

CORRESPONDENCE

Magnetic resonance imaging and the dangers of orbital foreign bodies

EDITOR,—We read with interest the letter from Kulshrestha and Misson¹ as we too have seen a patient who developed eye pain on entering the magnetic resonance image scanner secondary to a ferrous foreign body in the eyelid.² He was screened with a questionnaire but it did not jog his memory sufficiently. When the foreign body was detected, he clearly recalled an eye injury while hammering 8 months previously.

Both cases involved ferromagnetic foreign bodies after hammering. Hammering or chiselling accounts for 70% to 87% of metallic intraocular foreign bodies.³⁻⁵ The patients are virtually always male, usually under 40 years old and frequently work with metal as mechanics, engineers, or doing DIY at home.^{3,4}

We agree that a thorough history with specific questions is the most likely way to get patients to remember previous intraorbital foreign bodies before MRI scanning. We, therefore, recommend that screening questionnaires ask about any past eye injuries from hammering or chiselling as well as occupations and hobbies. A plain x ray should be taken if there is any doubt.

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- 1 Kulshrestha M, Misson G. Magnetic resonance imaging and the dangers of orbital foreign bodies. *Br J Ophthalmol* 1995;79:1149.
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Activated protein C resistance in central retinal vein occlusion

EDITOR,—Is it known whether resistance to activated protein C is found only in younger patients with central retinal vein occlusion (CRVO)? In the March 1996 issue of the *BJO* there were two papers and an editorial regarding CRVO and resistance to activated protein C. The paper by Williamson *et al*¹ studied patients, ranging in age from 27 to 87 years, with a CRVO and they found that a higher percentage of patients with CRVO had activated protein C resistance than did controls. However, I don't find anything in the article indicating that they broke the results down by age groups. They do state 'the results from patients over the age of 64 years were compared with the results from a local population study of individuals above this age' but do not report the results.

Larsson *et al* reported on activated protein C resistance in a group of patients below 50

years of age with a CRVO.² They also found that this group of patients had a greater than expected incidence of activated protein C resistance compared with controls. They do not state why they only studied a younger group of patients.

Hunt, in an editorial, states that screening for thrombophilia should be performed in younger patients and this was stated as being less than 50 years of age.³ However, no mention is made of why only younger patients should be screened.

What is the evidence that an increased incidence of activated protein C resistance is found only in younger patients with a CRVO? If resistance to activated protein C is congenital why would resistance to activated protein C not be found in older patients also? The question has a great deal of significance because of who has to be screened when patients present with a central retinal vein occlusion.

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- 1 Williamson TH, Rumley A, Lowe GDO. Blood viscosity, coagulation, and activated protein C resistance in central retinal vein occlusion: a population controlled study. *Br J Ophthalmol* 1996;80:203-8.
- 2 Larsson J, Olafsdottir E, Bauer B. Activated protein C resistance in young adults with central retinal vein occlusion. *Br J Ophthalmol* 1996;80:200-2.
- 3 Hunt BJ. Activated protein C and retinal vein occlusion. *Br J Ophthalmol* 1996;80:194.

Reply

EDITOR,—The patients with activated protein C (APC) resistance in our study were spread across the age range of the cohort and were not only in the younger age group. The numbers were too small, therefore, for any meaningful correlation with age to have been discernible. However, examination of the individual cases with CRVO and APC resistance demonstrated no particular clinical pattern as was stated in the results and discussion. For APC resistance the patients were age matched case for case with controls as stated in the methods. The control group over 64 years of age mentioned by Sanborn was used to compare the results of von Willebrand factor, tissue plasminogen activator, and plasminogen activator inhibitor. It would not be difficult to envisage an increase in the prevalence of APC resistance in the young if, for example, this was associated with increased mortality at a younger age. However, although there is an association with thrombotic tendencies we are unaware that an association with increased mortality has been proved as yet.

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Reply

EDITOR,—We thank Dr Sanborn for his interesting questions regarding activated protein C resistance in central retinal vein occlusion. In our article we state that glaucoma, hypertension, atherosclerosis, and diabetes are factors that are well known to be associated with the disease.¹ However, studies in young people with a history of CRVO have been done but no predisposing factors for thrombosis have

emerged.²⁻⁵ Since there is no explanation as to why younger people get a CRVO we found it more interesting to test our hypothesis that activated protein C resistance could be a cause of CRVO in younger patients. At the moment we are finishing a study concerning activated protein C resistance in patients older than 50 years and we hope that this will answer his question as well as ours.

Regarding the question concerning screening for thrombophilia in patients with a CRVO, we feel that it is difficult to give any recommendations since there are no facts to support thrombophilia screening in patients with a CRVO. We refer the older patients to their general practitioner for a medical check up including hypertension and diabetes. In these patients we do not perform a thrombophilia screening. In younger patients who do not have hypertension, diabetes, or glaucoma, it is more likely that their CRVO is caused by an error in the coagulation system, and that is why we do perform a thrombophilia screening, including activated protein C resistance in these patients.

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- 1 McGrath MA, Wechsler F, Hunyor ABL, Penny R. Systemic factors contributory to retinal vein occlusion. *Arch Intern Med* 1978;138:216-20.
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- 5 Priluck IA, Robertson DM, Hollenhorst RW. Long term follow-up of occlusion of the central retinal vein in young adults. *Am J Ophthalmol* 1980;90:190-202.

Reply

EDITOR,—Dr Sanborn raises queries about screening for activated protein C resistance (APCR) and other thrombophilic defects in older patients with central retinal vein thrombosis (CRVO).

The editorial comments were confined to younger patients because, as Dr Sanborn noted, the association between APCR and CRVO has been established fully only in younger patients. Clearly, clinical studies of the prevalence of APCR in older patients are required.

Furthermore, the main purpose of a screening test is to alter clinical management. If APCR was found associated with RVO, the next step would be to consider oral anticoagulant therapy, which is of unknown benefit in this situation. As the main complication of oral anticoagulants is bleeding, and the risk of bleeding increases in those over 65,¹ I was reluctant to encourage their use in older patients until we know more about the utility of oral anticoagulants in patients with CRVO.

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- 1 Hirsh J, Fuster V. AHA Medical/Scientific Statement: guide to anticoagulant therapy Part 2: oral anticoagulants. *Circulation* 1994;89:1469-80.