305. FACTORS ASSOCIATED WITH DETECTION OF LARGE VESSEL VASCULITIS ON 18-FLOREINE FLURODEOXYGLUCOSE POSITRON EMISSION TOMOGRAPHY/COMPUTED TOMOGRAPHY SCANS: A SINGLE-CENTRE AUDIT

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Background: 18-Fluorine fluorodeoxyglucose PET-CT (FDG-PET-CT) can be used to diagnose large vessel vasculitis (LVV). However, suppression of inflammation with steroids can result in a negative scan result. We examined data from our centre to determine how often scans were positive and whether this was associated with prednisolone therapy.

Methods: Records from our trust, a regional PET-CT centre, identified consecutive patients undergoing PET-CT scans for non-oncological purposes over a 2-year period from 2011 to 2013. Medical notes and laboratory results were reviewed to determine CRP and prednisolone dose at the time of the scan. Descriptive statistics were employed for these audit data.

Results: Of 70 PET-CT scans identified, 57 were patients of our trust. Of these, notes were available for 43; 18/43 were male. The median (range) age was 66 (31–81) years. 9/43 patients had a positive scan indicating LVV; 8/9 of these were reported as showing aortitis. Of the remaining 34 who did not have LVV, 4 received a new diagnosis of malignancy and 2 were diagnosed with atheromatous disease (not classified as LVV). LVV was demonstrated in 2/7 of the patients with known GCA and in 1/9 of the patients with known PMR. Of the patients with positive scans, four were receiving prednisolone (range 2.5–40 mg) at the time of the scan, but only two of them were receiving 10 mg or more. The mean dose of prednisolone was 6 mg in those with a positive result (LVV) and 12 mg in those with a negative scan (no LVV). The cumulative prednisolone dose in the 4 weeks prior to the scan was 160 mg and 201 mg, respectively. CRP: Of the patients with positive scans, 2 had CRP levels of <10 mg/l. The mean (range) CRP level was 64.1 (5 to 149) mg/l in those with a positive scan and 36.9 (5 to 95) in those with a negative scan. Patients with CRP levels <10 mg/l and positive FDG-PET-CT were not receiving high-dose prednisolone.

Conclusion: During the audit period, about 1 in 5 FDG PET-CTs done for non-oncological reasons revealed LVV, and about 1 in 10 revealed an unexpected malignancy. Most, but not all, of the patients for whom PET-CT revealed LVV were receiving <10 mg prednisolone at the time of the scan and had a CRP level of >10 mg/l. None of the cases in which LVV was detected were on high-dose prednisolone with a CRP level of <10 mg/l. On the basis of our audit, clinicians requesting PET-CT scans should be aware of the factors associated with detection of LVV. We will re-audit to determine whether referral patterns (CRP, prednisolone) have changed as a result of this local learning, and whether this results in more targeted use of scans and a greater likelihood of detecting LVV when it is clinically suspected.

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