Sulphamethoxazole–trimethoprim in the treatment of limited paranasal Wegener’s granulomatosis

Sir, Wegener’s granulomatosis (WG) is a systemic vasculitis that affects predominantly the upper and lower respiratory tract, kidneys, joints and skin. It is also recognized in limited form, where it occurs without renal involvement. Both the systemic and the limited form of WG are known to cause severe morbidity and destructive lesions. Treatment modalities for both these forms consist of high doses of steroids and cyclophosphamide. Here we present what we believe to be the first report of a patient with limited paranasal WG who responded to sole treatment with sulphamethoxazole–trimethoprim.

A 20-yr-old lady presented with a 4-yr history of recurrent sinusitis, epistaxis, generalized malaise, weight loss and fever. Previously she had been treated with antihistamines and antibiotics for her recurrent sinusitis, with no benefit. She then had a severe bout of epistaxis followed by collapse of her nasal bridge. She did not have evidence of arthritis or pulmonary, renal, neurological or skin manifestations.

Urinalysis was negative for protein, blood and casts. Full blood count (FBC) showed leukocytes $16 \times 10^9/l$ and platelets $450 \times 10^9/l$. The erythrocyte sedimentation rate (ESR) was 12 mm/h and the C-reactive protein (CRP) concentration $<7 \text{ mg/l}$. She was positive for antineutrophil cytoplasmic antibodies (ANCA; titre $1:160$), which showed a cytoplasmic pattern (c-ANCA). ELISA testing was positive for proteinase-3 (PR3). Her chest X-ray was normal. CT scanning demonstrated extensive mucosal thickening of the paranasal sinus (Fig. 1).

A diagnosis of limited WG was made. She was commenced on sulphamethoxazole–trimethoprim. She responded well to this therapy, feeling much more energetic, with resolution of her nasal discharge and no further episodes of epistaxis. However, she continued to complain of nasal crusting. ENT review ruled out any residual mucosal inflammation.

Repeat investigations after 3 months showed a normal FBC with the exception of mild thrombocytosis (platelets $430 \times 10^9/l$). Her ESR and CRP remained normal. She continued to be positive for c-ANCA (titre $>1:160$). Her urine was negative for blood and protein. She continued on sulphamethoxazole–trimethoprim. In her subsequent follow-up she remained well without any constitutional symptoms. She had two spells of minimal nasal bleeding. Nasal reconstructive surgery was performed uneventfully 5 yr after initial presentation. Her FBC, ESR and CRP were normal but her c-ANCA and PR3 tests remained strongly positive.

At the most recent review (7 yr after presentation), she was well and had no nasal discharge, epistaxis, cough or headache. Clinical examination was normal except for right nasal septum crusting. Her ESR and CRP were again normal, with strongly positive c-ANCA and PR3. Imaging of the paranasal air sinuses and orbits showed only minor abnormalities (Fig. 2).

The diagnosis of limited WG was consistent with the presenting features of nasal discharge and epistaxis followed by collapse of the nasal bridge, and was supported by the strongly positive c-ANCA and PR3 assays and paranasal sinus mucosal thickening on CT scanning. Immunosuppressive therapy has been considered essential for the management of limited WG.
Luqmani et al. [1] reported that limited WG caused major tissue destruction and hence immunosuppressive therapy was essential, a requirement echoed by Hoffman [2]. Luqmani et al. also commented that limited WG may change pattern in some cases to involve the kidney [1]. Sulphamethoxazole–trimethoprim has been reported as being effective in the prevention of relapses of WG [3].

Our patient showed an excellent response to sulphamethoxazole–trimethoprim alone and did not require immunosuppressive therapy at any stage. She has remained well over a 7-yr follow-up period, with no evidence of renal or pulmonary involvement at any time. Soukiasian et al. [4] reported the successful use of sulphamethoxazole–trimethoprim alone in a biopsy-proven, c-ANCA-positive case of limited ophthalmic WG, with normalization of serial ANCA titres. Our patient showed significant clinical improvement and is unique in terms of the clinical response of her paranasal disease and the length of follow-up. Although her c-ANCA and PR3 assays remained strongly positive, ANCA positivity may persist unrelated to clinical disease activity in systemic vasculitis and should not be used as the sole reason for treatment modification [5]. Her acute-phase reactants (ESR and CRP) remained normal throughout the course of disease, indicating that local inflammation does not always cause systemic elevation of inflammatory markers, a point that may contribute to delay in diagnosis.

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Accepted 1 November 2001

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