عنوان مقاله:

Impact of ۱۸F-FDG PET/CT on treatment of patients with differentiated thyroid carcinoma, negative ۱۳۱I whole body scan and elevated serum thyroglobulin

محل انتشار:

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خلاصه مقاله:

Objective(s): ۱۸F-FDG PET/CT is increasingly performed in patients with differentiated thyroid cancer. The aim of this study was to assess the clinical impact of ۱۸FFDG PET/CT on the management of patients with differentiated thyroid carcinoma who had elevated serum thyroglobulin (Tg) and negative ۱۳۱I whole body scan (WBS) .Methods: ۶۷ patients with differentiated thyroid carcinoma were included in this study. The findings of ۱۸F-FDG PET/CT imaging were compared with histopathology, follow up imaging, or clinical follow-up results. The diagnostic accuracy of ۱۸F-FDG PET/CT was evaluated for the entire patient group and for those patients with stimulated serum thyroglobulin levels of less than ۵, ۵–۱۰, and more than ۱۰ pmol/L as well as for local recurrences and metastases sites. The impact of ۱۸F-FDG PET/CT on therapeutic management was also evaluated.Results: ۳۰/۶۷ patients had positive findings on ۱۸F-FDG PET/CT; ۲۸ were truepositive and ۲ were false-positive. ۱۸F-FDG PET/CT results were true-negative in۳۶ patients and false-negative in ۱ patient. The overall sensitivity, specificity, accuracy, PPV and NPV of ۱۸F-FDG PET/CT were, ۹۶.۵%, ۹۴.۵%, ۹۵.۵%, ۹۳.۳%, and ۹۷.۲% respectively. Positive ۱۸F-FDG PET/CT findings were directly correlated with stimulated serum thyroglobulin levels, ۷.۱% had Tg between ۵–۱۰, and ۹۲.۹% had Tg greater than ۱۰ pmol/L. ۱۸F-FDG PET/CT had a high or moderate impact on treatment management in ۲۸ (۴۱.۸%) of patients.Conclusion: ۱۸F-FDG PET/CT is able to improve diagnostic accuracy and have management impact in a therapeutically relevant way in patients with differentiated thyroid carcinoma who present with rising thyroglobulin level, negative ۱۳۱I WBS, and clinical suspicion of recurrent disease.

کلمات کلیدی:

FDG PET, Thyroglobulin, ۱۳۱I, thyroid carcinoma