Intense [^{18}F]FDG tongue uptake in a case of acipimox-related angio-oedema during FDG-PET myocardial viability study

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Tongue FDG uptake can occasionally be seen during FDG-PET imaging, especially in patients talking after injection [1]. Orofacial angio-oedema can be triggered by various drugs [2]. Acipimox, a nicotinic acid analogue, used in FDG-PET myocardial viability studies can rarely cause angio-oedema [3].

A kidney mass suspicious for malignancy was found on MRI scan in a 74-year-old man with haematuria and coexistent advanced coronary artery disease. Myocardial perfusion assessment for pre-operative cardiac risk stratification further necessitated an FDG-PET viability study, which, because of the patient's history, was combined with simultaneous whole-body scan.

Acipimox was orally given before the administration of 460 MBq [^{18}F]FDG [3]. One hour after acipimox intake, the

patient reported difficulty in swallowing. After scan completion, neck, tongue, tonsils and soft palate oedema was evident (a). Elevated total IgE (311 IU/ml; normal <100 IU/ml) was compatible with IgE-mediated angio-oedema.

Whole-body scan was negative for malignancy. However, intense uptake (SUV maximum 8, average 6.2) in the tongue and mild activity along the pharynx and upper oesophagus were best shown in sagittal sections (b). Activity was located only at the posterior, swallowing-related and not at the anterior, freely moving part of the tongue. The area of activity was lacking the normal upward curved shape of the tongue, probably because of the swollen soft palate (c, arrow).

In the presented case, intense FDG uptake of the tongue was shown in association with acipimox-related angio-oedema. Increased muscular metabolism due to repeated swallowing efforts, triggered by the swollen soft palate, is proposed as the underlying mechanism.

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