

Case Report

Nodular Hepatic Tuberculosis Masquerading as a Seminoma Liver Metastasis

Housseem Harbi, MD¹; Amine Chaabouni, MD¹; Rim Kallel, MD²; Nozha Toumi, MD³; Sami Fendri, MD¹; Jihene Krichene, MD¹; Salah Boujelbene, MD¹; Rafik Mzali, MD¹

¹Department of General Surgery, Habib Bourguiba Hospital of Sfax, Sfax, Tunisia

²Anatomo-pathology Department, Habib Bourguiba Hospital of Sfax, Sfax, Tunisia

³Radiology Department, Habib Bourguiba Hospital of Sfax, Sfax, Tunisia

Abstract

Isolated macro-nodular liver tuberculosis is a very rare condition. It may mimic primitive or secondary tumors of the liver. This could delay or mislead the therapeutic management. An immunocompetent 48-year-old man with a history of non-metastatic seminoma was treated with right orchidectomy followed by 20 Gy radiotherapy. The discovery, 8 months later, of a 2 cm nodule of the hepatic dome evoked a liver metastasis. Percutaneous biopsy was not feasible. Wedge resection was performed whereas medical treatment would have sufficed, as pathologic examination of the resected specimen showed a macro-nodular hepatic tuberculosis. The patient received anti-tuberculosis drugs for 9 months. The diagnosis of isolated macro-nodular liver tuberculosis is frequently misleading, particularly in immunocompetent and paucisymptomatic patients. Thus percutaneous biopsy is mandatory for diagnosis and also prior to any major surgeries.

Keywords: Liver, Nodular, Tuberculosis

Cite this article as: Harbi H, Chaabouni A, Kallel R, Toumi N, Fendri S, Krichene J, et al. Nodular hepatic tuberculosis masquerading as a seminoma liver metastasis. Arch Iran Med. 2018;21(4):180–182.

Received: October 11, 2017, Accepted: January 17, 2018, ePublished: April 1, 2018

Introduction

Liver tuberculosis is still a very rare condition despite the recrudescence of both pulmonary and extra-pulmonary tuberculosis during the last 2 decades. We report herein a case of isolated macro-nodular pseudo-tumoral liver tuberculosis wrongly taken for seminoma hepatic metastasis.

Case Report

A 48-year-old man with no medical history had a right orchidectomy for non-metastatic seminoma and then received 20 Gy of radiotherapy. Eight months later, he presented a mild right hypochondrium pain with asthenia, unmeasured weight loss and sometimes a low-grade fever. Abdominal CT-scan showed a hypo-dense sub-capsular 3 cm liver nodule highly suspected to be a seminoma liver metastasis (Figure 1 white arrow). However, tumor markers (alpha-fetoprotein, human chorionic gonadotropin, carcinoembryonic antigen and CA 19-9) were at normal levels and scrotal ultrasound control did not show any cancer recurrence. Percutaneous biopsy of the hepatic nodule, prior to surgery, was not feasible for this tissular lesion, because it was lying in posterior side of the liver fundus in the dihedral angle between inferior vena cava and the right hepatic vein.

So the patient underwent surgery and had a wedge resection of this nodule at the cost of a wound of the right hepatic vein despite careful intra-operative Doppler ultrasound controls.

To our greatest surprise, pathologic examination of the resected specimen (Figure 2) showed a granulomatous necrotizing reaction (Figure 3 blue star) within normal hepatic parenchyma (Figure 4 yellow star). This reaction corresponds to a caseous, eosinophilic, granular and structureless necrosis (Figure 3 blue star) surrounded by epithelioid cells arranged in a lattice manner (Figure 3 green arrow), which suggested tuberculous granuloma. Moreover, few bacilli were seen with Ziehl-Neelsen staining (Figure 4 arrow, ×1000).

So diagnosis of pseudo-tumoral liver tuberculosis was made and the patient was first treated by conventional antitubercular quadruple therapy (isoniazid, rifampicin, éthambutol, and pyrazinamide) for 2 months, followed by bithérapie (isoniazid and rifampicin) for 7 months.

Discussion

Six forms of hepatic tuberculosis have been described by Levin: primary acute or chronic pulmonary tuberculosis with liver localization, miliary tuberculosis, primary hepatic tuberculosis, tuberculoma and tuberculous

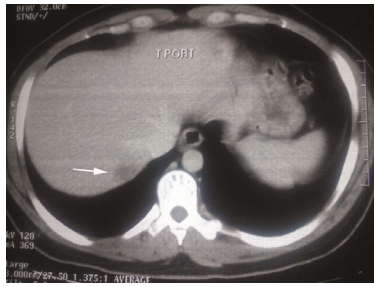


Figure 1. Abdominal CT-scan showing a hypo-dense sub-capsular 3 cm liver nodule (white arrow) lying in the dihedral angle between inferior vena cava and the right hepatic vein.

