Clinical vignette

[18F]fluorodeoxyglucose positron emission tomography imaging in a case of relapsing polychondritis

A 77-year-old man presented with headache, monolateral conjunctivitis, swelling and redness of the nasal bridge and external ear cartilage. After 2 months, he developed bilateral episcleritis, left hearing loss, laryngitis and dysphonia. A CT scan showed inflammatory tissue filling the tympanic cavity and left mastoid. Laboratory examination showed the following: CRP 9.77 mg/dl (normal value <0.5 mg/dl), ESR 120 mm/1st h (normal value <15). Relapsing polychondritis (RPC) was suspected and [18F]fluorodeoxyglucose (FDG) PET/CT was performed, to exclude a co-existing large-vessel vasculitis or neoplastic conditions. Fig. 1 shows unexpected marked FDG uptake at the right auricle. Lower uptake was evident on the ipsilateral cervical lymph node and on the cartilage of the contralateral auditory canal. We started prednisone at a dose of 50 mg daily.

Symptoms and laboratory tests normalized in a few months. Thirteen months later a second FDG PET/CT was negative. Nishiyama et al., De Geeter and Vandecasteele, and Sato et al. [1–3] used FDG PET in RPC to evaluate the residual activity of the disease or to localize useful sites for diagnostic biopsy. Fig. 1 shows that in inflamed cartilage, there is recruitment of cells with increased metabolic activity, and that PET/CT is useful in the diagnosis and follow-up of RPC.

Fig. 1 FDG PET/CT showing tracer uptake at the cartilage of the right ear auricle and of the contralateral auditory canal.

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References