

PET-CT Imaging in a Rare Metabolic Myopathy Pediatric Case

Abstract

F18 - Fluorodeoxyglucose (FDG) PET/CT have found widespread application area especially in oncological patients. In the present case, diagnosis of metabolic myopathy detected on FDG PET-CT imaging performed for investigation of malignancy in a child patient with paraneoplastic syndrome was presented. Rare pediatric metabolic myopathy case FDG PET-CT findings was demonstrated for the first time in the literature.

Keywords: Metabolic myopathy; PET-CT; FDG

Short Communication

Volume 2 Issue 5 - 2017

Pelin Ozcan Kara^{1*}, Zehra Pinar Koc¹, Cetin Okuyaz², Elvan Caglar Citak³, Ali Ertug Arslankoylu⁴, Suzan Zorludemir⁵ and Ozlem Tezol²

¹Department of Nuclear Medicine, Mersin University, Turkey

²Department of Pediatric Neurology, Mersin University, Turkey

³Department of Pediatric Oncology, Mersin University, Turkey

⁴Department of Pediatric Intensive Care, Mersin University, Turkey

⁵Department of Pathology, Cukurova University, Turkey

***Corresponding author:** Pelin Ozcan Kara, Mersin University Hospital, Department of Nuclear Medicine, 33343 Mersin, Turkey, Tel: 903242410000; Fax: 903242410098; Email: ppelinozcan@gmail.com

Received: April 02, 2017 | **Published:** April 05, 2017

Abbreviations: FDG: Fluorodeoxyglucose; CT: Computed Tomography; MRI: Magnetic Resonance Imaging; PET-CT: Positron Emission Tomography-Computed Tomography

Short Communication

Thirteen-year-old female patient with normal cerebral and muscular magnetic resonance imaging (MRI) was referred to our department for PET/CT imaging on examination of underlying malignancy. She had weight loss, widespread pain, unexplained LDH and uric acid level. Postprandial state was ruled out and following fasting for 4 hours i.v. 5.2mCi 18F-FDG was injected. Sixty minutes later images to be 2-3 minutes per bed in 3D mode were taken from the calvarium to the footpad. Images taken on GE Discovery PET/CT 610 (General Electric Medical Systems, Milwaukee, WI, USA) were evaluated after attenuation correction with low-dose CT. PET/CT imaging demonstrated symmetrical diffuse markedly increased metabolic activity (SUVmax: 5.74-12.66) including all the cross-sectional area in skeletal muscle structure. Except this, no additional finding or FDG avid malignancy was found. According to the PET-CT findings, inflammatory muscle diseases was considered and muscle biopsy was suggested. Biopsy confirmed the diagnosis of metabolic myopathy. FDG PET-CT imaging is a standard whole body imaging modalitie with widespread use in the field of oncology. However, there are limited number of articles about the FDG PET-CT imaging in inflammatory muscle diseases such as polimyosit, dermatomyositis and metabolic myopathies as in this case [1,2]. In the present case, diagnosis of metabolic myopathy detected on FDG PET-CT imaging performed for investigation of malignancy in a child patient with paraneoplastic syndrome was presented. Rare pediatric metabolic myopathy case FDG PET-CT findings were demonstrated for the first time in the literature. FDG-PET/CT imaging findings were found suspicious for non-malignant skeletal disease and directed the clinician to perform muscle biopsy (Figure 1).

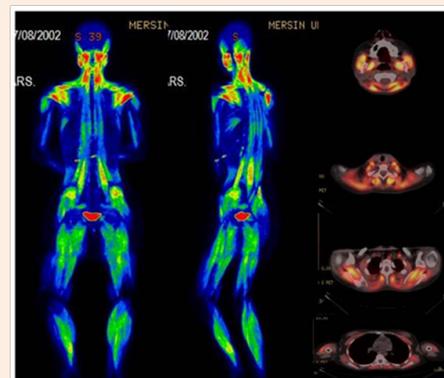


Figure 1: PET/CT MIP (Maximum intensity projection) and axial fusion images demonstrates symmetrical diffuse markedly increased metabolic activity including all the cross-sectional area in skeletal muscle structure.

References

1. Al-Nahhas A, Jawad AS (2011) PET/CT imaging in inflammatory myopathies. *Ann N Y Acad Sci* 1228: 39-45.
2. Tateyama M, Fujihara K, Misu T, Akira A, Tomohiro K, et al. (2015) Clinical values of FDG PET in polymyositis and dermatomyositis syndromes: imaging of skeletal muscle inflammation. *BMJ* 5(1).