Treatment of wet and dry types of age-related macular degeneration

Age-related macular degeneration (AMD) is a common cause of blindness in developed regions.[1] Late-stage AMD is categorized as the neovascular (wet) type and the atrophic (dry) type. Despite the availability of several potent drugs for the treatment of wet-type AMD, the problem of reducing treatment burden and enhancing treatment compliance remains a challenge. No proven treatments are available for dry-type AMD.

In this issue of the *Hong Kong Journal of Ophthalmology*, Kwok et al[2] report the 2020 updates on recommendations for the treat-and-extend regimen for wet-type AMD. The authors recommend maintenance of treatment if there is no loss of ≥5 ETDRS (Early Treatment Diabetic Retinopathy Study) letters, decreased intraretinal fluid, stable residual subretinal fluid ≤200 μm, no new macular hemorrhage, and no new neovascularization. The recommended criteria for extension or reduction of treatment can readily be derived from these maintenance criteria.

Also in this issue, Wong and Kwok[3] review emerging treatments for dry-type AMD with geographic atrophy (GA). Both a phase 2 trial of a C3 inhibitor (intravitreal pegcetacoplan) and a phase 3 trial of a C5 inhibitor (intravitreal avacincaptad pegol) show positive results. Furthermore, results of two phase 3 trials of the C3 inhibitor (pegcetacoplan) have recently been announced by the manufacturer and presented orally at the Annual Meeting of the American Academy of Ophthalmology.[4] The DERBY (621 patients enrolled) and OAKS (637 patients enrolled) trials are multicenter randomized double-masked sham-controlled studies of the efficacy and safety of intravitreal pegcetacoplan in patients with GA secondary to AMD. After 12 months of monthly or every-other-month treatment with pegcetacoplan, OAKS showed a reduction in GA lesion growth of 22% (p=0.0003) and 16% (p=0.0052), respectively, whereas DERBY showed a reduction of 12% (p=0.0528) and 11% (p=0.0750), respectively, but did not meet the primary endpoint of GA lesion growth. Nonetheless, in a prespecified analysis of the combined studies, pegcetacoplan was shown to decrease GA lesion growth in patients with extrafoveal lesions by 26% (p<0.0001) after monthly treatment and 23% (p=0.0002) after every-other-month treatment. We look forward to formal peer-reviewed publication of the results of these trials.

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