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DEVELOPMENT OF NOVEL RADIAL RELAXATION RETINECTOMY METHOD ON RETINAL DETACHMENT WITH ADVANCED PROLIFERATIVE VITREORETINOPATHY

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Retinal detachment (RD) remains one of the most challenging cases in vitreoretinal surgery. It becomes more challenging as the condition advances, marked by abnormal cellular accumulation creating traction to the retina known as proliferative vitreoretinopathy (PVR). The presence of PVR may reduce the anatomical success rate of RD treatment due to double burden and difficulty level of the surgery. Surgical treatment of RD with PVR may involve multiple procedures including scleral buckling, membrane peeling, retinotomy, retinectomy and intraocular tamponande injection. To date, vitrectomy, membrane peeling, retinotomy with additional silicon oil tamponade has been considered as the best technique for treatment of RD with advanced PVR. Retinotomy has been widely used for their management. Subsequent development of 360°, circumferential retinotomy was done for advanced PVR. Recently, peripheral 360° retinotomy, anterior flap retinectomy and radial retinotomy were combined to improve anatomical outcomes of RD with advance PVR. These techniques are shown to have considerable anatomical success rate than previous retinotomy alone. However, recent report has suggested that only a small portion of patients achieved good visual acuity and there were substantial number of post-operative complications such as persistent hypotony, corneal damage and retinal redetachment. Theoretically, in RD, there is tangential force caused by PVR that plays key role in creating the traction and ultimately reduce the success rate of postoperative retinal reattachment. Therefore, any procedures performed during surgical treatment of RD with PVR should aim to reduce or eliminate this tangential force to achieve anatomical reattachment of the retina. This review aimed to show high success rate of radial relaxing retinectomy as a novel method in eliminating tangential force due to RD with advanced PVR. As an alternative to silicone oil, this technique combined with intravitreal gas as tamponade was able to yield excellent anatomical and functional outcomes

Biography

Waldensius Girsang is a Senior Consultant Ophthalmologist in the Surgical and Medical Retina division at Jakarta Eye Center (JEC) Hospital, the largest eye centre in Indonesia. He obtained his Medical Doctor certification from Faculty of Medicine, University of North Sumatera and his Ophthalmologist certification from Faculty of Medicine, University of Indonesia. He joined a fellowship program at JEC and Vitreoretinal Training at Zhongshan Ophthalmologic Center, Sun Yat Sen University, Guangzhou, China. He has his expertise in General Ophthalmology, Cataract, and Vitreoretinal Surgery. Girsang's clinical works and research focus is on diseases of the retina. His practice involves the management and surgery for retinal diseases in combination with anterior segment disease. He is one of the scientific committee members in Indonesia Ophthalmology Association (IOA), Indonesian Medical Association [IMA] – IDI, and European Society of Retina Specialist [EURETINA].

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