Relapsing polychondritis detected in PET/CT

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We report a case of relapsing polychondritis (RP) in a patient in whom PET/CT using ^{18}F -FDG performed due to a suspicion of malignancy led to the diagnosis of RP.

A previously healthy man, aged 57 years, was admitted to hospital for the diagnosis of chronic fever and weight loss of about 5 kg. Extensive laboratory and imaging evaluation showed only elevated C-reactive protein levels up to 180 mg/l (normal value <10 mg/l) and erythrocyte sedimentation rate up to 118 mm/h. Endoscopic evaluation showed signs of chronic laryngitis and sinusitis, oesophageal candidiasis, chronic gastritis and a benign sigmoid polyp. Antibacterial and antifungal therapy did not cause any significant improvement in the fever or laboratory findings.

PET/CT using ^{18}F -FDG showed diffuse ^{18}F -FDG accumulation in all costal cartilages and in the sternal angle ($\text{SUV}_{\text{max}}=4.5$). Additionally, symmetrically increased ^{18}F -FDG activity in the joints of the upper extremities (elbows and wrists) was found. A moderately increased ^{18}F -FDG concentration in the hypopharynx was also visible. The CT scan demonstrated thickened tracheal mucosa that did not show any ^{18}F -FDG activity. The characteristic complex of signs and symptoms after exclusion of malignancy led to the diagnosis of RP – a rare autoimmune disease characterized by inflammation of cartilaginous tissues of the larynx, trachea and ears [1–3].

The patient was treated with glucocorticosteroids that provided rapid improvement of the symptoms and laboratory parameters.

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