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Sir,

Variations in prevalence estimates of epiretinal membranes

We read with interest the article by You *et al* describing the prevalence of epiretinal membranes (ERM) in the Beijing Eye Study (BES).[1] While varying prevalence rates of ERM have been reported in different ethnic groups, with rates from 6 to 11.8% in whites, 18.5% in Hispanics, and 4% in Japanese,[2,3] the BES reported the lowest prevalence rate in the literature (2.2%). Interestingly, the prevalence estimates were equal for both cellophane macular reflex (1.8%) and premacular fibrosis (1.8%). Previous studies, however, show that cellophane macular reflex, an earlier form of ERM, is invariably more common than premacular fibrosis, a later stage of ERM. Additionally, the data presented for the associations are inadequate for readers to examine possible reasons for the lower prevalence. For example, there are no point estimates (i.e., odds ratios) accompanying the *P*-values and 95% confidence intervals. It is also unclear whether the associations were adjusted for age. All reported associations therefore can only be interpreted as unadjusted, which are not helpful in understanding risk factors associated with age-related conditions.

Nonetheless, we offer several possibilities for why their findings contrast with existing epidemiological data. First, grading of ERM was based on non-stereoscopic retinal photographs in the BES, while most other studies used stereoscopic retinal photographs. The use of non-stereoscopic photographs may miss subtle retinal abnormalities, such as early age-related macular degeneration[4] and ERM.[2] The BES has also previously reported low rates of age-related macular degeneration in their sample.[5] Second, while the authors described that ERM assessment was performed by a trained grader, actual reliability of the grading process was not defined. Some information regarding intra- and inter-grader variability would be helpful. Third, nuclear cataract was highly prevalent (82%) in the BES. ERM rates may be lower in eyes with nuclear cataract owing to increased difficulty in detection of this lesion.[4] However, the authors claim that 98.6% of the sample had gradable retinal photographs. All these factors are potential sources of ascertainment errors that could lead to underestimation of ERM in the BES. Further studies are needed to provide clear understanding of possible racial/ethnic differences in the epidemiology of ERM.

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Sir,

Reply to Cheung *et al*

The authors would like to thank Dr Cheung and colleagues for their letter and interest in the article.[1] The authors agree with Dr Cheung and colleagues that for the descriptions of the correlations between the epiretinal membranes and the ocular and general parameters, the correlation coefficient, the *P*-value, and the 95% confidence intervals of the odds ratios were given, while the odd ratios themselves were omitted. The description of the statistical analysis would have been considerably more precise, if the odds ratios had additionally been given, which now can only be estimated from their 95% confidence intervals in the manuscript.

The authors also agree with Dr Cheung *et al* that, as also pointed in the article,[1] differences in the grading method including use of monoscopic *versus* stereoscopic photographs may be one of the reasons for the differences in the prevalence rates of the epiretinal membranes between the various studies. In addition, as Dr Cheung and colleagues point out, nuclear cataract may have prevented the delectability of epiretinal membranes in some eyes with considerable cataract.

Although the intra-observer repeatability of the assessment of the epiretinal membranes was not measured in the Beijing Eye Study, the grader was trained and repeatedly checked by a panel of experienced clinicians, particularly in cases of doubt.

In summary, the authors completely agree with Dr Cheung in his constructive criticism of the weak

points of the study and thank him and his colleagues for their remarks.

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Proprietary interest: none

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Sir,

Delayed transient macular ischaemia due to ocular siderosis

We present a case of unilateral, transient macular ischaemia, presenting 1 year after vitrectomy, following classical ocular siderosis.

Case report

A 35-year-old man reported blurred vision in his left eye for 4 months; he recalled hammering concrete 6 months previously. Left visual acuity was 6/24, 6/9 pinhole, right 6/4. The left eye displayed classical ocular siderosis, with mydriasis, iris rust staining, ferrous lenticular deposits, and posterior subcapsular cataract. Additionally, there was a full-thickness corneal scar, traumatic iridotomy and an inferior pars plana foreign body (FB). The right eye was normal throughout.

