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## Specialist in Focus



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Assistant Professor Sein Lwin is a Consultant at the Division of Neurosurgery and Programme Director of NUHS Neurosurgery Residency in National University Hospital (NUH). He was trained in neurosurgery, specialising in skull base, neurovascular surgery and spine in Queen's Hospital, London. He also received a fellowship training for the endoscopic skull base surgery at University of Pittsburgh Medical Centre, USA.

His special interests are mainly skull base tumours including pituitary tumours and acoustic neuroma, spinal cord tumours and complex degenerative cervical spine, neurovascular surgery for aneurysm and cerebral and spine Arteriovenous Malformations (AVMs). He established a skull base team with Otolaryngologists (ENT) and started a multi-disciplinary programme for pituitary and suprasellar tumours in NUH since 2012.

## Clinical Highlights

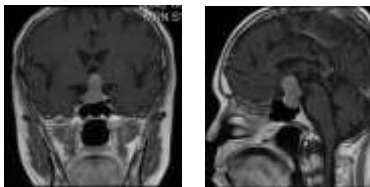
### Endoscopic Pituitary Tumour Excision

While many lesions of the pituitary gland exist, non-functioning pituitary tumours are the most common type of pituitary disorders amongst Asians. Despite being a benign brain tumour, it is anything but mild, given its strategic seat in the base of the brain. If the tumour is small (known as microadenoma) and the patient is asymptomatic, they can be managed either conservatively or radiosurgically.

However, a pituitary tumour can grow beyond its seat at the skull base, thus becoming problematic.

#### What are the risks if the tumour grows bigger:

1. It will exert pressure and cause pituitary hormonal failure (most sensitive hormones being the sex hormones).
2. It grows upwards and compresses the optic chiasm and nerve, causing tunnel vision.
3. Most importantly, if the tumour bleeds and suddenly increases in size, it can cause an acute loss of vision and hormonal failure (pituitary apoplexy).



#### Endonasal Endoscopic Pituitary Surgery- Minimally Invasive Surgery

It was the introduction of rigid endoscopes in sinus surgery performed by the ENT surgeons that revealed its potential role in pituitary surgery. The endoscope gives distal illumination, enhanced magnification with panoramic views of the skull base area. This helps the surgeon to differentiate tumour from the normal pituitary gland clearly. Therefore, most of the pituitary tumours performed by endoscopic dissection have reduced chances of residual tumour and damage to the normal pituitary gland. Postoperatively, the patient will experience less complications than the conventional approach and their hospital stay is much shorter as well.



Photo credit: Mayfield Clinic

#### How is endonasal endoscopic pituitary surgery performed?

In the National University Hospital, the surgery is accomplished by a skull base team comprising a neurosurgeon and ENT surgeons specialised in endoscopic skull base surgery. Before and after surgery, the patient is always reviewed by the dedicated endocrine team for pituitary hormonal function assessment. The ENT surgeon starts the surgery by creating a wide intra-nasal surgical corridor which allows placement of the endoscope and instruments through both nostrils. A free mucosal graft or vascularised flap (also known as nasoseptal flap) is harvested. The resection of the tumor is then carried out by both surgeons working simultaneously using a "2-surgeon, 4-hand" technique where the neurosurgeon performs the dissection of the tumour and the ENT surgeon provides dynamic visualisation of the tumour and normal gland interface to get a clear definition.

In NUH, our skull base team has been doing most of the complex suprasellar and pituitary tumour cases since 2012 and the Cerebrospinal Fluid (CSF) leak and incidence of diabetes insipidus rate is almost less than 3 - 5% in our case series.



Post-operative MRI scan showed no residual

This is the paradigm shift in the operative approach for the suprasellar tumours including pituitary tumours.

The endoscopic approach is a minimally invasive approach that offers excellent visualisation of the operative field with high tumour clearance and less morbidity in skull base tumours. For our patients, this translates to potentially complete resection of large, hard-to-reach or previously considered "inoperable tumour" without the need for extensive disfiguring scars in the head.



## GP Liaison Centre (GPLC)

GP Appointment Hotline: +65 6772 2000

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## Centre in Focus

### *The NUH Colorectal Centre & its Multi-disciplinary Management of Colorectal Cancer to Provide Optimal Treatment for Better Outcome*

The National University Hospital's Colorectal Centre is a **one-stop comprehensive clinic** that provides reliable, collaborative and convenient treatment for **all elective and emergency colorectal-related conditions**.

The Colorectal Centre manages these following colorectal conditions:

1. Cancer and polyp of the colon, rectum and anus
2. Cancer and benign tumour of the appendix
3. Peritoneal cancer (mesothelioma, pseudomyxoma peritonei, primary peritoneal carcinoma and peritoneal metastases from colorectal and ovarian cancer)
4. Screening for cancer and polyp of the colon and rectum
5. Benign colorectal conditions (diverticular disease, gastrointestinal bleeding, ischemic colon, infection, volvulus, stricture, radiation-related complications and intestinal fistula)
6. Anorectal conditions (anorectal infection and fistula, piles and anal fissures)
7. Hereditary colorectal cancer (lynch syndrome/hereditary non-polyposis colorectal cancer syndrome, familial adenomatous polyposis and family cancer syndrome)
8. Functional pelvic floor dysfunctions (fecal incontinence, constipation, anal pain and rectal prolapse)
9. Stoma and wound-related complications

We take pride in our **team approach** to care for our patients. We are a cohesive team of eight highly trained colorectal surgeons and advanced trained nurses in perioperative surgical management, stoma and wound management, colonoscopy and functional pelvic floor assessment.

