Nonbacterial Thrombotic Endocarditis in Metastatic Endometrial Adenocarcinoma Presenting as Stroke

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Introduction
Non-bacterial thrombotic endocarditis (NBTE) is a rare but potentially life-threatening entity due to sterile thrombi deposition on previously undamaged heart valves. The diagnosis and management remain challenging as there are no pathognomonic signs.

Case
A 45-year-old female with relapsed stage IV endometrial adenocarcinoma, recently started on pembrolizumab, presented to the ED for blurry vision of 2 weeks duration.

Physical Exam:
Heart: no murmurs
Neuro: visual field defect with left homonymous superior quadrantanopia. No other focal deficits. AAOx3

Workup:
• CT head: hypoattenuation in the bilateral occipital lobes
• MRI head: multiple subacute and chronic foci of ischemia involving posterior and anterior circulations, concerning for an embolic source (Fig. 1)
• Transthoracic echocardiogram (TTE): no obvious vegetation or patent foramen ovale
• Transesophageal echocardiogram (TEE): 0.3 cm x 0.3 cm lesions on the aortic valve (Fig. 2)
• Blood cultures: negative (3 sets cultured for 14 days)
• ANA and antiphospholipid antibodies: negative

Figure 1. Axial DWI image of brain MRI shows patchy restricted diffusion in left temporal occipital and right occipital lobe

Figure 2. TEE
a) Long axis view of the aortic valve opening-thickening of the aortic valve leaflets (arrows)
b) Short axis view of the aortic valve- leaflet tip thickening on all three leaflets

Diagnosis:
Based on TEE and negative blood cultures, diagnosis of NBTE was made leading to stroke, likely from relapsed endometrial cancer.

Treatment:
Indefinite anticoagulation was started with low-molecular weight heparin 1 mg/kg twice daily. She was eventually switched to rivaroxaban.

Discussion
• The patient’s advanced malignancy places her at increased risk for hypercoagulable state. Immune checkpoint inhibitors like pembrolizumab can also increase risk of venous and arterial thrombosis.
• Treatment guidelines of NBTE recommend indefinite systemic anticoagulation and treatment of the underlying condition (Grade 2C).
• More studies are needed to support the use of direct oral anticoagulants.
• A high clinical suspicion in advanced stage malignancies warrants a TEE to reach diagnosis.

References