

Retinal Pigment Epithelium Tears Linked to Bevacizumab?

The investigators suspect a tissue response rather than an injection-related phenomenon.

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Use of intravitreal injections of bevacizumab to treat age-related macular degeneration (AMD) has increased over the past year, but doctors should be aware of a possible link between the treatment and retinal complications. In clinical experiences gathered by ophthalmologists in daily practice, the reports on intravitreal bevacizumab (Avastin; Genentech, San Francisco) in scientific meetings, and recently published studies thus far, all suggest a therapeutic benefit of the drug as a treatment of exudative AMD. Previous trials have however examined the development of retinal pigment epithelium tears in eyes that underwent photodynamic therapy or an intravitreal injection of pegabtanib or triamcinolone acetonide as treatments for AMD. Despite the increasing application of this treatment, however, there has been little in the way of randomized clinical trials on the intravitreal injection of bevacizumab.

In our study published in the *American Journal of Ophthalmology*,¹ we found that intravitreal injections of bevacizumab for treatment of retinal pigment epithelium detachment secondary to AMD, may increase the risk of tears of the retinal pigment epithelium in eyes with exudative AMD.

INTERVENTIONAL CASE SERIES USED

An interventional case series was used to analyze 63 patients with a loss in visual acuity caused by detachment of the retinal pigment epithelium as a result of AMD. All patients had received an injection of 1.5 mg bevacizumab as part of their routine clinical care for neovascular AMD.

During a 2-month follow-up period, a retinal pigment epithelium tear was detected in 6% (n=4) patients and was observed as early as 1-week after treatment. Compared with baseline value, visual acuity at the end of

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the follow-up was unchanged in three of the four patients. The fourth patient saw a decrease in visual acuity from 20/60 to 20/100.

Although the investigation did not include a control group, and it is understood that retinal pigment epithelium tears may occur spontaneously, the relatively high frequency of retinal pigment epithelium tears after an intravitreal injection of bevacizumab suggest that this might be considered as a potential side effect. Since the retinal pigment epithelium tears occurred earliest at 1 week after injection, we also suspect a tissue response rather than an injection related phenomenon.

The findings of the present report suggest that randomized controlled trials may have to be performed before statements about the safety of this treatment may be made. ■

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1. Spandau U, Jonas J. Retinal Pigment Epithelium Tear After Intravitreal Bevacizumab for Exudative Age-Related Macular Degeneration. *American J of Ophthalmol.* 2006; 142:1068-1070.