Letters to the Editor

Is FDG-PET useful in the evaluation of steroid-resistant PMR patients?

Sir, Blockmans et al. [1] showed that 31% of the patients with newly-diagnosed polymyalgia rheumatica (PMR) have moderate PET signs of vasculitis, especially of the subclavian arteries. Not surprisingly, more prominent vasculitic changes were found in 74% of the patients with GCA [2]. We have performed PET in steroid-resistant PMR patients with the aim of ascertaining whether undetected vasculitic changes could explain steroid resistance. Diagnosing large-vessel vasculitis should be relevant in this setting, because patients may need increased doses of steroids and the addition of immunosuppressive drugs, as in case of concomitant GCA [3]. Steroid resistance was defined as the impossibility to withdraw prednisolone treatment before 2 yrs and to taper its dosage to <7.5 mg daily without exacerbations [4]. This was the cause of referral to our unit in the eight consecutive PMR patients considered for this study (female/male 4/4, median age 73 yrs, mean disease duration 69.4 ± 61.4 months, mean cumulative steroid dosage 18.2 ± 11.8 g). All the patients gave their informed written consent to publish their data. Of them, five showed headache or temporal tenderness, suggesting the possible coexistence of GCA, diagnosis of which was confirmed by biopsy in only one patient.

Three of these eight patients (37.5%) showed large-vessel vasculitis on a PET scan (Fig. 1). The only patient with biopsy-proven GCA was negative on PET scan.

A 73-yr-old woman complained of fever, fatigue and pain in the cervical spine and girdles, with a systemic inflammatory laboratory response, which responded promptly to 25 mg prednisolone a day, but recurred when steroid was tapered. The attending physician suspected GCA, although biopsy was not performed but, based on clinical findings, she was treated with prednisolone 50 mg daily with rapid tapering. Symptoms recurred when prednisolone dosage reached 10 mg daily. A PET scan, performed in October 2007, showed increased vascular uptake of all regions with a TVS of 17 (Fig. 1). She has recently added 15 mg of weekly MTX with an improvement of subjective findings.

A 77-yr-old woman complained of girdle pain, high-grade fever, weight loss and elevation of the indexes of inflammation. The diagnosis of PMR associated with GCA was suspected because of local loss of pulse and slight tenderness. She was treated with methylprednisolone (16 mg daily for 6 months). After initial improvement, symptoms recurred when corticosteroid was tapered. PET showed an increased uptake of the thoracic aorta spreading to the abdominal tract, together with the initial part of the supra-aortic branches. Her TVS was 7. These findings were confirmed by MRI. The patient was treated with MTX (10 mg/week) and prednisolone (12.5 mg daily) with improvement.

In our small group of steroid-resistant PMR patients, three showed increased vascular uptake of the large arteries. This observation is in keeping with the frequency of arterial lesions exhibited by untreated PMR patients at diagnosis. Only women had increased vascular uptake. Patients with positive PET had higher CRP (146 ± 82 vs 44 ± 11 mg/dl, P = 0.03) and ESR (103 ± 11 vs 65 ± 18 mm/h, P = 0.07). Large arteries vasculitis could not explain persistence of PMR in most of our patients. These anecdotal observations are insufficient to support the view that vasculitis is a complication of pure PMR, or that the correct initial diagnosis in the concerned patients was GCA or idiopathic aortitis. We, however, feel that PET may play a role in the follow-up evaluation of steroid-resistant polymyalgic patients with GCA symptoms. This subset should be relatively small because only 30% of PMR patients experience persistent disease course in spite of corticosteroid treatment [5].

From another viewpoint, fluorodeoxyglucose (FDG) uptake was present in spite of the long-term and still ongoing steroid treatment, a finding supporting the opinion that low-dosage steroids usually administered in PMR are ineffective in large-vessel vasculitis. We wonder, however, if some uptake could have also been present in the other patients, if they were untreated.

In conclusion, PET could be a useful adjunct in the evaluation of patients with steroid-resistant PMR, especially if they show persistently high inflammation indices.

Fig. 1. FDG-PET of Patient #2. A strong uptake of the thoracic and abdominal aorta, and of the carotid, subclavian, axillary, iliac and femoral arteries, is shown.
Rheumatology key message

- PET could be a useful adjunct in the evaluation of patients with steroid-resistant PMR.

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**Rheumatologists are not perceived as being able to treat septic arthritis by core medical curriculum or by core medical trainees**

Sir, Little needs to be said regarding the trauma of the launch of Modernising Medical Careers (MMC) in 2007. Nonetheless, this did make the evaluation and scrutiny of the interview processes possible. In the Northern Deanery, the core medical training (CMT) interview was divided into three sections as follows: a communication station, a case-based discussion and a structured interview. The use of such methods was agreed by consensus at CMT strategy meetings, chaired by the Regional Advisor, Royal College of Physicians of London. These included the CMT programme directors, regional RCP college tutors and physicians who had expressed an interest in helping with the process. Most medical specialties were represented.

One such case-based discussion described a patient with RA currently on anti-TNF immunosuppressive therapy and presenting with a septic arthritis.

This case was used in some interviews where the trainee was applying at specialty training 2 (ST2) level in CMT. As the candidates answered pre-determined questions, the two interviewers who both happened to be consultant rheumatologists, documented their answers. Specific positive and negative indicators were used for marking purposes in each section. Areas of particular interest were which specialty would the candidate inform (rheumatology or orthopaedics), whether they would suspend immunosuppression and whether they would explain their management plan to the patient.

In total, 23 candidates were assessed using the marking criteria. Only 2/23 candidates said they would inform rheumatology team that a patient of theirs on anti-TNF therapy had been admitted with a septic arthritis, in contrast to 16/23 who would have contacted orthopaedics alone. Indeed, 5/23 candidates felt the case did not warrant input from either rheumatology or orthopaedics. Not one of the candidates felt it prudent to withhold immunosuppression and no one explained their management plan to the patient (Table 1).

Overall, the consensus of the trainees was that such a patient should be managed by orthopaedic surgeons and the role of the rheumatologist in the care of this patient was not considered by the majority of candidates. Indeed, involving a rheumatologist is not mentioned in the acute General Internal Medicine (GIM) curriculum (at level 1 competencies) pertaining to septic arthritis, only surgical intervention [1]. We would argue that early referral to a rheumatologist is vital in the management of such a presentation, in view of the immunosuppression used for treatment. Surgical and possibly some medical colleagues may not be so familiar with the range of drugs now used. Serial aspiration of septic joints and appropriate intravenous antimicrobial therapy are well-established methods of treatment [2, 3]. In a recent systematic review, there was no evidence to suggest that surgery was superior to serial aspiration or vice versa [4]. Of course, should conservative measures be unsuccessful, or indeed the joint itself be inaccessible to routine aspiration, such as SI joints, then surgical intervention should be sought.

Although rheumatology is a small specialty and cannot always provide a 24-h emergency service, involvement of the treating rheumatologist should be at the earliest opportunity. Such chronic patients are often managed by rheumatologists on an outpatient basis and inevitably follow-up falls into the hands of such specialist care. Trained and experienced in the management of such patients, disease processes and presentations, a rheumatologist should be the initial specialist to involve in such a presentation as described during the interview process. Unfortunately, the results above suggest the perception of the management of a patient with septic arthritis with RA and on potentially toxic treatment with anti-TNF drugs is far from ideal among core medical trainees.

**Rheumatology key message**

- Rheumatologists are not perceived as able to treat septic arthritis by GIM curriculum or trainees.

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