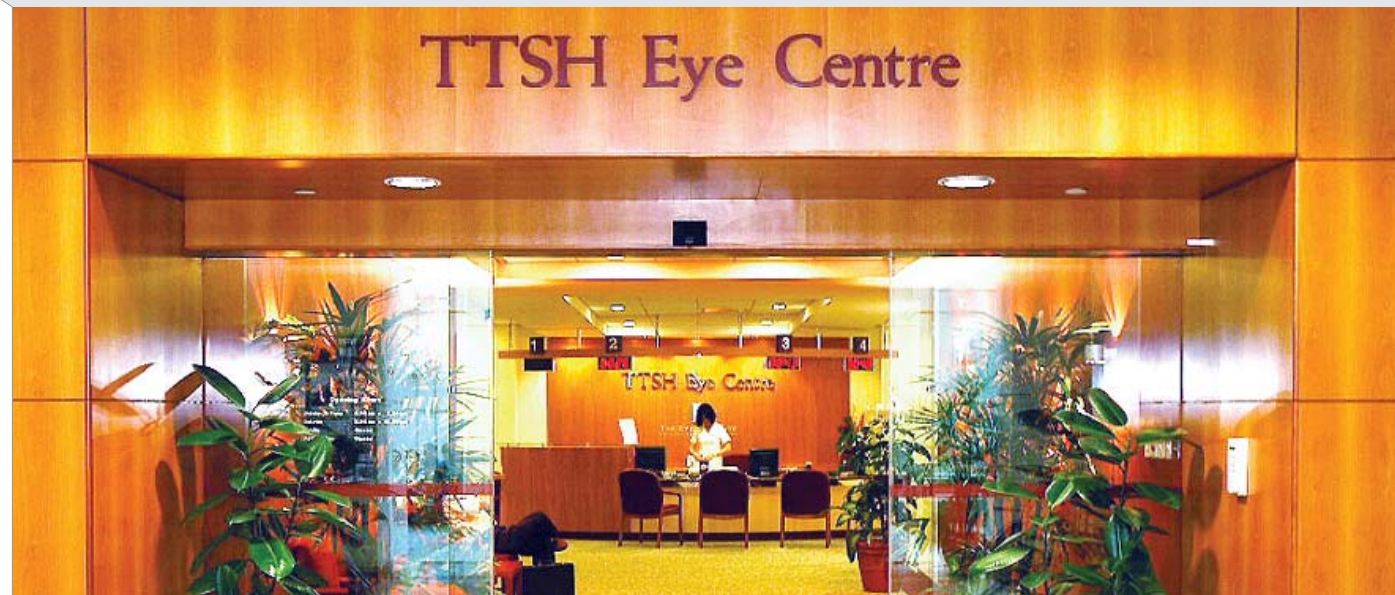


2006: Asia's First 23-Gauge Vitreo-Retinal Surgery

by Tan Tock Seng Hospital



23-GAUGE SUTURELESS VITREO-RETINAL SURGERY: REDUCED SURGICAL TIME AND BETTER OUTCOME FOR PATIENTS

Our ophthalmologists have successfully performed hundreds of vitreo-retinal surgeries in the past one year utilising a new minimally invasive, sutureless technique.

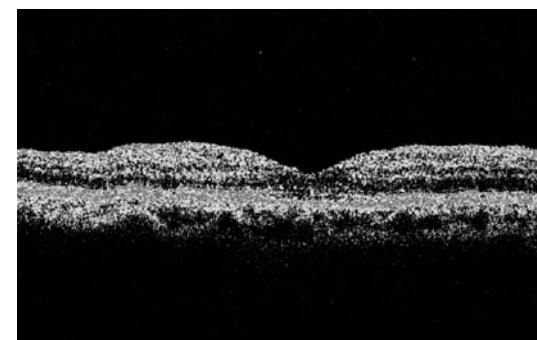
The new method has benefited almost all TTSH patients with retinal conditions requiring vitrectomy (used to surgically treat blinding retinal conditions such as diabetic vitreous haemorrhage, retinal detachment, macular holes, epiretinal membranes, infection, trauma, etc), without the pain and discomfort from conventional surgery. An additional advantage is shorter surgical duration, as well as shortened recovery time for the patient.



Minute Scleral Wound following 23G Surgery



Macular hole (Pre-operation)



Macular hole (Post-operation)

At the core of this new technique is a more refined 23 gauge set of specialised tools. The current standard technique for vitrectomy requires the use of sutures and larger 20-gauge instruments with longer operating time.

TTSH vitreo-retinal team has endorsed this new technique, after finding it to be highly efficient and beneficial to our patients.

This new surgical system utilises the trocar-cannula system where the entry site (sclerostomy) is first prepared by a slanting surgical blade to create a shelving wound through the conjunctiva and sclera. The cannula is then introduced into the wound via a trocar. Retinal surgery can then be performed by gaining access through the sclerostomies. After its completion, the cannula is simply withdrawn, with the wound self-sealing suturelessly. As operating time is markedly reduced, the operative risks and costs in patients are also reduced. With faster visual recovery, patients can return back to their work or routine activities with fewer clinic follow-ups. Depending on their conditions, they can be back at work in 2 weeks, compared to the usual 4 to 6 weeks of medical leave issued for the conventional vitrectomy.

This new method closely mirrors an earlier incarnation: a 25-gauge system introduced 2 years ago, similarly sutureless yet limited in its scope, as it was an extremely delicate set that was unsuitable for more complex retinal conditions. The 23-gauge instruments are more stable and robust enough even for demanding surgery. Surgical outcomes with 23-gauge vitrectomy have been very encouraging, with no significant complications reported at TTSH.