

GP IN-SYNC

A monthly e-newsletter by
NUH GP Liaison Centre



**GP Appointment
Hotline +65 6772 2000**

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Specialist in Focus



Dr Chelvyn Sng

BA, MBBChir, MA(Cambridge), MRCSEd, MMed

Consultant

Department of Ophthalmology,
National University Hospital (NUH)

Dr Chelvyn Sng is a Consultant and Assistant Professor who is subspecialty-trained in glaucoma, and a fellow of the Royal College of Surgeons of Edinburgh. As a recipient of the Academic Medicine and Development Award, she completed the glaucoma fellowship at Moorfields Eye Hospital in London, where she was trained in the management of complex and severe glaucoma. She is also trained in complex cataract surgery, including the scleral fixation of intraocular lenses and femtosecond laser cataract surgery. After her fellowship, she remains an Honorary Consultant at Moorfields Eye Hospital.

Dr Sng is accredited in the use of several novel MIGS devices (eg. iStent, Aquesys XEN-45 gel stent, trabectome). She is currently conducting a study investigating the use of the iStent in the treatment of angle closure glaucoma. Dr Sng is the co-inventor of a new glaucoma drainage device, which is currently undergoing patent application. She received the New Investigators Grant from the National Medical Research Council for her work on the "Novel Ocular Biometric Risk Factors in Primary Angle Closure Glaucoma".

Dr Sng graduated from Gonville and Caius College in Cambridge University with triple First Class Honours and distinctions. In the Ophthalmology Specialist Accreditation Examination, she received Gold Medals for being the best candidate in Glaucoma, Cataract and Refractive Surgery, Neuroophthalmology and Paediatric Ophthalmology.

Clinical Highlights

New Surgical Options for Glaucoma

A. Conventional Glaucoma Treatment

Early treatment of glaucoma prevents visual loss, and is aimed primarily at lowering the intraocular pressure. Mild to moderate glaucoma is typically treated with a daily regime of eyedrops. However, glaucoma eyedrops are associated with significant side-effects, including allergic conjunctivitis, fatigue, hypotension and dyspnoea. Recent studies have also shown that less than 50% of Singaporean patients with glaucoma adhere to treatment with eyedrops.



Figure 1. Current glaucoma eyedrops (A) and severe allergy due to chronic use of glaucoma eyedrops (B)

The conventional surgical treatment options for glaucoma include trabeculectomy and tube shunt implants. These procedures are associated with substantial complications, including ocular hypotony, endophthalmitis and corneal decompensation.

Hence, glaucoma surgery is typically reserved for patients with advanced glaucoma or those with uncontrolled intraocular pressure despite maximum medical treatment.

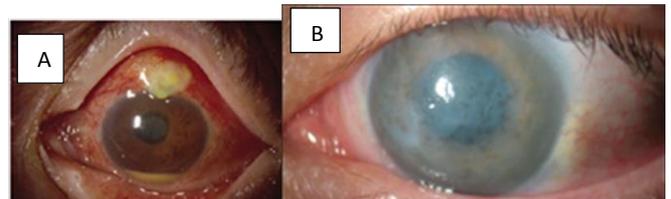


Figure 2. Complications of glaucoma surgery:
(A) Bleb-related endophthalmitis associated with trabeculectomy;
(B) Cornea decompensation associated with tube shunt implants

B. Micro-Invasive Glaucoma Surgery

Micro-invasive glaucoma surgery (MIGS) refers to a new group of surgical procedures which are characterized by the following features:

1. High safety profile
2. Minimal trauma
3. Ease of use
4. Rapid recovery

There are three main groups of MIGS devices, which drain fluid to different regions in the eye: the Schlemm's canal, the suprachoroidal space and the subconjunctival space.



Figure 3. Micro-invasive glaucoma surgery:
(A) Schlemm's canal microstents (B) Suprachoroidal microstents (C) Subconjunctival

The high safety profile of MIGS allows it to be used earlier than conventional glaucoma surgeries within the glaucoma treatment algorithm. Early glaucoma surgery eliminates or reduces the need for medications, resulting in an improved quality of life for glaucoma patients. It may also reduce the subsequent need for more aggressive glaucoma surgeries.

C. National University Hospital as a Centre for MIGS

Though MIGS devices were introduced in the United States of America, Canada and Europe more than five years ago, these devices are not available in most Asian countries. NUH is the first tertiary care hospital in Singapore to offer Schlemm's canal microstent implantation.