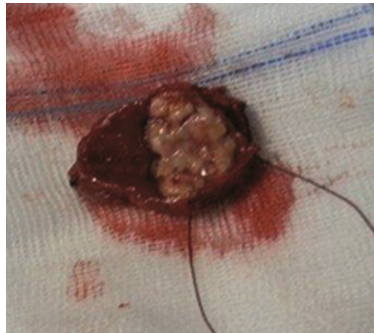


Figure 2. Resected Specimen: White Tissue-Like Subcapsular Nodule

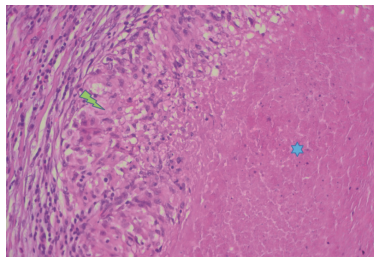


Figure 3. Anatomo-pathological section (x100 with Hematoxylin and eosin staining) of the resected specimen showing a granulomatous necrotizing reaction (blue star) within normal hepatic parenchyma (yellow).

cholangitis.¹

Isolated macro-nodular liver tuberculosis is very rare as hepatic parenchyma is not favourable to the development of mycobacteria because of the lack of oxygen. Tuberculous infection of the liver can go through hepatic artery in case of miliary tuberculosis, or through portal vein suggesting primitive intestinal contamination.^{2,3}

Liver tuberculosis is frequently associated to tuberculous infiltration of both biliary ducts (almost 40%) and hepatic lymph nodes (31%). It is worth noting that these two conditions may lead to biliary obstruction.⁴

The causes of immunodepression (corticotherapy, immunosuppressive treatment, diabetes, alcohol consumption and retroviral positive serology) should be sought systematically. Our patient didn't have any of these conditions, but he was living in an endemic

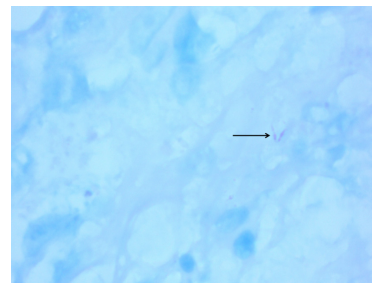


Figure 4. High-power microscopy (x400 with Ziehl-Neelsen staining) showing tuberculoid granuloma centered by caseous, eosinophilic, granular and acellular necrosis (blue star), surrounded by epithelioid cells organized in a palisade (green arrow).

country; thus tuberculous infection diagnosis could be suggested. However, he didn't suffer from concurrent lung tuberculosis, enlarged abdominal lymph nodes or calcification in both liver lesion and lymph nodes. These lesions would have made diagnosis of liver tuberculosis easier; and need for surgery would have been avoided.^{5,6}

Our anti-tuberculous protocol is the usual therapy applied by most of the authors who advocate 6 to 12 months medical treatment.⁷

The diagnosis of isolated macro-nodular liver tuberculosis is frequently misleading, particularly in immunocompetent and pauci-symptomatic patients. Thus percutaneous biopsy is mandatory for diagnosis and also prior to any major surgeries.

Authors' Contribution

HH: acquisition of data; analysis and interpretation of data; drafting of the manuscript; critical revision of the manuscript for important intellectual content. AC: acquisition of data; analysis and interpretation of data; drafting of the manuscript; critical revision of the manuscript for important intellectual content. RK: acquisition of data; analysis and interpretation of data. NT: acquisition of data; analysis and interpretation of data. SF: acquisition of data; analysis and interpretation of data. JK: acquisition of data; analysis and interpretation of data. SB: acquisition of data; analysis and interpretation of data, critical revision of the manuscript for important intellectual content. RM: acquisition of data; analysis and interpretation of data.

Conflict of Interest Disclosures

The authors have no conflicts of interest.


Ethical Statement

An informed consent was obtained from the patient. He also agreed to the publication of this case.

References

1. Dias LT, Rodrigues GC, Barbosa DS, Lacerda DC, Ruas MF. Primary nodular hepatic tuberculosis mimicking hepatic neoplasia in an immunocompetent host. *Braz J Infect Dis.* 2009;13(2):153-4.
2. Singh S, Jain P, Aggarwal G, Dhiman P, Singh S, Sen R. Primary hepatic tuberculosis: a rare but fatal clinical entity if undiagnosed. *Asian Pac J Trop Med.* 2012;5(6):498-9. doi: 10.1016/s1995-7645(12)60085-6.
3. Chong VH, Lim KS. Hepatobiliary tuberculosis. *Singapore Med J.* 2010;51(9):744-51.

4. Amarpurkar DN, Patel ND, Amarpurkar AD. Hepatobiliary tuberculosis in western India. *Indian J Pathol Microbiol.* 2008;51(2):175-81.
5. Guidi R, Bolli V, Lanza C, Biagetti C, Osimani P, de Benedictis FM. Macronodular hepatosplenic tuberculosis. *Acta Radiol Short Rep.* 2012;1(5). doi: 10.1258/arsr.2012.12-0020.
6. Kakkar C, Polnaya AM, Koteswara P, Smiti S, Rajagopal KV, Arora A. Hepatic tuberculosis: a multimodality imaging review. *Insights Imaging.* 2015;6(6):647-58. doi: 10.1007/s13244-015-0440-y.
7. Diallo I, Mbengue A, Gning SB, Amar MA, Ndiaye B, Diop Y, et al. Hepatosplenic tuberculosis simulating secondary malignant lesions with cholangitis. *BMC Res Notes.* 2016;9(1):316. doi: 10.1186/s13104-016-2091-6

 © 2018 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.