



Specialist in Focus



Dr Mark Thong

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Dr Mark Thong is a Senior Consultant with the Department of Otolaryngology – Head & Neck Surgery, National University Hospital (NUH). He obtained his medical degree from the National University of Singapore (NUS), and completed his Otolaryngology residency training in Singapore in 2006. He subsequently proceeded onto subspecialty training in rhinology and sinus surgery as a clinical fellow in 2008 at the Lahey Clinic, Massachusetts, USA.

Dr Thong's areas of expertise in rhinology and sinus surgery include sinonasal allergy, open septorhinoplasty for nasal obstruction, chronic sinusitis and nasal polyposis, and in particular, minimally invasive sinus surgery (ie "balloon sinuplasty"). His other area of interest is in snoring and obstructive sleep apnoea (OSA).

Dr Thong is also actively involved in research and medical education. He has published in peer-reviewed journals, and is an invited speaker at regional conferences. He is currently the Director of Undergraduate Education for Otolaryngology in the Yong Loo Lin School of Medicine, NUS.

Clinical Highlights

Chronic Sinusitis, with / without Nasal Polyposis

Chronic sinusitis is usually diagnosed when a patient has typical symptoms (nasal congestion, nasal discharge, loss of smell, and /or facial pressure) of at least 3 months. A subset of these patients also has nasal polyps. It is believed that the cause of chronic sinusitis is multifactorial, varies from patient to patient, and frequently elusive. These include allergies, environmental irritants, anatomical factors, bacterial infection, fungal disease, and immune disorders.

Sometimes, it is difficult to differentiate chronic sinusitis from allergic rhinitis, especially if the main complaint is just nasal congestion or if the nasal secretions are not coloured. In such instances, a flexible naso-endoscopy can be used to confirm the diagnosis by visualising any pus or nasal polyps in the nasal cavity, and to assist in accurate pus collection for culture. In some patients, a CT scan of the sinuses may also be required to help make a definitive diagnosis or to identify underlying causes (e.g. fungal ball).

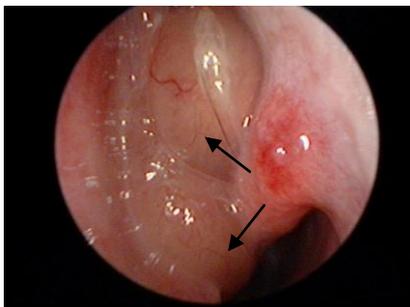


Fig 1. Left nasal cavity with nasal polyps (black arrows)

Chronic sinusitis is usually first treated with a combination of intranasal steroids, nasal douching, antibiotics, and if allergic, antihistamines. Only after the patient has failed maximal medical management is sinus surgery then indicated.

Balloon Sinuplasty – Minimally traumatic sinus surgery

The aim of sinus surgery is to remove irreversibly diseased mucosa and trapped pus, relieve sinus outflow tracts of obstruction, and thereby allow normal ventilation and physiology to return.

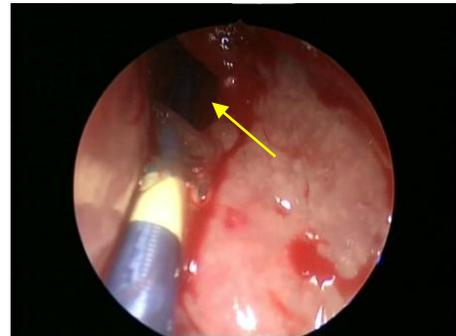


Fig 2. Balloon within dilated frontal sinus outflow tract (yellow arrow)

Balloon sinuplasty is a relatively new tool developed for sinus surgery. It is essentially a balloon that dilates sinus outflow tracts while preserving surrounding mucosa. Its main advantage is that it is minimally traumatic compared to conventional rigid instruments which may strip mucosa unintentionally. Currently, the main indication for its use is primary surgery for mild-to-moderate chronic sinusitis (especially frontal sinusitis). Data so far suggests that its clinical efficacy is at least comparable to traditional rigid instruments, but with probably a better safety profile. There is, however, additional cost that needs to be discussed with the patient.

Obstructive Sleep Apnoea (OSA)

There has been increasing awareness that OSA not only gives rise to excessive daytime somnolence and disturbance of bed partners' sleep, but it is also associated with cardiovascular disease like hypertension, arrhythmia and heart failure.

First line of treatment in adults is usually CPAP (Continuous Positive Airway Pressure) and if obese, weight loss. If patients can't tolerate CPAP, then surgical options are considered. Surgical results are good if the narrowing of the patient's upper airway is only due to enlarged tonsils. However, most adult patients have narrowing at multiple levels (e.g. nose, oropharynx, tongue base) and surgery needs to strike a fine balance between achieving satisfactory success rates while avoiding excessive surgical morbidity.

2 techniques recently available to reduce enlarged tongue bases are (i) coblation (low-temperature radiofrequency) and (ii) trans-oral robotic surgery (TORS).



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Specialist in Focus



Dr Raymond Ngo

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Dr Raymond Ngo is a Senior Consultant with the Department of Otolaryngology-Head & Neck Surgery, National University Hospital (NUH). He completed his specialist training in 2006 and did a one-year fellowship in otology & neurotology in Vancouver, Canada.

