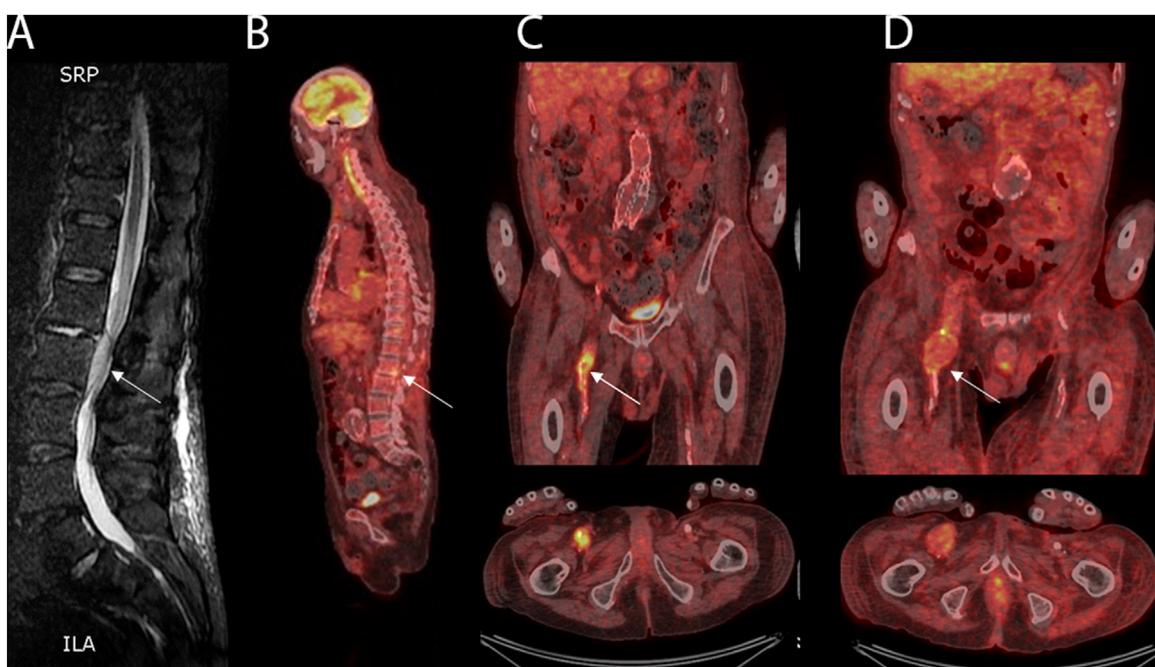


## Medical Imagery

Femoral artery aneurysm complicating *Staphylococcus aureus* bacteremia

Complicated *Staphylococcus aureus* bacteremia is defined by the following factors: community acquisition, presence of skin lesions, persistent fever at 72 h and positive blood cultures at 48–96 h (Fowler et al., 2003) and is often associated with metastatic foci. A 77-year old man diagnosed with complicated methicillin-sensitive *S. aureus* (MSSA) bacteremia complained of back pain. An MRI of the spine demonstrated the presence of an epidural abscess at the level of L1-L2 vertebral bones (Figure 1A) that was drained, and a culture grew positive for MSSA. The patient underwent two transesophageal echocardiography procedures that did not demonstrate any vegetation. A whole-body  $^{18}\text{F}$  fluorodeoxyglucose-positron emission tomography scan ( $^{18}\text{F}$  FDG-PET/CT) that included whole lower limbs acquisition demonstrated a hypermetabolism of the L1-L2 vertebral bones (Figure 1B) and of the right femoral artery localized on a calcified atheroma plaque (Figure 1C).

