

# 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

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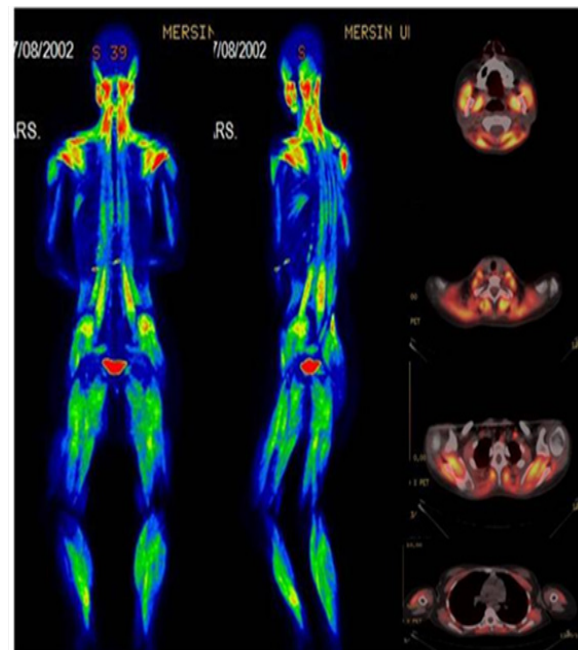
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**Abbreviations:** FDG, fluorodeoxyglucose; CT, computed tomography; MRI, magnetic resonance imaging; PET-CT, positron emission tomography-computed tomography

## 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. Postbrandial state was ruled out and following fasting for 4hours i.v. 5.2mCi 18F-FDG was injected. Sixty minutes later images to be 2-3minutes 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.<sup>1,2</sup> 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.

## Acknowledgements

None.

## Conflict of interest

Author declares that there is no conflict of interest.

## References

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