

## **Management of Vitreoretinal Pathology in Eyes Undergoing Osteo-Odonto Keratoprosthesis Surgery**

*Authors: Doric Wong, Anton Javellana, Zena Lim, Jet Bautista, Chong-Lye Ang, Donald Tan (Singapore National Eye Centre; Singapore)*

### **Background/Problem:**

The osteo-odonto keratoprosthesis (OOKP) is used to treat end stage anterior segment opacification due to severe ocular surface disease. Assessment of the retina, as well as visualisation and access for vitreoretinal surgery is severely hampered in eyes that require, or have an OOKP.

### **Methods:**

Managing vitreoretinal problems in these eyes requires an individualised staged approach and coordination with the anterior segment surgeon. In surgery, temporary keratoprotheses and endoscopes are required for visualisation. Techniques and steps have to be modified to successfully complete surgery. Accurate B scan ultrasonography is important pre and post OOKP surgery.

### **Effectiveness / Safety:**

Eight cases were managed. Three eyes had untreated limited retinal detachments. Repair of these retinal detachments preceded completion of the OOKP procedures. One eye required to repeat vitrectomy for recurrent detachment with the OOKP in place. One eye had a choroidal haemorrhage resulting in abortion of OOKP stage two surgery. The choroidal haemorrhage resolved, leaving a localized traction-associated retinal detachment that was repaired during repeat stage two surgery. Two eyes had previous retinal surgery with silicone oil in place prior to OOKP surgery. Stage two surgery was completed with assessment and confirmation of stability of retinal pathology. Two eyes required vitreo-retinal intervention for endophthalmitis. One developed infection after stage two surgery and was successfully salvaged. The other developed endophthalmitis after endoscopic cyclophotocoagulation for glaucoma 18 months after stage two surgery. This eye was lost in spite of aggressive intervention.