-31.
10. Kung IT, Lui IO, Loke SL, Khin MA, Mok CK, Lam WK, So SY. Pulmonary scar cancer. A pathologic reappraisal. *The American journal of surgical pathology*. 1985 Jun 1;9(6):391-400.
11. Karnak D, Kayacan O, Beder S. Reactivation of pulmonary tuberculosis in malignancy. *Tumori Journal*. 2002 May;88(3):251-4.
12. Silva FA, Matos JO, de Mello QF, Nucci M. Risk factors for and attributable mortality from tuberculosis in patients with hematologic malignancies. *Haematologica*. 2005 Jan 1;90(8):1110-5.
13. Abu-Zidan FM, Zayat I. Gallbladder tuberculosis (case report and review of the literature). *Hepato-gastroenterology*. 1999 Sep 1;46(29):2804-6.
14. Kapoor S, Sewkani A, Naik S, Sharma S, Jain A, Varshney S. Myriad presentations of gall bladder tuberculosis.
15. Xu XF, Yu RS, Qiu LL, Shen J, Dong F, Chen Y. Gallbladder tuberculosis: CT findings with histopathologic correlation. *Korean journal of radiology*. 2011 Mar;12(2):196.
16. Karaosmanoglu AD, Onur MR, Sahani DV, Tabari A, Karcaaltincaba M. Hepatobiliary tuberculosis: imaging findings. *American Journal of Roentgenology*. 2016 Oct;207(4):694-704.
17. Saluja SS, Ray S, Pal S, Kukeraja M, Srivastava DN, Sahni P, Chattopadhyay TK. Hepatobiliary and pancreatic tuberculosis: a two decade experience. *BMC surgery*. 2007 Dec;7(1):1-9.
18. Ben RJ, Young T, Lee HS. Hepatobiliary tuberculosis presenting as a gall bladder tumor. *Scandinavian journal of infectious diseases*. 1995 Jan 1;27(4):415-7.
19. Singhal, Sameer, Abhay M. Gaidhane, Nazli Khatib, Tripti Srivatsava, Sanjay Diwan, Satish N. Mahajan, Shilpa Bawankhule, and Quazi Syed Zahiruddin. "Use of Flexible Bronchoscopy for Rapid Diagnosis of Suspected Tubercular Cases in Rural India." *JOURNAL OF INFECTION IN DEVELOPING COUNTRIES* 3, no. 11 (December 2009): 860–64. <https://doi.org/10.3855/jidc.608>.
20. Rashmi, S., Jajoo, S.N., Belsare, A., 2019. Assessment of correlation between clinical examination and investigations with outcome in cases of abdominal malignancy. *International Journal of Pharmaceutical Research* 11, 1465–1468. <https://doi.org/10.31838/ijpr/2019.11.03.163>
21. Sharma, S.K., Mohan, A., 2019. Extrapulmonary tuberculosis, Mycobacterium Tuberculosis: Molecular Infection Biology, Pathogenesis, Diagnostics and New Interventions. https://doi.org/10.1007/978-981-32-9413-4_4
22. Sharma, S.K., Tripathi, M., 2020. Addison's disease due to histoplasmosis of bilateral adrenal glands in a previously treated extrapulmonary tuberculosis case. *Indian Journal of Medical Research* 152, 1–3. https://doi.org/10.4103/ijmr.IJMR_2424_19
23. Swarnkar, K., Gaikwad, S., Uke, P., Joshi, M., 2020. Systemic lupus erythematosus in an adolescent male as tuberculosis mimic. *Journal of Datta Meghe Institute of Medical Sciences University* 15, 698–701. https://doi.org/10.4103/jdmimsu.jdmimsu_259_20
24. Yadav, V., Kapoor, A., Naqvi, W.M., 2020a. A rare case report on post tuberculosis sequelae with right ventricular failure in young adult and the positive impact of cardio-pulmonary rehabilitation on

- functional independence. *International Journal of Pharmaceutical Research* 12, 1125–1130. <https://doi.org/10.31838/ijpr/2020.SP1.170>
25. Dakhode, S., Muntode, P., Gaidhane, A., 2019. A cross sectional assessment of tuberculosis (Tb) related knowledge and awareness among urban slum dwellers in wardha district. *Indian Journal of Public Health Research and Development* 10, 165–170. <https://doi.org/10.37506/v10/i12/2019/ijphrd/192684>
26. Garg, S., Vagha, S., Khedkar, S.S., 2019. Correlation of clinical presentation, histopathology and polymerase chain reaction for diagnosis of genital tuberculosis at rural hospital. *International Journal of Pharmaceutical Research* 11, 1198–1202. <https://doi.org/10.31838/ijpr/2019.11.01.212>
27. Lamture, Y.R., Dilip, G., Mundada, A., 2020b. A rare case report of isolated tuberculous caecal perforation presented as acute appendicitis. *Indian Journal of Forensic Medicine and Toxicology* 14, 6233–6236. <https://doi.org/10.37506/ijfmt.v14i4.12575>