GP Liaison Centre (GPLC)

GP Appointment Hotline: +65 6772 2000

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Specialist in Focus



Dr Paul Zhao

MBBS, FRCSed Ophthal

Consultant

Department of Ophthalmology,
National University Hospital (NUH)

Dr Paul Zhao is a Consultant in the Department of Ophthalmology at the National University Hospital and Visiting Consultant to the Department of Ophthalmology at Jurong Health Service. He was previously the Head, Vision Performance Centre at the Military Medicine Institute from 2013 to 2015. Dr Zhao obtained his medical degree from the National University of Singapore in 2002. He subsequently underwent his specialist training in Singapore before proceeding to do a retina fellowship under Prof David Wong at Queen Mary Hospital, Hong Kong.

Dr Zhao performs cataract surgery and is trained in the latest technology using femtosecond laser assisted cataract surgery and the use of premium intraocular lenses for correction of astigmatism and presbyopia (lao hua).

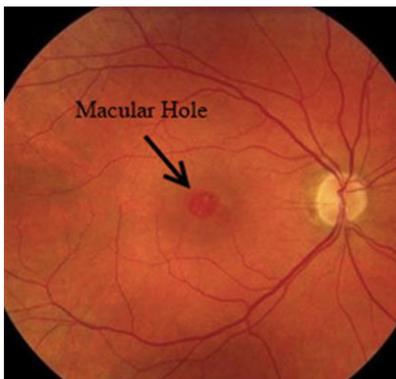
His field of sub-specialisation is in vitreo-retinal disease and he routinely performs retina surgery for conditions such as retina detachment, macular holes and epiretinal membranes, diabetic eye disease (tractional retinal detachment, vitreous hemorrhage) and vitreomacular traction. A significant proportion of his clinical work is also involved in the medical management of patients with age-related macula degeneration, retinal vascular disorders, diabetic eye disease, retinal dystrophies and intraocular infections.

Clinical Updates

Macula Hole

A macula hole is an anatomical defect in the continuity of the macula, located in the centre of the eye's retina. The macula is responsible for sharp, central vision that we need for performing our daily activities.

Patients with macula holes present with central blurring or distortion of vision in addition to decreased visual acuity. As this condition also more commonly occurs in patients over the age of 60 years old, the blurring of vision can sometimes be mistakenly attributed to cataracts.



A colour photo of the retina

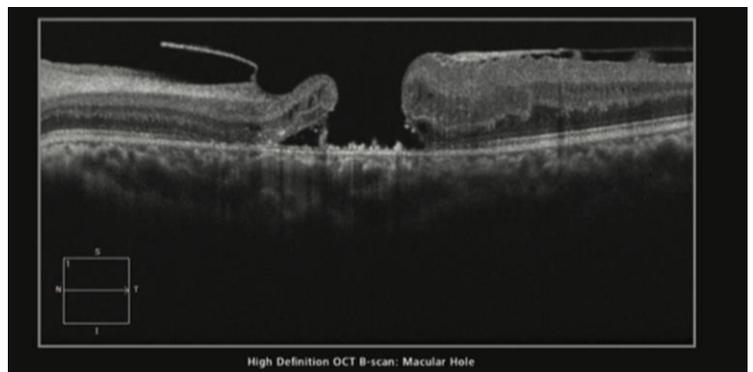
Symptoms of a Macula Hole

In the early stage of a macula hole, people may notice a slight distortion or blurriness in their central vision. Straight lines look wavy or distorted and this may affect their ability to perform routine tasks such as reading with the affected eye.

Treatment

Surgery is necessary in many cases to help improve the vision. People who have had a macula hole for less than six months and with smaller macula holes have a better chance of recovering vision after surgery.

A vitrectomy is performed where the vitreous gel in the eye is removed, and the internal limiting membrane of the retina is delicately peeled around the macula hole to relieve any traction on the retina. The vitreous cavity is then filled with a gas bubble that acts as an internal temporary bandage that seals the hole as it heals. The surgery is performed under local anaesthesia as a day surgery procedure.



Optical Coherence tomography showing the cross section of the retina

Cause and Risk Factors

The vitreous gel fills 80% of the eye and is attached to the surface of the retina. With ageing, the vitreous liquefies and shrinks, pulling away from the surface of the retina. This is a normal process and in most cases does not cause any problems. However, if the vitreous is firmly attached at the macula when it pulls away, this creates a traction on the retina resulting in the formation of a macula hole.

