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CORRESPONDENCE

Sir,
Vision, eye disease, and art

The recent Keeler Lecture, 'Vision, eye disease, and art', delivered by MF Marmor[1] highlights the complexities of vision and art. It is not an uncommon belief that sight-impaired individuals are unable to appreciate art. Although a 2004 review for the Arts Council England cited almost 400 papers demonstrating the positive impact of art in healthcare,[2] there is no published literature on the role of visual art in the ophthalmology setting.

To address this, we held an art and photography exhibition at Moorfields Eye Hospital, London, UK and invited patients, staff, and visitors, both sighted and sight-impaired, to respond to a prevalidated questionnaire asking agreement on a 5-point Likert scale to statements about art appreciation and display in the healthcare setting.

There were 102 respondents: 39% males, 61% females; mean age 50.7 years (range 17–90); 47% were patients, 24% visitors, 28% staff; 54% had an ophthalmic condition, 51% of these bilateral.

An overwhelming majority of respondents agreed/strongly agreed that display of visual art in the hospital improves patient experience (92%), relaxes patients (91%), makes clinic waiting times more bearable (85%), and improves staff morale (70%). For the first two statements, agreement was stronger among staff and visitors than patients (Kruskal–Wallis ANOVA, $P=0.007$ and $P=0.016$), and among those without an eye condition *vs* those with an eye condition (Mann–Whitney U; $P=0.006$ and $P=0.02$). The display of tactile art was thought to be beneficial for the visually impaired patient experience by 86% of respondents.

Of those with an ophthalmic condition, 77% agreed/strongly agreed that they enjoyed visual art and 75% could express themselves through art creation similarly to before visual problems developed, with no difference between those with unilateral *vs* bilateral disease (Mann–Whitney U; $P=0.107$ and $P=0.129$).

Our results demonstrate strong opinion that visual art positively enhances patient and staff experience in ophthalmology, and proves that those with visual impairment are able to enjoy and create art. This should be considered when designing ophthalmology clinical areas. There is a suggestion that displaying tactile art may make a more significant improvement to the visually impaired patient experience. Future exhibitions showcasing tactile art could investigate this further.

Conflict of interest

The authors declare no conflict of interest.

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Sir,
Response to: 'Cotton wool spots and migraine: a case series of three patients'

We read with great interest the letter by Jamison and Gilmour,[1] and wish to emphasise that patients with headache and cotton wool spots require appropriate investigation before using the diagnosis of exclusion 'retinal vasospasm', as the differential diagnosis is wide and has potential threat to sight or life. This includes ischaemic retinopathy (diabetes, hypertension, hypercoagulable states, embolic disease), inflammatory conditions (systemic lupus erythematosus, polyarteritis nodosa, giant cell arteritis), and more rarely infection (HIV, Bartonella, leptospirosis) and neoplasia (lymphoma, leukaemia, metastases).

The authors' speculation regarding a link between migraine and retinal vasospasm is reminiscent of the occasionally encountered diagnosis 'retinal migraine'. This condition, defined by the International Headache Society (IHS) as recurrent, transient monocular visual disturbance occurring in close temporal association with typical migraine headache,[2] is controversial. A literature review by Hill *et al*[3] showed that only a minority of reported cases meet the IHS diagnostic

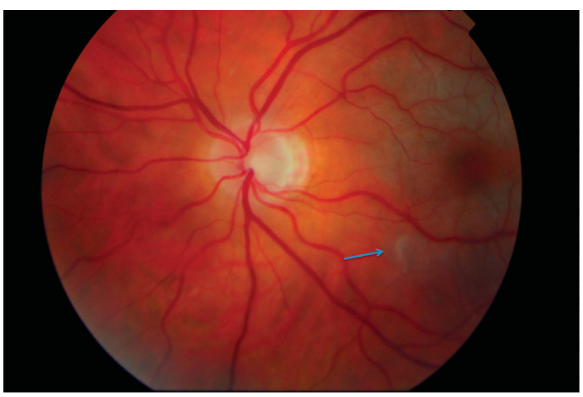

Figure 1 Left fundus colour photograph from a 63-year-old patient presenting with headaches and scintillating scotomata, showing an isolated cotton wool spot (arrow). Giant cell arteritis was later confirmed by temporal artery biopsy.

criteria. Even where they are met, this presentation still merits investigation. We have seen a 63-year-old gentleman with a 10-day history of generalised headaches, intermittent scintillating scotomata, and an isolated cotton wool spot on examination (Figure 1). Within 24 hours of presentation he developed a central retinal artery occlusion and, despite the absence of any systemic symptoms, a diagnosis of giant cell arteritis was later confirmed by biopsy. Ominously, retinal migraine was initially considered a likely diagnosis.

It is worth noting that the understanding of migraine pathophysiology has changed. Alterations in cortical blood flow, though associated with migraine, do not reliably explain the complex nature or time course of the symptoms experienced by migraineurs. Evidence to support the modelling of migraine as a pathological state of neuronal instability is growing.[4] Cortical migraine and retinal vasospasm may therefore be pathologically distinct entities.[5] One must also bear in mind that 'migraine' is a term widely used by the public and is the commonest neurological diagnosis. Therefore, when a history of migraine is elicited from a patient with cotton wool spots, it is important not to be falsely reassured by this finding as it may be purely incidental.

Conflict of interest

The authors declare no conflict of interest.

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Sir,
Reply to 'Response to: Cotton wool spots and migraine: a case series of three patients'

We would like to thank Svasti-Salee *et al* for their response to our letter entitled 'Cotton-wool spots and migraine: a case series of three patients'. The authors give a long list of all possible diagnoses that may present with cotton-wool spots (CWS). We would agree that patients with CWS should be appropriately investigated.

Indeed, all three of our patients had blood pressure measurement, routine serum biochemistry, and haematology tests (including inflammatory markers) on presentation. Furthermore, fundus fluorescein angiogram (FFA), optical coherence tomography (OCT), and Goldmann visual field testing were performed in each case. The patients, who were all below the age of 50, were then followed-up initially within 1 month, then around 2 months following this, then finally at 6 months, at which point symptoms and signs had completely resolved. All tests carried out were normal, other than the presence of an isolated CWS on the FFA and OCT images. We were unable to give all this detail due to the word count stipulation of this article.

We would also agree with Svasti-Salee *et al* that our observation, that isolated CWS and migraine could be linked, is speculation. Migraine is a complex disorder and, as the authors point out, the understanding of its pathophysiology is evolving. However, we would suggest that it seems likely that there is an association based on the evidence that we have cited and our observations in these three young, healthy patients.

Svasti-Salee *et al* appear to have misinterpreted the message of our article. We would certainly advocate appropriate investigation and follow-up of patients with CWS. The risk of an associated life or sight threatening disease becomes higher with the presence of any concerning clinical features such as increasing age, evidence of vascular disease elsewhere in the retina, or elsewhere in the body.

Conflict of interest

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