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CORRESPONDENCE

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Nonbacterial thrombotic endocarditis as a paraneoplastic manifestation of newly diagnosed splenic large B cell lymphoma

Nonbacterial thrombotic endocarditis (NBTE), which presents with sterile valvular vegetations, has been reported in patients with mucin-secreting adenocarcinoma[1] and autoimmune diseases. Here, we report a case of NBTE as a paraneoplastic manifestation of newly diagnosed splenic large B cell lymphoma.

A male in his 50s with underlying diseases of alcoholic liver cirrhosis and diabetes mellitus came to our hospital due to an intermittent fever lasting for 2 months. Upon arrival, his temperature was 39.3°C. He also noticed a 3-kg body weight loss in the previous month. Right upper abdominal tenderness was found. The hemoglobin level was 7.1 g/dL, the platelet count was 101,000/μL, the serum glutamic-oxaloacetic transaminase level was 113 IU/L, glutamic-pyruvic transaminase was 73 IU/L, and C-reactive protein was 197.45 mg/L. Chest radiograph showed increased infiltration over the right lower lung. Due to suspected intra-abdominal infection and pneumonitis, the patient was initially treated with Piperacillin plus Tazobactam. Four days after admission, oral candidiasis was noted; thus, fluconazole was given.

Acid-fast bacilli assay, viral infection surveys, and galactomannan test revealed the absence of active infection. Of note, serum lactate dehydrogenase (329 IU/L) and β2-Microglobulin (518 μg/dL) were significantly elevated. Transthoracic echocardiography revealed small oscillating vegetations on aortic cusps without aortic regurgitation and small vegetations on mitral leaflets with mild mitral regurgitation. Six days after admission, intermittent high fever, and thrombocytopenia presented; the empirical antibiotics were thus switched to meropenem and teicoplanin under suspicion of infective endocarditis. Due to the unexplained moderate-to-severe thrombocytopenia, which was refractory to platelet transfusion, a bone marrow biopsy revealed a normocellular marrow with myelodysplasia of erythroid and megakaryocyte lineage and a smear result of the increased proportion of plasma cells.

Further transesophageal echocardiography revealed small verrucous vegetations over mitral and aortic valves, and these findings supported the impression of NBTE. Intravenous methylprednisolone was then given. The results of sputum aerobic and mycobacterial cultures and acid-fast stains of sputum, as well as autoimmune profiles, were all negative. Positron emission tomography showed less imaging evidence of fluorodeoxyglucose-avid lymphadenopathy but extreme splenomegaly (Figure 1). Splenic lymphoma was suspected. Due to the progressive thrombocytopenia despite platelet transfusions and

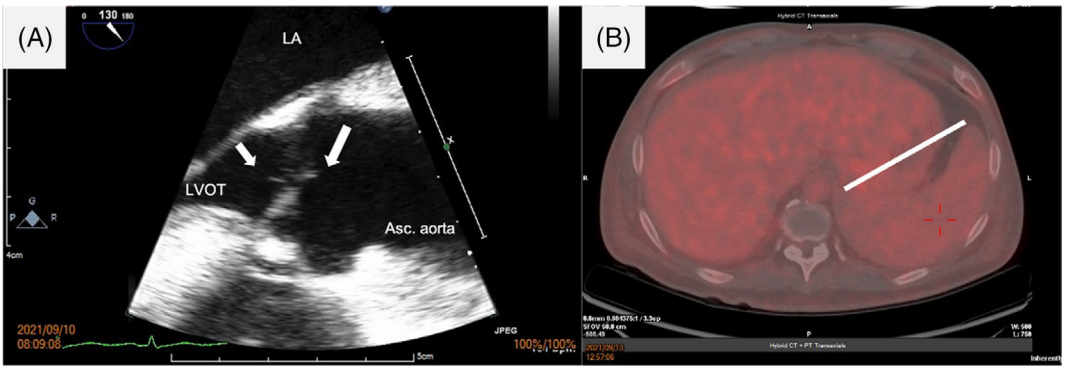

FIGURE 1 (A) Transesophageal echocardiography in mid-esophageal long axis view. White arrows indicate verrucous-like thin linear vegetations on the aortic valve. (B) Fluorodeoxyglucose-positron emission tomography/computed tomography scan demonstrating hepatosplenomegaly with extreme splenomegaly. White bar indicating a length of 15 cm. Asc, ascending aorta; LA, left atrium; LVOT, left ventricular outlet.

intravenous methylprednisolone, the patient received a splenectomy for both diagnosis and possible treatment. Splenectomy led to a final pathologic diagnosis of large B-cell lymphoma. Severe thrombocytopenia failed to restore after the splenectomy. Unfortunately, the patient passed away 1 week after the splenectomy due to the overwhelming lymphoma activity.

Hematologic malignancies are extremely rare among the reported cancer types associated with NBTE. To date, only two of the published cases are diagnosed as non-Hodgkin lymphoma.[2,3] Interestingly, in a previous review containing 2381 autopsies,[4] BMT was found to impose higher risks of NBTE on the general population and even the patients carrying bone marrow transplantation (BMT) candidate diseases. However, the mechanistic association between BMT and NBTE remained unclear.

In short, we report the first case of the treatment-naïve splenic large B cell lymphoma with NBTE as the paraneoplastic manifestation. It should arouse awareness of not merely considering NBTE as complications regarding chemotherapy or BMT in hematologic malignancies.

CONFLICT OF INTEREST STATEMENT

All authors declare no conflict of interest.

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