Our consultants are:

|                     |                   |
|---------------------|-------------------|
| Dr Bettina Lieske   | Dr Cheong Wai Kit |
| Dr Chong Choon Seng | Dr Frances Lim    |
| Dr Lee Kuok Chung   | Dr Ridzuan Farouk |
| Dr Sharon Koh       | Dr Tan Ker Kan    |



Our team meets twice a week to discuss treatment plans for all our patients with colorectal cancer and complicated colorectal problems. This is to ensure that all our final treatment plans are up-to-date, tailored and individualised to the patients' individual characteristics, evidence-based and the most appropriate for our patients. **In short, our patients benefit from the combined expertise and experience of our team of specialists.**

Here, we take pride in our **patient-centric model of care**. We always try our utmost best to provide expedient management by consolidating diagnostic and therapeutic management together in the outpatient or day-surgery setting to minimise hospitalization stay, and for those admitted, to enroll in our Fast Track Surgery Programme to shorten hospital stay and improve their perioperative experience and finally, to optimise our follow-up consultations in the same day to reduce inconvenience to our patients and their caregivers.

As a specialty centre, we are **well equipped** with advanced diagnostic and therapeutic facilities and trained staff in one centre to handle all colorectal-related conditions. We offer these following diagnostic investigations and therapeutic managements:

#### COLONOSCOPY

- Advanced colonoscopy with image-enhancement technology (magnifying chromoendoscopy and FICE-Fuji Intelligent Chromo Endoscopy technology) to help increase polyp detection and malignant polyp detection accuracy and the availability of advanced polypectomy technical expertise (endoscopic mucosal resection, EMR and endoscopic submucosal dissection, ESD) to remove these polyps
- Colonoscopic stenting for obstructed colorectal cancer
- Direct access to colonoscopy service for colorectal cancer screening
- Endorectal Ultrasonography for the assessment of rectal polyp to determine cancer potential and plan optimal treatment (endoscopic or surgery)

#### COLORECTAL SURGERY

- Laparoscopic and open colorectal cancer surgery including robotic assisted laparoscopic surgery, transanal total mesorectal excision (ta-TME), complete mesocolic excision (CME) and transanal minimally invasive surgery (TAMIS)
- Exenterative pelvic surgery for locally advanced colorectal cancer and recurrent colorectal cancer
- Cytoreductive surgery (Peritonectomy) and Hyperthermic IntraPeritoneal Chemotherapy (HIPEC) for peritoneal and appendicular cancers
- Fast Track Surgery also known as Enhanced Recovery After Surgery (ERAS) programme to optimise patients' hospitalisation and surgical experience. This has resulted in earlier feeding and mobilisation, quicker recovery and shorter hospital stay hence improved surgical outcomes and better patient experience

#### COLORECTAL CANCER

A dedicated and multi-disciplinary Colorectal Cancer Tumour Group consisting of colorectal surgeon, medical oncologist, radiation oncologist, radiologist, pathologist, palliative care specialist, specialist nurses and coordinators and other associated allied health staff to jointly discuss and manage all patients with colorectal cancer in NUH to ensure quality cancer care.

#### ANAL SURGERY

- 3D Endoanal Ultrasonography for the assessment of anal fistula to plan optimal surgery including LIFT (ligation of intersphincteric fistula tract) and endorectal advancement flap
- Ambulatory surgery (day surgery) for piles including stapler haemorrhoidectomy and transanal haemorrhoidal dearterialisation (THD)
- Medical and surgical management for chronic anal fissure including botox injection

#### ASSESSMENT AND MANAGEMENT OF FUNCTIONAL BOWEL DYSFUNCTION

- 3D Endoanal Ultrasonography to assess anal sphincter integrity, pudental nerve electromyography assessment and anal pressure studies in the complete assessment of fecal incontinence to optimise management planning
- Transit marker study and defecography to assess patients with chronic constipation and availability of biofeedback therapy to manage patients with puborectalis paradox (anismus)
- Investigation and management for patients with chronic anal pain (proctalgia fugax)

#### CLINIC TREATMENT

Same day clinic consult combined with office treatment e.g. rubber band ligation treatment for piles and office or day surgical procedures e.g. drainage of perianal abscess or perianal haematoma.

#### STOMA AND WOUND CARE

- Specialist nurse management for surgical wounds and stoma-related complications. The Colorectal Centre has always been actively looking for ways to improve our patients' journey and outcome by providing seamless, convenient and efficient care between primary care and specialty care in NUH (outpatient and inpatient care). We aim to provide the best care for patients suffering from colorectal problems.

We would like to hear from you on how we can cooperate to serve and care for our patients better. We welcome your suggestions and ideas and you can contact us at 6772 2230.



