our case. We hypothesize that some extent of inflammation induced by the operation might be associated with the reduction of the residual orbital mass.

References


Age-related macular degeneration is an inflammatory disease possibly treatable with minocycline

Emil Wirostko,1 William J. Wirostko2 and Barbara M. Wirostko1

1Columbia University, College of Physicians and Surgeons, New York, USA
2Medical College of Wisconsin, Milwaukee, Wisconsin, USA

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Sir,

Age-related macular degeneration (AMD) is a major medical problem. It remains the most common cause of blindness for older patients in developed nations, and is expected to become even more prevalent as the population ages (Ryan & Schacht 2001). Its economic and psychological costs are staggering, both for those responsible financially for treatment, and for those suffering blindness.

Age-related macular degeneration exists in both non-exudative and exudative forms. The non-exudative form involves atrophy of the central retina with a slow and progressive loss of central vision. The exudative form is characterized by the growth of new blood vessels through Bruch’s membrane into the subretinal space, with often sudden and profound vision loss. Both forms may coexist, and the presence of AMD in one eye suggests the likelihood of disease in the other (Ryan & Schacht 2001).

Because it lacks an aetiology, treatment for AMD remains limited. Laser photocoagulation and photodynamic therapy are helpful in a select minority, but often cannot prevent further vision loss, central scotomata formation or recurrent neovascularization (Ryan & Schacht 2001). Repeat treatments are often necessary at a financial cost to society. High dose antioxidants with zinc can also help retard disease progression, but may not prevent further vision loss either (Age-Related Eye Disease Study Research Group 2001). The effect of vitamin supplementation on mild disease remains unclear.

Ischaemic vascular disease is probably involved in the pathology of AMD. Risk factors common to both include increasing age, cigarette smoking, hypertension, angina, positive family history, and use of thyroid medication, oral antacids and hydrochlorothiazide (Ryan & Schacht 2001). An association between ischemia and AMD is not surprising as the macula has only a single blood supply, the eye is an end organ, and the retina has the highest uptake of oxygen in the body. A recent study by Kalayoglu et al. (2003) demonstrated that the prokaryotic pathogen Chlamydia pneumoniae, which is emerging as a risk factor for cardiovascular disease, may play a role in AMD. The authors demonstrated a serological association between AMD and anti C. pneumoniae antibodies (Kalayoglu et al. 2003).

Pathogenesis of AMD also involves chronic granulomatous inflammation. A series of elegant studies has documented the involvement of giant cells and monocytes in both non-exudative and exudative disease (Penfold et al. 1986, 1987). In exudative disease, lymphocytes appeared to be intimately involved with the growth of choroidal capillaries through Bruch’s membrane. It is likely that they represent the source of supply of the potent lytic enzymes, including matrix metalloproteinases, collagenases and lipases, necessary for neovascularization and the degradation of Bruch’s membrane. The source of inflammation may be drusen. Drusen represent cellular remnants from degenerate retinal pigment epithelial cells, and contain inflammatory stimuli, including acute phase reactants, immunoglobulins, fibrinogen and complement. Their formation may be analogous to that in Alzheimer’s disease and atherosclerosis, where the accumulation of extracellular plaques and deposits elicits an inflammatory response that exacerbates the effects of the primary pathogenic stimulus (Anderson et al. 2002). Inflammation can exacerbate underlying ischaemia by inducing vascular endothelial hyperplasia and hypertrophy.

Implicating inflammation in the pathogenesis of AMD suggests that oral tetracyclines may help retard the progression of AMD.
disease progression. Tetracyclines inhibit lymphocyte proliferation, suppress leucocyte chemotaxis, inhibit angiogenesis, limit inflammatory cytokines and inactivate matrix metalloproteinases, collagens and lipases. They have proven effective for controlling inflammation in a wide variety of idiopathic inflammatory diseases, including rheumatoid arthritis, scleroderma, acne rosacea and vulgaris, where many patients have used them safely for long durations. In a randomized, double-blind, controlled study of 48 weeks duration, minocycline (100 mg po bid) (a semisynthetic tetracycline) was found to be safe and effective for improving clinical and chemical parameters of chronic rheumatoid arthritis (Tilley et al. 1995). A year of therapy was necessary to achieve response, with improvements continuing thereafter (O’Dell et al. 1999). Minocycline is also beneficial in arresting scleroderma (Robertson et al. 2003), and may be beneficial for treating the inflammation of multiple sclerosis (Brundula et al. 2002).

The authors propose a trial of minocycline as treatment for AMD. Oral minocycline is rapidly absorbed, demonstrates a prolonged half-life, possesses antioxidant capabilities, is lipid soluble, and attains high concentrations within the eye (Tilley et al. 1995; O’Dell et al. 1999). With chronic therapy, we believe minocycline will be helpful for arresting disease progression in early AMD, and be beneficial for retarding neovascularization in advanced disease.

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References

Correspondence:
William J. Wirostko MD
The Eye Institute
925 N 87th Street
Milwaukee
Wisconsin 53226
USA
Tel: +1 414 456 7875
Fax: +1 414 456 6300
Email: wirootko@mcw.edu

Vitreous haemorrhage in a 19-year-old Japanese woman using an oral contraceptive

Akira Higa1, Masahiko Ayaki1, Hitoshi Nishihara1, Toshu Inoue1, Yoshiko Ishida1, Shigeo Yaguchi1, Genichiro Tsuda2 and Tomoko Saotome3

1Department of Ophthalmology, Fujigaoka Hospital, Showa University School of Medicine, Fujigaoka, Yokohama, Japan
2Tsuda Eye Clinic, Kawasaki, Japan
3Fureai Yokohama Hospital, Yokohama, Japan

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Sir,

The use of oral contraceptives was approved in Japan in 1999 but they are not yet widely used due to social and traditional factors. Therefore, few cases of ocular manifestations related to oral contraceptives have been reported. In countries where the use of oral contraceptives is common, many ocular side-effects have been reported, including vision-threatening manifestations in the form of macular oedema, optic neuritis, retinal vein occlusion,