

The purpose of this article is to describe the role of 18F-FDG PET/CT in the diagnosis of septic pulmonary embolism in children with *S. aureus* catheter-related bacteremia” Méndez-Echevarria et al (2017).

Abstract:

PURPOSE: The role of 18F-fluorodeoxyglucose positron emission tomography-computed tomography (18F-FDG PET/CT) in the diagnosis of metastatic infectious foci in children with catheter-related blood stream infection has been hardly studied, although some authors have reported it benefit in the screening of metastatic foci in adult population. Septic pulmonary emboli are among the most difficult to identify, because many cases do not present pulmonary complaints or abnormal chest radiography. However, diagnosis of these foci has important therapeutic consequences. The purpose of this article is to describe the role of 18F-FDG PET/CT in the diagnosis of septic pulmonary embolism in children with *S. aureus* catheter-related bacteremia.

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METHODS: We report 3 children with *S. aureus* catheter-related bacteremia and normal chest X-ray at admission, in whom 18F-FDG PET/CT led to the diagnosis of unsuspected septic pulmonary emboli, with an impact on clinical management.

RESULTS: All patients had hemophilia and implantable venous access ports and presented with fever and normal lung auscultation. Only 1 reported non-specific symptoms (undifferentiated left chest pain). All patients had normal chest X-ray on admission. Catheters were removed within 48 h after admission in 2 cases, and 5 days after admission in the last case, subsiding fever. In 2 children, paired blood cultures were not able to identify bacteremia. However, in all cases catheter tip and subcutaneous port cultures yielded *S. aureus* and PET/CT detected unsuspected pulmonary metastatic emboli.

CONCLUSIONS: 18F-FDG PET/CT should be considered as a useful tool to diagnose septic

pulmonary embolism in *S. aureus* catheter-related bacteremia, especially if conventional diagnostic imaging techniques have failed to reveal possible metastatic foci. Further studies are needed to clarify the usefulness of PET/CT performance in children with CRBSI.

Reference:

Méndez-Echevarria, A., Coronado-Poggio, M., Baquero-Artigao, F., Del Rosal, T., Rodado-Marina, S., Calvo, C. and Domínguez-Gadea, L. (2017) Septic pulmonary emboli detected by 18F-FDG PET/CT in children with *S. aureus* catheter-related bacteremia. *Infection*. February 27th. .

doi: 10.1007/s15010-017-0992-5.

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