Rectal Polipoid Lesion with Intense F-18 FDG Uptake On PET/CT

PET/CT İncelemesinde Yoğun F-18 FDG Tutan Rektal Polipoid Lezyon

ABSTRACT A 74-year-old male with bilateral pleural thickening on CT was referred for F-18 FDG PET/CT scan for metabolic characterization. A whole body image was obtained and there was no significant F-18 FDG uptake at the pleural lesions that were identified on thorax CT. In addition, the PET/CT scan demonstrated an intensely hypermetabolic focal F-18 FDG uptake in the rectal region. Afterwards, a rectoscopy was performed and a polypoid lesion was discovered in the same localization with PET/CT. The patient underwent a successful endoscopic resection and the histopathological examination reported a low-grade tubulovillous adenoma.

Key Words: Fluorodeoxyglucose F18, positron-emission tomography, polyps


Anahtar Kelimeler: Florodeoksiglükoz F18, pozitron emisyon tomografisi, polip


PET/CT with 18F-FDG is increasingly used for the evaluation of primary lesion, staging, and monitoring the effects of therapy of many tumors. Colonic F-18 FDG uptake can be observed with variable intensity and different frequencies which may be the source of a false positive result. In this study, we describe a case with incidental demonstration of highly intense colonic F-18 FDG uptake. The patient was referred for PET/CT for metabolic characterization of the pleural thickening seen on thorax CT.
MBq (15 mCi) of F-18 FDG using a Siemens Biograph 16 PET/CT scanner.

The PET/CT scan demonstrated an intensely hypermetabolic focal uptake in the rectal region. However, there was no significant F-18 FDG uptake at the pleural lesions that were identified on thorax CT (Figure 1 and 2). Afterwards, a rectoscopy was performed and a polypoid lesion was discovered in the same localization with PET/CT. The patient underwent a successful endoscopic resection and the histopathological examination reported a low-grade tubulovillous adenoma (Figure 3).

**DISCUSSION**

Colorectal carcinoma is a common malignancy especially in elderly patients. Nearly all carcinomas of the colon develop in previously benign polyps. Histopathologically, adenomatous polyps are grouped as tubular, villous and tubulovillous adenomas. Fifteen percent of all polyps are tubulovillous adenomas, and of these, approximately 22 percent are malignant. Clinically, it is important to recognize and treat these tumors at an early stage because of their potential to transform into adenocarcinomas.

**FIGURE 1:** Axial PET (A), CT (B), fusion (C) and coronal PET (D) images revealed intensely hypermetabolic F-18 FDG uptake in the rectal region (white and black arrows).
Increased colonic F-18 FDG uptake poses a special problem in the evaluation of PET images. Contrary to the physiologic colonic F-18 FDG uptake, which mostly appears diffuse, pathologic uptake in the colon appears more focal.\textsuperscript{1,3} Although focal and intense F-18 FDG uptake suggests the presence of colonic malignancies, these uptake patterns can also be observed in nonmalignant pathologic processes, such as hyperplastic polyps, adenomas, acute enterocolitis, pseudomembranous colitis, Crohn’s disease and ulcerative colitis.\textsuperscript{3,6} Quantitative analysis using SUVs does not allow discrimination between adenomas and carcinomas.\textsuperscript{1,7}

In this case report, a low-grade tubulovillous adenoma was incidentally detected by PET/CT due to its intensely hypermetabolic focal F-18 FDG uptake. The early diagnosis and endoscopic resection of the adenoma was provided and its progression to carcinoma was prevented by PET/CT imaging.

In conclusion incidental focal colonic F-18 FDG accumulations should not be ignored and should be verified by colonoscopy and tissue biopsy.\textsuperscript{1,3,7-9}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2.png}
\caption{Maximum intensity projection (MIP) PET image showed a focal F-18 FDG uptake in the rectum region (black arrow).}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3.png}
\caption{Tubulovillous adenoma with adenomatous epithelium (HEX40).}
\end{figure}

\section*{REFERENCES}