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Primary non-Hodgkin Lymphoma of the Liver Mimicking Metastases

Case Report

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Abstract

Liver is a common secondary site of lymphomatous involvement in about half of patients with non-Hodgkin lymphoma. However, primary hepatic lymphoma is extremely rare, especially when presenting with multiple discrete nodular lesions, as in this case.

A 73-year-old man presented with a one-month history of anorexia, weight loss and occasional abdominal pain. Abdominal ultrasound and computed tomography revealed multiple nodular lesions in both hepatic lobes. Total colonoscopy and gastroscopy were negative for a primary cancer site. Ultrasound-guided biopsy of the lesions showed a non-Hodgkin lymphoma of medium size B origin cells. Since no other site of lymphoma involvement was found, a primary non-Hodgkin B cell lymphoma was diagnosed. The patient received adjuvant chemotherapy and 12 months later is free of any symptoms.

Multiple nodular liver lesions in patient with anorexia and weight loss mimicking secondary metastases of unknown origin should raise the clinical suspicion for a primary hepatic lymphoma.

Key words:
Liver lesions, Liver metastases, Primary hepatic lymphoma

Introduction

Lymphoma accounts for 8% of adult cancers with 8-10% overall mortality [1]. Liver is a common secondary site of lymphomatous involvement in about half of the patients with non-Hodgkin lymphoma (NHL) [2,3]. However, primary lymphoma of the liver is not common [4]. This is a rare case of primary NHL of the liver presenting with multiple discrete nodular lesions.

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Case

A 73-year-old male patient was admitted to our surgical department with a one-month history of anorexia, apathy, weight loss and occasional abdominal pain. Patient denied any fever, night sweats, vomiting, diarrhoea or blood in his stools. His medical history included type 2 diabetes mellitus, while no previous surgery was mentioned.

Clinical examination was unremarkable with normal temperature and vital signs and no palpable lymph nodes were detected. Abnormal laboratory results included an elevated lactate dehydrogenase (LDH), with negative HIV, hepatitis B (HBV) and hepatitis C (HCV) serology. Serum alpha-fetoprotein and carcinoembryonic antigen (CEA) levels were normal. A chest x-ray was normal. The abdominal ultrasound examination demonstrated multiple hypoechoic liver lesions bilaterally. An abdominal and chest computed tomography (CT) scan showed multiple hypoattenuated liver lesions with peripheral enhancement after intravenous contrast agent injection (figure 1). Total colonoscopy and gastroscopy were negative. An ultrasound-guided fine-needle aspiration biopsy of the lesions was performed. The pathology report showed diffuse infiltration by malignant cells with immunophenotypic markers CD19 (+), CD20 (+), CD79a (+), CD30 (-), UCHL1 and CD3 (+), findings consistent with a non-Hodgkin lymphoma of medium size B cells. Bone marrow biopsy showed normal cellularity with maturing tri-lineage haematopoiesis in normal proportion. No histologic evidence of B-cell lymphoma was present.

The final diagnosis was primary B-cell lymphoma of the liver, stage IE, as no other lymphoma foci were found extrahepatically. Adjuvant chemotherapy was administered. Our patient received alternating triple-combination chemotherapy (analysed further in the discussion section) and 12 months later the patient is free of any symptoms.

Discussion

Primary hepatic lymphoma (PHL) is extremely rare, even though the liver is secondarily involved in the

late stages of lymphoma. It accounts for less than 0.4% of extranodal non-Hodgkin's lymphomas and 0.016% of all non-Hodgkin lymphomas [5]. Most published reports are case reports with the larger patient series having up to 20-30 patients over a long period. There are less than a few hundred cases reported in adults that have been published to date. In this report, we describe a PHL that presented with multiple discrete nodular liver lesions in both lobes which is not common. Despite the presence of lymphoid tissue in the hepatic parenchyma, it seems that host factors make the liver a poor environment for the development of primary lymphoid malignancy [6]. Furthermore, misdiagnosed as secondary liver metastases of unknown origin rendered differential diagnosis difficult. Ultrasound or CT-guided biopsy with fine-needle aspiration is the examination of choice. In addition, a high level of clinical suspicion must be present when gastrointestinal track endoscopy is negative for a primary site of cancer.

The exact cause of PHL is unknown, although there is a strong connection with HCV infection [7, 8]. Hepatitis C infection is present in 40-60% of patients with PHL. However, our patient was negative for hepatic viral infection. Usual age at presentation is 5th to 6th decade of life and the incidence in the male population is twice that found among females. Presenting symptoms include apathy, weight loss and occasional abdominal pain, which are not specific. An elevated LDH with normal alpha-fetoprotein and CEA, as in this case, should raise high clinical suspicion for lymphoma. PHL usually has a poor prognosis [9].

Mainstay of treatment is combination chemotherapy as reported in most series, although further investigations are required to firmly establish this approach. Our patient received alternating triple-combination chemotherapy (doxorubicin, cytosine arabinoside, methyl prednisolone and cisplatin alternating with methotrexate, cyclophosphamide, bleomycin, vincristine, doxorubicin, and methyl prednisolone and alternating with mesna, mitoxantrone, ifosfamide, and VP-16). The aforementioned regimen was used because our patient fulfilled certain pre-treatment risk criteria, namely Se LDH > 10% of normal, larger tumor mass > 7cm, and Ann Arbor Stage III disease, as set by The University of Texas M. D. Anderson Cancer Center. In any other case, a CHOP-based regimen would be administered (cyclophosphamide, doxorubicin, vincristine, and prednisone).

