

Sleep matters

ASEAN SLEEP MEDICINE NEWSLETTER NEWS / OPINIONS / INSIGHTS



DR. TOH SONG TAR
MBBS, MRCS(Edin), MMED(ORL), MMED(Sleep Med), FAMS(ORL)

Consultant, Department of Otolaryngology, Singapore General Hospital, Director and Consultant, Sleep Disorders Unit, Singapore General Hospital, Adjunct Assistant Professor and Senior Clinical Lecturer, National University of Singapore

Dr. Toh and team have done the most cases of TORS for sleep apnea and have the most experience in Transoral Robotic Surgery for Obstructive Sleep Apnea in Singapore and Southeast Asia to-date.

Interview with Dr. Toh Song Tar on Singapore General Hospital Sleep Lab

When was the Sleep Lab started?

Basic research in sleep medicine started way back in the 1970s with makeshift equipment in the then-Norris Block in Singapore General Hospital. In 1987, a dedicated sleep laboratory was established in ward 46. There was a need to start a Sleep Medicine service to manage patients presenting with sleep disorders in Singapore. That was the time when Sleep Medicine started to gain more prominence in the international arena. Our sleep laboratory expanded and was moved to the current site at ward 54 in 1998.

How many beds does the Sleep Lab have for Level 1 Sleep studies?

The sleep laboratory in Singapore General Hospital has 6 beds for Level 1 sleep studies currently.

What types of Diagnostic studies are done in the Sleep centre?

These diagnostic studies are done in the Sleep Disorders Unit, they are: Overnight Sleep study, Multiple Sleep Latency Test (MSLT), Maintenance Wakefulness Test (MWT), Overnight Sleep Study with CPAP Titration/BIPAP Titration and Split Night Study.

Is the centre accredited by any accreditation body? if yes, which one? What are the contact details of the accreditation body?

Yes, the sleep laboratory is accredited by the NATA (National Association of Testing Authorities, Australia). (<http://www.nata.com.au/nata/>).

When was the accreditation obtained? How long it took you to prepare for and get the accreditation?

The accreditation was obtained in 2008 by the then accreditation body (The Thoracic Society of Australia and New Zealand - TSANZ) and our laboratory was subsequently re-accredited in 2014 by the current accreditation body (NATA). It took us more than a year to prepare during the initial accreditation and a year to prepare before the reaccreditation.

What are the PAP titration facilities available at your Sleep Centre?

We can conduct up to 3 CPAP/BIPAP titrations in a night.

Email us on

sleepmatters@philips.com with your content.

What are the educational/training opportunities available for Doctors and technicians at your Sleep Centre especially for candidates from other countries?

We conduct sleep symposium on a regular basis (yearly). We also welcome doctors and technicians to be attached at the sleep laboratory for attachment or exchange programs. A fellowship program is available for doctors who can spend at least 6 months with us.

How many sleep techs are employed at the Sleep Centre? What are their day time and night time duties?

We have 10 sleep technicians at our sleep laboratory who are on rotating day and night shifts. Day shifts starts at 0830 and ends at 1730 and night shifts starts at 1900/2000 and ends at 0700/0800.

How many Level 1, level 3 studies, PAP titration studies, MSLT and MWT are done in one year?

More than 1000 Level 1 sleep studies, which include MSLT and MWT were conducted last year. Close to 100 Level 3 sleep studies were also performed in 2015.

What are the contact details of the Sleep Centre- address, phone no., email id, website?

The Sleep Laboratory is situated at:
Singapore General Hospital
Blk 5 Level 4, Outram Road
Singapore 169608

Contact Number: (+65)63266202

E-mail: gnsrdu@sgh.com.sg

Website: www.sgh.com.sg



SGH Patient Room



SGH Sleep Lab Control Room



Dr Toh Song Tar & Team

From left to right (front row): A/Prof Pavanni Ratnagopal, Dr Shahul Hameed, A/Prof K. Puvandenra, Dr Toh Song Tar (Director of SDU), Dr Ong Thun How, Dr Tan Keng Leong, Dr Leow Leong Chai, A/Prof Ng Beng Yeong