Since then, he has worked in NUH as an Otolaryngologist in ENT, with a subspecialty interest in ear conditions, dizziness and facial nerve problems. He also works with neurosurgeons on lateral skull base operations. He runs a combined clinic with physiotherapists for patients with challenging vestibular conditions.

Dr Ngo is also involved in education of residents and medical students. He holds an adjunct position of Assistant Professor with the Yong Loo Lin School of Medicine, National University of Singapore. He is the current programme director for the NUHS' ENT Residency Programme. He is a member of the Chapter of Otorhinolaryngology in the College of Surgeons.

Clinical Updates

Endoscopic Ear Surgery

Otologic ear surgery has traditionally been done with a microscope. Almost all otologic operations require magnification for the operation to be done precisely in a confined environment of the ear.

In the nose, the endoscope has replaced the microscope for over 20 years. The ability to perform minimally invasive procedures in the nose has rendered the microscope obsolete in the nose and sinuses. Advances in technology of HD visualisation and thinner endoscopes have also enabled the use of endoscopes in ear operations.

Traditional otologists have criticised the endoscopic approach for allowing only one-handed surgery. The endoscope also does not allow depth perception due to the lack of stereoscopic cameras. In the past, older computer monitors and cameras could not deliver the precise image quality required in otologic surgery. That has since been negated with HD cameras and monitors.

The benefits of the endoscopic approaches are many. They include a smaller or no incision for the operation, as the procedure can be done just through the ear canal.

The better visualisation enables the surgeon to appreciate the operative field and be more precise in manipulation of instruments in the ear. The endoscope allows the surgeon to look around the corner and this enables the surgeon to see better, thus reducing the risk of residual disease.

All this translates to less morbidity for the patient to undergo middle ear surgery. There is less soft tissue trauma and consequently less pain.

At the moment, not all ear operations can be done by the endoscope. The microscope is still required for mastoid operations. In the end, this is not a battle between the microscope or the endoscope. The endoscope is possibly a better tool for the middle ear.

Endoscopic ear surgery is gaining popularity around the world. The number of courses that teach this technique now number more than 14 around the world. They include Italy, UAE, Japan, France, UK, USA, Canada and Australia. In April 2015, the 1st endoscopic ear surgery course was held in NUH, with Dr Raymond Ngo as the course director.



Fig 1. Freshening the tympanic membrane perforation for myringoplasty



Fig 2. Endoscopic view of the middle ear, showing the incudostapedial joint



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News Updates

His Heart Stopped in the ICU

A security officer tells about his fight for his life after he came down with pneumonia and developed complications in hospital.



Mr Matnor, 61, enjoys cycling in his free time. In November 2013, he was warded for 22 days in ICU at NUH for pneumonia and also suffered a cardiac arrest.

In November 2013, 61-year-old security officer Matnor Abu Bakar stayed home from work for two days to nurse a fever and diarrhoea. When he started coughing up blood on the third day, he was whisked to the National University Hospital's (NUH) accident and emergency department by his son and wife.

Tests showed that he was stricken with pneumonia. The next 22 days were spent fighting for his life in the intensive care unit (ICU). But it helped that NUH had started a new workflow that rushes patients like him, who have severe community-acquired pneumonia, to the medical ICU.

There, he was prescribed a broad spectrum of antibiotics as well as vasopressors to increase his blood pressure, and put on a ventilator to support his breathing.

Unfortunately, for Mr Matnor, one problem led to another. First, he developed pulmonary embolism, a major complication of severe pneumonia, when a blood clot forming in a deep vein breaks off and travels to the lungs. Then, on the 11th day of his ICU stay, he suffered a cardiac arrest from very low levels of oxygen in his body.

It started with him bleeding from his lungs, causing blood clots to form in his breathing tube. Dr Siow Wen Ting from NUH's division of respiratory and critical medicine said: "This is not unexpected for someone with severe pneumonia."

Furthermore, his treatment for pulmonary embolism made his blood a bit thinner, therefore he bled more easily. "Although we caught the problem early and managed to change his breathing tube very quickly, his heart stopped for about two minutes just before the new tube went in." Mr Matnor's daughter-in-law, 34-year-old Shiela Mardzuki, said it was a shock to the family that the avid cyclist was suddenly so ill.

By the third day of his stay in the ICU, most of his relatives had come to see him, afraid it would be the last time. It was hardest on his wife, who hardly left his side while he was in hospital.

Finally, just after Christmas in 2013, Mr Matnor was well enough to be discharged from hospital. Six months later in June, he underwent surgery to repair a heart defect that had been picked up while he was in hospital. This time, he was in hospital for just nine days, with four of those in the ICU.

Mr Matnor is thankful for his second shot at life. "We can plan for today but we cannot predict what will happen tomorrow," he said. "Most importantly, we must stay healthy."

Source: *The Straits Times* (Published on 23 April 2015).

Upcoming CME Event

Date	Topic
30 May	Recent Advances in Head and Neck Cancers

Registration & lunch will start at 12.30 pm

Event Venue:

NUHS Tower Block, Auditorium, Level 1
1E Kent Ridge Road, Singapore 119228

Please visit our CME Portal @ <https://nuhcme.com.sg/> for registration. For enquiries you may contact the GP Liaison Centre @ 6772 5079 / 2535.