BIOBUSINESS BRIEFS

DEAL WATCH

Alcon invests in first non-surgical therapy for common eye disorder

ThromboGenics has entered into a commercialization agreement with Alcon for its experimental therapeutic ocriplasmin, which has successfully completed Phase III trials for an eye disorder known as symptomatic vitreomacular adhesion (VMA). Under the terms of the agreement, Alcon will be granted rights to market the drug outside the United States, whereas ThromboGenics will receive an initial sum of €75 million, and up to a total of €375 million including milestone payments.

As we age, the vitreous of the eye naturally begins to liquefy, which may cause it to separate from the retina — a process termed posterior vitreous detachment (PVD). However, although this is a very common and typically harmless condition, complications can occur. Peter Kaiser, Cole Eye Institute, Cleveland Clinic, USA, explains: "PVD is common in individuals over the age of 50; however, in many patients, the detachment is incomplete. A primary complication of incomplete PVD is VMA, where the vitreous pulls on the macula or centre of vision, leading to distorted vision, blurry vision and even permanent loss of central vision owing to the formation of a macular hole. Thus, VMA has a role in the pathogenesis of many significant retinal diseases, including vitreomacular traction syndrome, macular hole, macular degeneration, diabetic macular oedema and many others."

There are currently no pharmacological therapies available for VMA, and surgical removal of the vitreous (vitrectomy) represents the only treatment option. "The decision to operate is based on the underlying disease and concomitant visual symptoms," says Kaiser. However, although surgery is an effective solution, there are limitations. "Potential complications of surgical intervention to treat VMA include infection, bleeding and retinal detachment," notes Kang Zhang, University of California San Diego, USA.

Ocriplasmin (microplasmin) is a truncated form of the human serine protease plasmin, which targets fibronectin, laminin and the type IV collagen fibres that adhere the vitreous to the retina. The agent has completed two pivotal Phase III trials (TG-MV-006 and TG-MV-007) involving a total of 652 patients at 90 centres across the United States and Europe. Both trials met the primary end point of non-surgical resolution of focal VMA, 28 days after a single intravitreal injection of ocriplasmin (observed in 26.5% of treated individuals compared with 10.2% of those receiving placebo). In addition, 40.6% of individuals experienced closure of full thickness macular hole, and 13.4% of individuals had induction of total PVD. Visual acuity and visual function were improved with ocriplasmin, and treatment was generally well tolerated.

"Ocriplasmin offers a safe and effective option for early intervention and resolution of symptomatic VMA and macular hole. In the past, vitreolysis (dissolving the vitreous traction) was not possible because no previous agent induced both vitreous liquefaction and vitreoretinal separation with an acceptable safety profile. Importantly, in cases where ocriplasmin does not work, we still can safely perform vitrectomy, so there is very little downside," says Kaiser. Given the role of VMA in the pathogenesis of various eye diseases, ocriplasmin may have several applications. "Other potential uses of this treatment may include facilitating retinal break closure, reducing and treating proliferative diabetic retinopathy and vitreous haemorrhage, as well as facilitating surgeries of retinopathy of prematurity and proliferative vitreoretinopathy," notes Zhang.

Sarah Crunkhorn