# Shaping Medicine for the Future

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

## News Updates

### Liver donor's gift saves 16-year-old's life



Mr Lim with the recipient of part of his liver, Si Jia, yesterday. In January last year, Mr Lim decided to donate part of his liver to whoever on the national waiting list needed it most.

Nearly 30 years ago, before the Human Organ Transplant Act made organ donation the default in the event of a person's death, Mr Lim Kok Seng signed up to be an organ donor. Twenty years later, he started volunteering for clinical drug trials to help advance medical science. And in January last year, the 54-year-old security concierge decided to take things a step further, by coming forward to donate part of his liver to whoever on the national waiting list needed it most. That turned out to be 16-year-old Lim Si Jia, whose own liver was unable to break down a compound called glycogen properly.

Following 10-hour surgery at the National University Hospital on March 24 this year, Mr Lim became the first non-directed liver donor in Singapore's 26 years of carrying out liver transplants.

Left untreated, Si Jia's condition could lead to cancerous tumours forming on her liver and prove fatal in the long run. Professor Krishnakumar Madhavan, co-director of the National University Centre for Organ Transplantation, said the majority of living organ donations worldwide are directed— that is, the donor has a specific recipient in mind.

Said Prof Madhavan: "This is the first time in our experience with somebody who steps up and says, 'I want to donate; it doesn't matter to whom.'" Mr Lim, who simply wanted to be able to help someone, decided not to wait until after his death to donate his liver because he was not sure whether it would still be in good working order by then. "When you are above 60, you know, complications do come in all forms," he said. "Even if I made the pledge, my liver might not be good (enough) to help any more." He also wanted to make the donation before he turns 55, as doctors generally recommend that people who want to donate their organs do so before this age.

Typically, potential donors go through a lengthy counselling process over months to make sure they are aware of the risks and still want to go ahead. They are given the option to back out at any time before the surgery. Both sides do not know who the other person is until after the operation – and only if both agree to disclosing their identities— so as to avoid feelings of obligation.

Mr Lim met Si Jia, who now has 60 per cent of his liver, for the first time about a month ago. The rest of his liver will regenerate within three months, doctors said. Said Mr Lim: "I had only one request, which was that (the liver) be given to a younger (recipient), so that they have much more life ahead of them."

Source: *The Straits Times* (Published on 21 June 2016)

### Tasting the difference after weight-loss surgery

When Ms Prassanthi Sivajothi underwent bariatric surgery, a procedure that reduces the stomach size, she had hoped it would prevent serious weight problems in the future. The 22-year-old teacher did not expect anything other than her weight to change. After a two-week liquid diet, her first taste of solid food had her experiencing something unusual – a heightened sense of taste, especially towards sweet foods.

"After the surgery, I found the taste too strong and stopped eating sweet foods almost completely," she said. This symptom has been noticed by a team of doctors from the National University Hospital (NUH), who ran a study on 120 patients who went through laparoscopic sleeve gastrectomy, a type of bariatric surgery. They found that about one-third of the patients who had the procedure between 2012 and 2014 experienced changes in the way they tasted food, with 90 per cent reporting heightened sensitivity towards sweet foods.

All the patients who experienced taste change, including Ms Prassanthi, reduced their intake of sweet, salty or sour foods, depending on which taste was affected. During laparoscopic sleeve gastrectomy, the area which produces 90 per cent of the hunger hormone ghrelin is removed from the body. NUH senior dietitian Fathimath Naseer believes this could be what leads to altered food preferences. "If the hunger hormone level is lower, the patient will experience less hunger and altered food preferences and eating behaviour," she said.

Tongue inflammation or other diseases that prevent proper blood flow to the tongue could affect taste as well, and these factors have to be ruled out, she noted. Dr Asim Shabbir, director and senior consultant at the Centre for Obesity Management and Surgery at NUH, describes obesity as a multifaceted disease that persists even after attempts to treat it. "What we want is something which can result in long-term differences, an intervention that can keep patients healthy," he said. "Taste change is welcome because it can help with maintaining their weight over longer periods of time." For now, further research will focus on how those who undergo the surgery may enjoy a more sustained weight loss than those who diet, possibly because of the taste change. The team hopes this may lead to a discovery that can help combat obesity.

Dr Shabbir, who was involved in the study, explained that a patient who tastes things differently in this way would ideally consume less sugary snacks and eat better quality food, resulting in better health over their lifetime. He said: "We want to look at ways in which these procedures are affecting our population at large, and why they are being affected this way." The NUH team is collaborating with another team led by Dr Ciaran Forde from the Clinical Nutrition Research Centre to better understand the role of taste and smell in dietary patterns. They are expected to conduct trials to look at the physiological mechanisms that govern taste change.

Source: *The Straits Times* (Published on 10 June 2016)

## Upcoming GP CME Events

| Date      | Topic  |
|-----------|--|
| 23 July   | Updates in Neurosurgery for the General Practitioner   |
| 30 July   | NUH Orthopaedics Update for GPs                        |
| 13 August | Advances in Urology – 2016 Update for General Practice |

Registration & Lunch will start at 1.00 pm

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

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