A false positive FDG PET/CT result in a patient with prosthetic heart valve disease

**KEYWORDS:** infective endocarditis, Duke criteria, prosthetic valve, positron emission tomography.

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**Case report:** 75-year-old male patient with a prior history of Bentall procedure in 2013 has been hospitalized for fever of unknown origin. Blood cultures came positive on Streptococcus pluranimalium and a high suspicion of PVE was raised. Transesophageal echocardiography (TEE) showed a suspected vegetation on mechanical aortic valve without compromising valve function (Figure 1). No other signs of septic embolization were found, except subconjunctival hemorrhage. Since two major and two minor Duke criteria for definite IE were met, the patient was started on standard antibiotic treatment according to ESC guidelines. Despite completed targeted antibiotic treatment, the patient remained subfebrile without clear clinical manifestation of infection with repeated negative blood cultures and no signs of vegetation on TEE. FDG PET/CT was performed and showed diffuse perivalvular FDG uptake pattern consistent with inflammation. While awaiting for the PET/CT result, the patient became afebrile with no laboratory or clinical signs of infection. In consultation with cardiac surgeon a strategy of watchful waiting was taken. The patient remained stable during one year follow-up.

**Conclusion:** Homogenous FDG uptake may be present in the perivalvular area in the absence of PVE, even years after valve implantation. Since the factors used to distinguish normal and abnormal FDG uptake patterns are not yet standardized, clinical judgement and multidisciplinary treatment approach are still crucial in decision making.

**LITERATURE**