After 6 weeks of antibiotic treatment, another  $^{18}\text{F}$  FDG-PET/CT scan was performed and demonstrated a dilated aneurysm of the right femoral artery with a light hypermetabolism of the vessel wall (Figure 1D) that was surgically removed. Infected (mycotic) aneurysm that occurs secondary to weakening of the vessel wall following infection or to the infection of a preexisting lesion following embolization is mainly caused by *S. aureus* (Lee et al., 2008). As metastatic foci may be asymptomatic during complicated *S. Aureus* bacteremia (Vos et al., 2012), whole body  $^{18}\text{F}$  FDG-PET/CT including lower limbs acquisition should be performed both in the initial evaluation of complicated *S. Aureus* bacteremia and also during treatment follow-up (Vos et al., 2010).  $^{18}\text{F}$  FDG-PET/CT has been associated with treatment modification and reduced mortality in *S. aureus* bacteremia (Berrevoets et al., 2017).



**Figure 1.** (A) Sagittal T2-weighted MRI with fat saturation showing an epidural collection (arrow) protruding into the spinal canal. (B) Whole-body  $^{18}\text{F}$  FDG-PET/CT performed after laminectomy showing a hypermetabolism of the L1–L2 vertebral bone (arrow) and (C) hypermetabolism of the right femoral artery localized on a calcified atheroma plaque. (D) Whole-body  $^{18}\text{F}$  FDG-PET/CT performed after 6 weeks of antibiotics treatment demonstrating a dilated aneurysm of the right femoral artery with a light hypermetabolism of the vessel wall.

<https://doi.org/10.1016/j.ijid.2019.02.015>

1201-9712/© 2019 The Author(s). Published by Elsevier Ltd on behalf of International Society for Infectious Diseases. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

**Conflict of interest**

None to declare.

**Funding**

None.

**Ethical approval**

The patient approved the use of its personal data for publication.

**References**

- Berrevoets MAH, Kouijzer IJE, Aarntzen EHJG, Janssen MJR, De Geus-Oei L-F, Wertheim HFL, et al. 18 F-FDG PET/CT optimizes treatment in *Staphylococcus aureus* bacteremia and is associated with reduced mortality. *J Nucl Med* 2017;58 (September (9)):1504–10.
- Fowler VG, Olsen MK, Corey GR, Woods CW, Cabell CH, Reller LB, et al. Clinical identifiers of complicated *Staphylococcus aureus* bacteremia. *Arch Intern Med* 2003;163(September (17)):2066.
- Lee W-K, Mossop PJ, Little AF, Fitt GJ, Vrazas JI, Hoang JK, et al. Infected (Mycotic) aneurysms: spectrum of imaging appearances and management. *RadioGraphics* 2008;28(November (7)):1853–68.
- Vos FJ, Bleeker-Rovers CP, Sturm PD, Krabbe PFM, van Dijk APJ, Cuijpers MLH, et al. 18F-FDG PET/CT for detection of metastatic infection in gram-positive bacteremia. *J Nucl Med* 2010;51(August (8)):1234–40.

Vos FJ, Kullberg BJ, Sturm PD, Krabbe PFM, van Dijk APJ, Wanten GJA, et al. Metastatic infectious disease and clinical outcome in *Staphylococcus aureus* and *Streptococcus* species bacteremia. *Medicine (Baltimore)* 2012;91(March (2)):86–94.

Nicolas Dauby<sup>a,\*</sup>

Patrice Jissendi-Tchofo<sup>b</sup>

Camilo Garcia<sup>c</sup>

<sup>a</sup>Department of Infectious Diseases, CHU Saint-Pierre, Université Libre de Bruxelles (ULB), Belgium

<sup>b</sup>Department of Radiology, CHU Saint-Pierre, Université Libre de Bruxelles (ULB), Belgium

<sup>c</sup>Department of Nuclear Medicine, CHU Saint-Pierre, Université Libre de Bruxelles (ULB), Belgium

\* Corresponding author at: Department of Infectious Diseases, CHU Saint-Pierre, Rue Haute, 322, 1000 Brussels, Belgium. E-mail address: [Nicolas\\_dauby@stpierre-bru.be](mailto:Nicolas_dauby@stpierre-bru.be) (N. Dauby).

**Corresponding Editor:** Eskild Petersen, Aarhus, Denmark

Received 25 January 2019

Received in revised form 14 February 2019

Accepted 14 February 2019