

FDG PET/CT in a case of suspected infective endocarditis of prosthetic valve

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INTRODUCTION

Infective endocarditis outcome largely depends on early diagnosis and treatment. Clinical parameters and echocardiogram are the main diagnostic indicators; however their use is limited in prosthetic valve involvement.

CASE SUMMARY

A 30-year-old female, with history of post partum infective endocarditis managed with mechanical prosthetic valve replacement, presented after one month with new onset fever and chills. Blood culture was inconclusive. She also complained of hip pain and MRI revealed bilateral hip arthritis with a collection on the left side along psoas muscle. Trans-esophageal echocardiogram (TEE) done was suspicious of peri-aortic root abscess. A

confirmatory cardiac MRI could not be done in view of prosthetic valve. Patient was prepared for cardiac suppression FDG PET/CT with low-carbohydrate and high-fat diet for two days prior to scan. Whole-body FDG PET/CT revealed multiple foci of uptake. FDG uptake was noted along the sternotomy site and adjacent to the prosthetic valve, along the aortic root. FDG avid deposits were also noted in the spleen. Left hip involvement with uptake in surrounding soft tissue was seen.

DISCUSSION

Echocardiogram is the most commonly used investigation for diagnosis of infective endocarditis. Trans-esophageal echocardiogram (TEE) is considered more sensitive. The presence of prosthetic valves and cardiac implants decreases the sensitivity and specificity of both

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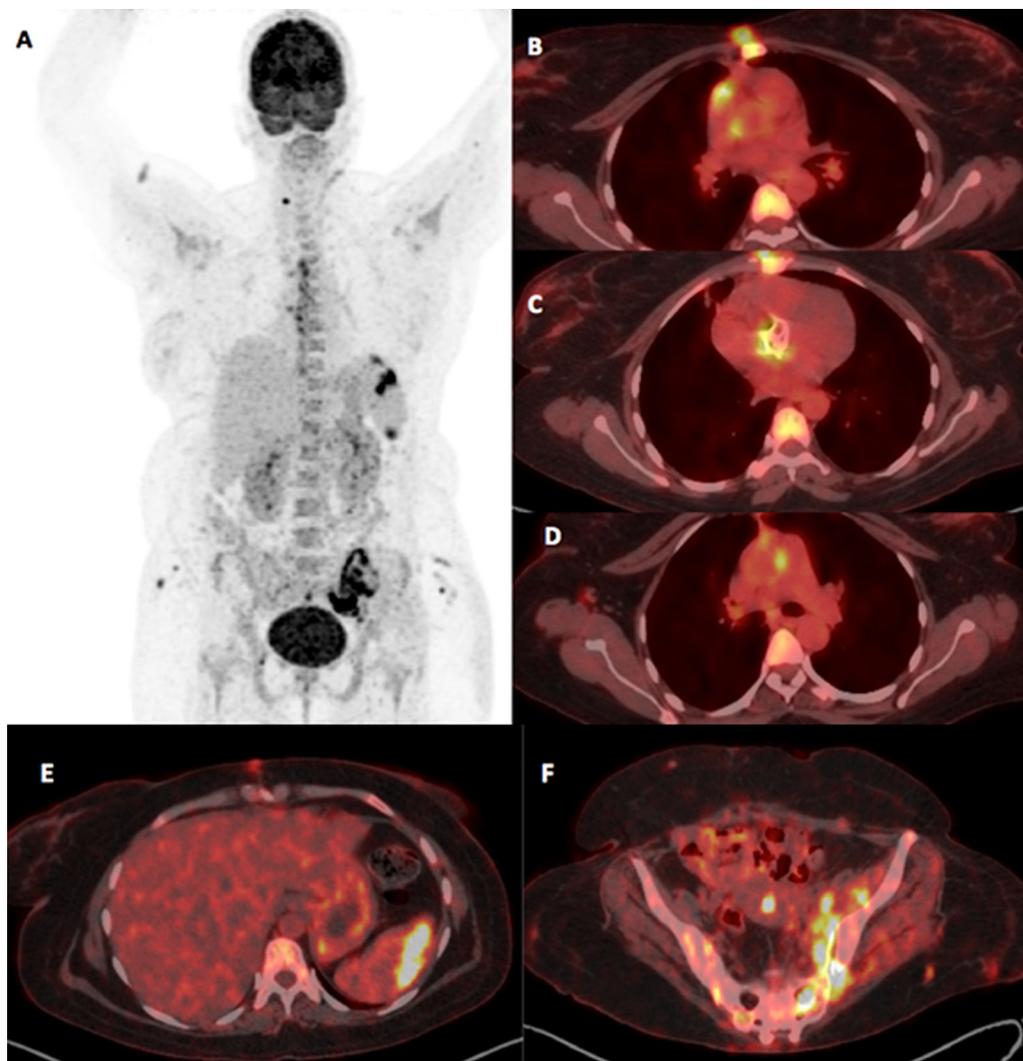


Figure 1. FDG PET/CT MIP image shows multiple foci of uptake (A). Intense focal uptake is noted along the surgical scar and sternotomy site (B). Uptake is also seen adjacent to the prosthetic valve (C) and along the aortic root (D). Spleen appears studded with FDG avid deposits (E). A soft tissue lesion is noted in left hip, with continuous tracking of FDG uptake along the left ilio-psoas (F).

trans-thoracic and trans-esophageal echocardiography.¹ Furthermore, ¹⁸F-FDG PET/CT can also diagnose systemic complications such as septic emboli, which need to be tackled simultaneously for a holistic management (Figure 1).

Disclosure

The authors Shreya Datta Gupta, Anshul Sharma, Neeraj Parakh and Chetan Patel declare that they have no conflict of interest.

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