

Physiological FDG uptake in the palatine tonsils

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In clinical F-18 fluorodeoxyglucose (FDG) positron emission tomography (PET) studies of the head and neck region, remarkable symmetric tonsillar FDG uptake is sometimes observed. We determined the incidence and degree of tonsillar FDG uptake and investigated the significance of tonsillar FDG uptake. Between June 1998 and August 1998, we obtained informed consent from 17 patients who were scheduled to undergo a FDG-PET study for their own disease (11 men and 6 women; aged 22 to 77 yr) and who did not have head and neck disease to perform FDG-PET scanning of the head and neck region in addition to their target organs. The incidence and degree of tonsillar FDG uptake were determined. Remarkable tonsillar FDG uptake was found in 9 patients. The SUVs of these FDG uptakes ranged from 2.48 to 6.75, with a mean of 4.29 ± 1.20 (SD). Tonsillar FDG uptakes in the remaining 8 patients were not remarkable, and their SUVs ranged from 1.93 to 3.31, with a mean of 2.46 ± 0.45 . Head and neck disease does not appear to have been responsible for the increase in tonsillar FDG uptake. Differences among tonsillar FDG uptake in these 17 patients without head and neck disease appear to reflect differences in activity of “physiological” inflammation of the palatine tonsils.

Key words: physiological inflammation, FDG, PET, tonsil