Surgical approach to primary hepatic lymphoma encompasses a wide range of interventions, starting from biopsy and extending to segmentectomy or even major hepatic resections. In most studies, initial approach comprises combination chemotherapy, followed by surgery and / or radiotherapy in the event of local or extrahepatic recurrence. The role of surgery in localized disease and overall, remains largely undefined since larger series are required to establish a clear benefit. However, rarity of disease presentation is not conducive to large prospective studies [6, 11].

The natural history of primary hepatic lymphoma is difficult to evaluate and has yet to be defined. Several patients survive long after treatment and die of other causes while others experience recurrent, resistant to therapy clinical courses and eventually die of the disease. It is assumed that the overall prognosis is favoured when therapy – including combination chemotherapy – is initiated early in the disease course [11].

Secondary involvement of the liver in cases of malignant lymphoma is rather common. The reported hepatic involvement in cases of patients with non-Hodgkin lymphoma ranges from 52-58%. Combination chemotherapy remains the mainstay of therapy in these cases [6, 12, 13].

Conclusion

Primary hepatic lymphoma presenting with multiple discrete nodular lesions can mimic secondary liver metastases, making diagnosis difficult. A high level of clinical suspicion must be present in order to perform a liver biopsy as soon as possible in order to begin treatment with adjuvant chemotherapy.

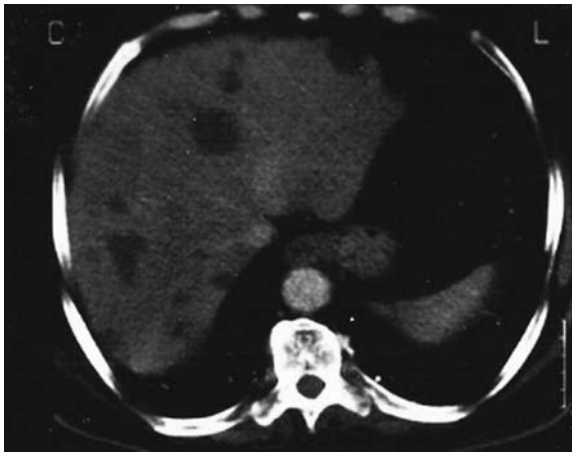

Fig. 1 Abdominal computed tomography scan showing multiple hypoattenuated lesions in both hepatic lobes.

Conflict of interest

The authors declare that they have no conflict of interest.

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Πρωτοπαθές μη - Hodgkin Λέμφωμα ήπατος Μημούμενο Δευτεροαθείς Εστίες

Ενδιαφέρουσα Περίπτωση

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Περίληψη

Εισαγωγή: Οι μισοί περίπου ασθενείς με non-Hodgkin λέμφωμα αναπτύσσουν δευτεροπαθείς εντοπίσεις στο ήπαρ. Το πρωτοπαθές ηπατικό λέμφωμα όμως είναι αρκετά σπάνιο, ιδίως όταν εμφανίζεται με τη μορφή διάχυτων, πολλαπλών, αφοτερόπλευρων εντοπίσεων στο ηπατικό παρέγχυμα.

Περιγραφή περιστατικού: Άνδρας ηλικίας 73 ετών με ιστορικό ανορεξίας, απώλειας βάρους και κοιλιακού άλγους από μηνός, εξετάσθηκε στα επείγοντα. Ο υπέρηχος και η αξονική τομογραφία κοιλίας ανέδειξαν πολλαπλά, αμφοτερόπλευρα οζώδη μορφώματα στο ήπαρ. Ο ενδοσκοπικός έλεγχος του γαστρεντερικού δεν ανέδειξε πρωτοπαθή νεοπλασματική εστία. Η βιοψία με λεπτή βελόνη υπό υπερηχογραφική καθοδήγηση των μορφωμάτων, ανέδειξε non-Hodgkin λέμφωμα από μετρίου μεγέθους Β λεμφοκύτταρα. Εφόσον, δεν ανιχνεύθηκε άλλη εστία νεοπλασίας, διαγνώσθηκε ως πρωτοπαθές non-Hodgkin λέμφωμα του ήπατος. Ο ασθενής έλαβε συμπληρωματική χημειοθεραπεία και 12 μήνες μετά, παρουσίασε ύφεση των συμπτωμάτων και ρίκνωση των ηπατικών μορφωμάτων.

Συμπέρασμα: Η παρουσία πολλαπλών ηπατικών μορφωμάτων σε ασθενή με ανορεξία και απώλεια βάρους, δεν είναι πάντοτε δευτεροπαθείς εντοπίσεις πρωτοπαθούς νεοπλάσματος. Όταν ο ενδοσκοπικός έλεγχος του πεπτικού είναι αρνητικός, θα πρέπει να εξετάζεται η σπάνια περίπτωση ανάπτυξης πρωτοπαθούς λεμφώματος του ήπατος.

Λέξεις-κλειδιά

Ηπατικά μορφώματα, Δευτεροπαθείς εντοπίσεις, Πρωτοπαθές ηπατικό λέμφωμα

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