OCTA, a sensitive screening for asymptomatic retinopathy, raises alarm over systemic involvements in patients with SLE

We have read with great interest the letter by Conigliaro et al1 regarding the usefulness of an optical coherence tomography angiography (OCTA) for evaluating retinal microvasculature in patients with systemic lupus erythematosus (SLE). The authors suggested that OCTA is a sensitive tool to detect preclinical ocular changes, and retinal vascular abnormalities are related to renal involvement in patients with SLE. In addition to this, we wish to emphasise that patients with abnormal eye findings should be closely followed, even if it is asymptomatic and in an early phase, keeping in mind the possibility of neuropsychiatric SLE.

Previous study showed that patients with SLE with eye involvement often have neuropsychiatric dysfunction as well,2 and we here report a case of asymptomatic retinal vasculitis incidentally detected by OCTA during ophthalmological examination prior to the introduction of hydroxychloroquine (HCQ). The patient had no ocular complaints at the onset, but headache and photophobia rapidly developed, which were complicated by neuropsychiatric SLE.

A 37-year-old Japanese man was diagnosed with SLE based on malar rash, wrist arthralgia, leucocytopaenia, and positive antinuclear antibody and antidouble-strand DNA antibody titres. He had no ocular complaints; however, ophthalmological examination prior to HCQ therapy incidentally found retinal vasculitis in both eyes. The patient was initially treated with 30 mg of oral prednisolone. For the next 10 days, he rapidly developed bilateral photophobia. A branch of the retinal vein was occluded and an extensive avascular area was detected by wide-angle OCTA (figure 1A). Moreover, headache and manic-depressive disorder appeared with bilateral macular shadows in the basal ganglia on head MRI fluid-attenuated inversion recovery images. We diagnosed that retinal vasculitis was highly active and exacerbated, complicated with neuropsychiatric SLE. Pulse methylprednisolone therapy (1 g/day ×3 days) and pulse cyclophosphamide therapy (1300 mg per body, equivalent to 750 mg/m²) were performed, followed by oral prednisolone at 60 mg/day. Headache abated quickly and his mental status stabilised thereafter. His photophobia resolved 5 months after the treatment began. The extent of the avascular area gradually improved, and wide-angle OCTA after 6 months from hospitalisation showed signs of angiogenesis and recanalisation of retinal microvascularisation (figure 1B).

Symptomatic retinopathy has been reported in 0.66% of patients with SLE,2 whereas when asymptomatic patients are included approximately 10% of patients with SLE are reported to have lupus retinopathy.3 By using sensitive screening tools such as OCTA, earlier changes of ocular findings can be picked up in patients with SLE. In addition, HCQ is widely used and the number of patients with early-onset or new-onset SLE who undergo ophthalmological screening has been increasing. For these reasons, asymptomatic retinopathy will be found in more patients with SLE. We should once again realise that retinal vasculitis is an important manifestation of SLE, even if the patient is asymptomatic, as in this case. Furthermore, physicians need to be in close contact with ophthalmologists, and patients with abnormal eye findings should be closely followed because they have the possibility of rapid progression of systemic symptoms, including neuropsychiatric SLE.

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