

Usefulness of ^{18}F FDG-PET in assessing the therapeutic effects of intraarterial concurrent chemoradiotherapy for head and neck cancer

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Abstract

The present study investigated the usefulness of ^{18}F FDG-PET in assessing the therapeutic effects of intraarterial concurrent chemoradiotherapy for head and neck cancer. Subjects were 95 patients in whom intraarterial concurrent chemoradiotherapy was performed at our hospital, after which ^{18}F FDG-PET was conducted in order to assess the therapeutic effects. Therapeutic effects were assessed in terms of tumor radioactivity at 40-50 and 50-60 minutes after ^{18}F FDG administration in relation to the administered ^{18}F FDG dosage. Cancer was considered eliminated if the radioactively decreased or remained unchanged and remaining if the radioactively increased. In the 27 patients in whom histopathological analyses were conducted, there was a single false-positive case and two false-negative cases. The sensitivity, specificity and accuracy of ^{18}F FDG-PET in assessing therapeutic effects were 90.9, 83.3 and 87.0%, respectively. The results of the present study suggest that ^{18}F FDG-PET is useful in assessing the therapeutic effects of intraarterial concurrent chemoradiotherapy.