Individuals who have high myopia, previous injury to the eye or retinal detachments are at increased risk of developing macula holes.



Shaping Medicine for the Future

CME Registration: <https://nuhcme.com.sg/>

News Updates

Singapore's First Successful Living Paired Kidney Exchange Transplant

Mum gives kidney to another so daughter gets a match



Ms Siti Rasyidah Lokman Hadan (far left), 23, is Singapore's first recipient of a paired kidney exchange transplant. Someone who came forward to donate a kidney to a stranger was found to be a match for Ms Siti. In exchange, her mother, Madam Noor Rafidah Nasir, 47, gave one of her own kidneys to a person on the national waiting list. ST PHOTO: MARK CHEONG; SEE TOP OF THE NEWS A3

Ms Siti Rasyidah Lokman Hadan (far left), 23, is Singapore's first recipient of a paired kidney exchange transplant. Someone who came forward to donate a kidney to a stranger was found to be a match for Ms Siti. In exchange, her mother, Madam Noor Rafidah Nasir, 47, gave one of her kidneys to a person on the national waiting list.

The team at the National University Hospital (NUH) has successfully performed Singapore's first living paired kidney exchange transplant. Living paired kidney exchange transplant involves the matching of incompatible living donors with compatible recipients across two or more donor-recipient pairs.

Twenty-three-year-old Siti Rasyidah binte Lokman Hadan was given a new lease of life following the transplant. Siti was born with a congenital abnormality of the kidneys and bladder.

At the age of 13, she was diagnosed with Systemic Lupus Erythematosus (SLE), an autoimmune disease in which antibodies attack different organs including the kidneys, joints and brain. Two years later, her kidneys failed and she had to start on dialysis.

Long-term dialysis coupled with drugs that were used to control her SLE meant Siti had to endure many complications, including rhythm abnormalities of the heart and bone disease that resulted in weak bones and repeated fractures. Prior to transplantation, Siti was wheelchair-bound as she was unable to walk. Her condition would have deteriorated with a shortened life span without a kidney transplant.

Siti's mother and her primary caregiver, Mdm Noor Rafidah Binte Nasir, was the only one in her family who was medically fit to donate a kidney. However, the two were deemed medically incompatible. Subsequently, Siti and Mdm Rafidah were counselled about the possibility of a living paired kidney exchange transplant and were placed on the waiting list for a paired exchange in August 2014.

In October 2014, an altruistic individual was assessed by Ministry of Health's National Organ Transplant Unit and found to be a suitable donor to Siti. He was subsequently referred to the National University Centre for Organ Transplantation (NUCOT) at the NUH for further evaluation.

In April 2015, Siti received a new kidney and under the living paired kidney exchange transplant arrangement, Siti's mother, Mdm Rafidah donated a kidney to a compatible recipient on the national waiting list on the same day.

The six-and-a-half hour surgery at the NUH which involved two donors and one recipient was carried out by two teams of surgeons, supported by a multi-disciplinary team comprising renal and transplant physicians, anaesthetists, transplant co-ordinators and nurses. "The transplant was crucial to improve Siti's condition.

Without the transplant, her condition would have deteriorated progressively given the seriousness of her heart and bone disease," says Siti's physician-in-charge, Professor Yap Hui Kim, Head & Senior Consultant, Division of Paediatric Nephrology. Professor Yap has been taking care of Siti since 2006.

"By matching two or more donor-recipient pairs to create matches that would otherwise not have occurred, more patients can receive organs. While living paired kidney exchange transplant had been approved in Singapore in 2009, this is the first time we have such a transplant in Singapore," says Professor A Vathsala, Co-director of NUCOT.

Siti is now recovering well and will continue to receive follow-up care at the NUH. She is optimistic that post-transplant, she will be able to continue with her studies and to pursue her interests in life.

"I feel a lot better. I can now walk freely without feeling the pain in my joints. I am looking to going back to school so that I can fulfill my dream of becoming a teacher," says the Korean drama fan who hopes to travel to Korea when she is able to do so, soon.

Source: The Straits Times (Published on 1 March 2016)

Upcoming GP CME Events

Date	Topic
16 April	GP Appreciation Lunch & CME Symposium
28 May	Common Issues in Developmental Paediatrics

Registration & Lunch will start at 1.00 pm

Event Venue:
 NUHS Tower Block Auditorium
 1E Kent Ridge Road, Singapore 119228

Please call us @ 6772 2535 / 5079 for registration & enquiries please visit our CME Portal @ <https://nuhcme.com.sg/>.