Interesting images

$^{18}$F-FDG PET/CT detected a septic focus corresponding to a small periurethral abscess in a patient with bacteremia due to Enterococcus faecium

$^{18}$F-FDG PET/TAC detectó un foco séptico debido a un pequeño absceso periuretral en un paciente con bacteremia por Enterococcus faecium

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A 70-year-old male patient hospitalized in our center presented systemic inflammatory response syndrome. Due to the high suspicion of a sepsis, the patient underwent blood cultures which demonstrated a bacteremia due to Enterococcus faecium. The patient underwent antibiotic therapy but he presented clinical deterioration. Therefore a whole-body CT was performed searching for possible occult foci of infection but no significant findings were evident. Subsequently, the patient was addressed to our department to perform a $^{18}$F-FDG PET/CT searching for septic foci. Before $^{18}$F-FDG injection, the patient had fasted for at least 6 h; at the time of the radiopharmaceutical injection the glucose blood levels corresponded to 100 mg/dL. Images were acquired 1 h after i.v. injection of 270 MBq of $^{18}$F-FDG.

$^{18}$F-FDG PET/CT showed a focal area of increased radiopharmaceutical uptake in the root of penis, corresponding to the urethra (Fig. 1), with a maximum standardized uptake value (SUV$_{\text{max}}$) of 10. No other areas of abnormal $^{18}$F-FDG uptake were detected in the rest of the body. Based on this $^{18}$F-FDG PET/CT finding a possible septic focus in the periurethral region was postulated. Ultrasonography showed the presence of a small periurethral abscess which was subsequently drained. The abscess fluid culture was positive for E. faecium. The antibiotic treatment was strengthen, blood culture became negative for E. faecium and clinical improvement was obtained.

E. faecium has become an important cause of nosocomial bacteremias. These infections are often difficult to treat owing to the resistance of E. faecium to a large number of antibiotics. The identification of occult sources of infection is of paramount importance to improve the outcomes of patients with bacteremia including those due to E. faecium. Recent articles demonstrated the possible role of $^{18}$F-FDG PET/CT in detecting septic foci in patients with sepsis of unknown origin showing promising results. In our case $^{18}$F-FDG PET/CT detected a septic focus corresponding to a small periurethral abscess in a patient with bacteremia due to E. faecium changing the patient management.
Figure 1. Maximum intensity projection $^{18}$F-FDG PET image (A), axial non-enhanced CT (B) and fused PET/CT image (C) showed an area of increased radiopharmaceutical uptake corresponding to a small periurethral abscess with a $SUV_{max}$ of 10.

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**Conflict of interest**

The authors declare that they have no conflicts of interest.

**References**