Left pattern electroretinogram and rod-specific responses were virtually undetectable. Left maximal responses were profoundly electronegative with a normal a-wave.

He underwent three-port pars plana vitrectomy, forcep FB removal, phacoemulsification, and lens implantation, without intravitreal antibiotics. Visual acuity was 6/6 2 weeks post-operatively, and 1 year later remained 6/6; however, examination revealed new macular cotton wool spots (Figure 1). Fundus fluorescein angiography (FFA) showed patchy macular capillary non-perfusion and cystoid macular oedema, which was not observable clinically (Figure 2).

Despite proven macular ischaemia, visual acuity and electrodiagnostics remained unchanged. The right eye remained normal. Blood pressure, full blood count, glucose, electrolytes, autoantibodies, and clotting were normal. Over 6 months, the cotton wool spots changed slightly in pattern, and then disappeared.

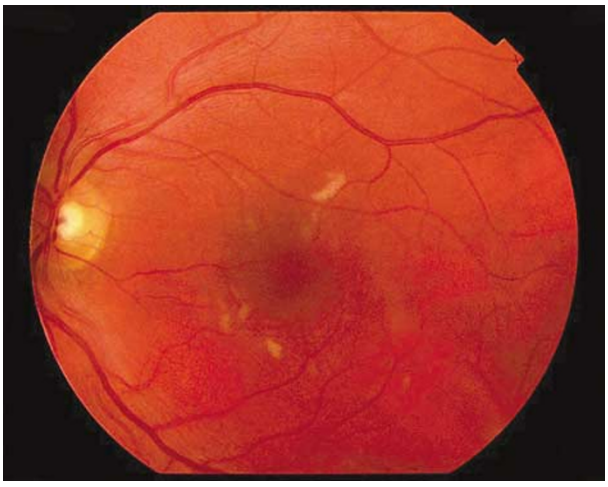

Figure 1 Fundus photograph of the left eye reveals macular cotton wool spots.

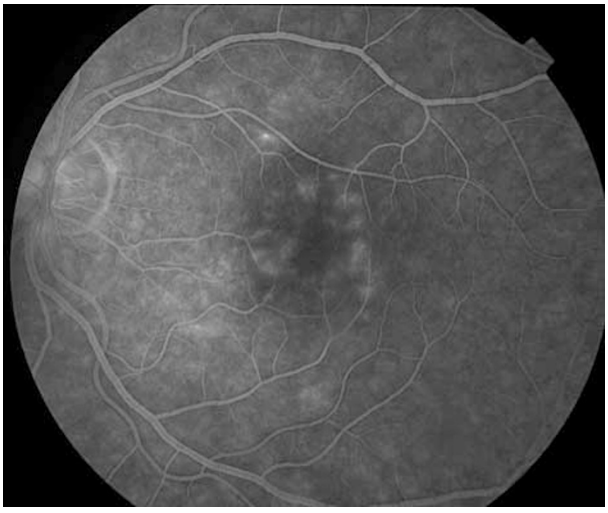

Figure 2 Fundus fluorescein angiogram of the left eye reveals patchy macular capillary non-perfusion and cystoid macular oedema.

Comment

In this classical case of ocular siderosis, transient ischaemic microangiopathy developed 1 year after vitrectomy and FB removal. Visual acuity and electrodiagnostics were unaffected. Alternative local and systemic causes of retinal ischaemia were excluded.

Cystoid macular oedema, arteriolar attenuation, and retinal pigment epithelium changes owing to siderosis have been reported, mimicking retinitis pigmentosa.[1–3] A gradient of microvascular ischaemia away from an iron FB has been reported;[1] in our case, FB and ischaemia are distant. In a similar report of delayed toxic macular microvasculopathy, visual acuity decreased 1 year after vitrectomy and FB removal, with perifoveal arcade staining on FFA and presumed perivascular iron deposits.[2]

Pathologically, iron dispersion throughout the globe results in intraretinal accumulation within intracellular siderosomes and oxidative injury.[4,5] We propose this to