1. Clinical Image

A 66-year-old man presented with belching for 3 weeks and all physical examinations were unremarkable. The patient is a hepatitis C virus carrier and his liver enzymes and tumor markers was normal. Gastroscopy revealed a type IIa + IIc lesion at the gastric body with irregular microsurface under narrow band Imaging with magnification endoscopy (NBI-ME) (Figure 1) and the biopsy showed high-grade intraepithelial neoplasia. Computed Tomography (CT) scan demonstrated multiple low-density lesions in liver and spleen with mild capsular enhancement after intravenous contrast media (Figure 2). The Positron Emission Tomography (PET) revealed increased FDG uptake in the lesions of liver and spleen. There was no positive uptake in the other body parts on PET/CT (Figure 2). Liver biopsy was performed to further evaluate his intrahepatic lesions. Hematoxylin-eosin image revealed diffuse proliferation of large lymphoid cells and the tumor cells were positive for CD20, CD21, CD10 and Bcl-6, but not for CD3 confirmed by immunohistochemistry (Figure 3). Bone marrow aspiration confirmed no lymphoma cell infiltration in the bone marrow. Based on these results, the patient was diagnosed as DLBCL with concurrent early gastric adenocarcinoma. He was administered with Endoscopic submucosal dissection (ESD) and followed by cyclophosphamide, adriamycin, vincristine and prednisone (CHOP regimen) chemotherapy.

Figure 1: Narrow band Imaging with magnification endoscopy showed a type IIa + IIc lesion at the gastric body with irregular microsurface.
Figure 2: Computed tomography images showed multiple low-density lesions in liver and spleen (a) with mild capsular enhancement after intravenous contrast media (b). The positron emission tomography revealed increased FDG uptake in the lesions of liver and spleen (c, d).

Figure 3: Hematoxylin-eosin image of liver biopsy revealed diffuse proliferation of large lymphoid cells and immunohistochemistry demonstrated that the tumor cells were positive for CD20 and Bcl-6, but not for CD3.

Lymphoma occurring only in the liver and spleen without nodules is extremely rare and constitutes 0.016% of all cases of Non-Hodgkin’s Lymphoma (NHL) [1]. Primary hepatosplenic DLBCL and gastric adenocarcinoma coexisting in one case is even rarer. Most of Primary Hepatic Lymphoma appears as a solitary discrete lesion which is seen in about 60% of cases and multiple lesions are seen in only 35%-40% of patients which can be easily misdiagnosed as metastatic lesions [2]. The prognosis and management of lymphoma is different from hepatocellular carcinoma or metastatic disease. Thus, a systematic evaluation of the patient can provide valuable information for the diagnosis and treatment.

Viral hepatitis B and C and Epstein-Barr virus is commonly associated with primary Hepatic Lymphoma, but the pathophysiology of PHL is poorly understood [2]. In this case, Hepatitis C virus (HCV) is probably associated with his DLBCL. The diagnosis of this case was challenging as the patient was also found to have gas-
tric adenocarcinoma. It is difficult to distinguish metastatic disease from primary hepatosplenic lymphoma by imaging features alone in this case. Although hypermetabolic at PET favored a diagnosis of lymphoma, multiple lesions and delayed contrast material wash-out with capsular enhancement were features of metastatic lesions. Therefore, liver biopsy was critical for correct diagnosis of the patient.

2. Acknowledgements

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References
