

High [^{18}F] 2-fluoro-2-deoxy-D-glucose (FDG) uptake of adrenocortical adenoma showing subclinical Cushing's syndrome

Akiko SHIMIZU,* Noboru ORIUCHI,* Yoshito TSUSHIMA,** Tetsuya HIGUCHI,*
Jun AOKI* and Keigo ENDO*

**Department of Diagnostic Radiology and Nuclear Medicine, Gunma University School of Medicine*

***Department of Radiology, Motojima General Hospital*

A 48-year-old woman with left adrenal tumor, which showed increased uptake of [^{18}F] 2-fluoro-2-deoxy-D-glucose (FDG) was presented. Her adrenal tumor was incidentally discovered, although she had no remarkable illness, and her blood pressure was normal. Hormonal examination including dexamethason suppression test and diurnal variation in serum cortisol level confirmed preclinical Cushing's syndrome. CT, MRI and ^{131}I -adosterol scintigraphy showed findings consistent with adenoma. FDG-PET revealed that tumor had standardized uptake value of 4.8, which was higher than usual benign tumors. Histological diagnosis of the resected adrenal tumor was adrenocortical adenoma without evidence of malignancy. Although the current literature showed that adenomas in general did not exhibit increased FDG uptake, adenoma in the present case with subclinical Cushing's syndrome showed intense uptake of FDG, suggesting FDG-PET could evaluate hormonal function of an adrenocortical adenoma in a completely asymptomatic normocortisolism patient.

Key words: FDG-PET, preclinical Cushing's syndrome, adrenocortical adenoma, adrenal incidentaloma