From left to right (back row): Mr Raymund Turqueza, Dr Lim Li Ling, Ms Kinjal Doshi, Ms Ethel Sheela, Ms Hemalatha Satharasinghe, Ms Siti Nur Zakiah, Ms Tan Xiu Juan, Ms Siti Raudha (Manager of SDU), Ms Jade Tay, Ms Song Peirong, Ms Nur Izzanie, Mr Kevin Beck



**DR. TEOFILO L. LEE-CHIONG JR.
MD**

Professor of Medicine, National Jewish Health and University of Colorado Denver School of Medicine, Chief Medical Liaison for Philips Respironics (Denver, USA)

“Prompt diagnosis and effective treatment of OSA in patients who were hospitalized with COPD exacerbation reduced hospital readmissions and emergency room visits.”

–Dr. Teofilo

Dr. Teofilo summary of clinical studies on Overlap Syndrome

Overlap Syndrome

Overlap syndrome refers to the co-existence of chronic obstructive pulmonary disease (COPD) and obstructive sleep apnea (OSA) and is a common disorder affecting an estimated 0.5–1% of the general population. Compared to either condition alone, the presence of OSA in COPD is associated with worse outcomes and increased mortality.

1 Patients with overlap syndrome have heightened cardiac sympathetic activity compared to patients with either OSA or COPD. Heart rate variability indices were evaluated in 14, 24 and 16 patients with overlap syndrome, OSA and COPD, respectively. Significantly lower high-frequency (0.4–0.15 Hz) power, greater low-frequency (0.15–0.05 Hz) power, and higher LF/HF ratio were observed in the overlap group compared with either COPD and OSA groups – findings that are consistent with higher sympathetic modulation of heart rate variability. [Taranto-Montemurro L et al. Cardiac sympathetic hyperactivity in patients with chronic obstructive pulmonary disease and obstructive sleep apnea. COPD. 2016 Jul 6:1–6.]

2 Overlap syndrome was identified in 58% of 45 mildly hypoxemic COPD patients who had no symptoms of OSA. Obstructive sleep apnea was defined as a respiratory disturbance index (RDI) of ≥ 15 events per hour during polygraphy. Body mass index (BMI), TNF- levels and sleep time with oxygen saturation (SaO_2) $< 90\%$ were significantly greater in the overlap group compared to those with COPD alone, and a significant correlation between RDI and BMI was noted on multivariate linear regression analysis. A BMI higher than 27.2 kg/m^2 had a sensitivity of 73% and specificity of 68% in identifying COPD patients with concurrent OSA. [Basoglu OK et al. Prevalence of overlap syndrome in chronic obstructive pulmonary disease patients without sleep apnea symptoms. Clin Respir J. 2016 May 5.]

3 Coexisting risk of OSA was noted in 29% of adults who fit epidemiological criteria for COPD. Researchers in Taiwan carried out a random cross-sectional national telephone survey and compared the data of COPD cases with and without risk of OSA. The overall prevalence of COPD in this national sample was 6.1%. The group with risk of OSA had significantly higher

BMI and COPD Assessment Test scores, and were more likely to have hypertension or cardiovascular disease, diabetes and performance impairment than those without risk of OSA. [Hang LW et al. Predictive factors warrant screening for obstructive sleep apnea in COPD: a Taiwan National Survey. Int J Chron Obstruct Pulmon Dis. 2016 Mar 30;11:665–73.]

4 Increased emphysema and gas trapping were linked to decreased AHI among OSA patients who are smokers. Fifty-one participants (BMI, $32 \pm 9 \text{ kg/m}^2$) of the Genetic Epidemiology of COPD (COPDGene) project underwent full-night polysomnography (PSG). Prevalence of OSA was 57%. Compared to subjects without OSA, those with OSA were younger and had a higher BMI. Factors associated with AHI included computed tomography (CT)-derived percent emphysema and CT-derived percent gas trapping, suggesting that lung inflation may be an important determinant of upper airway stability in patients with OSA. [Krachman SL et al. Effect of emphysema severity on the apnea-hypopnea index in smokers with obstructive sleep apnea. Ann Am Thorac Soc. 2016 Jul;13(7):1129–35.]

5 Prompt diagnosis and effective treatment of OSA in patients who were hospitalized with COPD exacerbation reduced hospital readmissions and emergency room visits. Data regarding PSG parameters and positive airway pressure (PAP) therapy adherence in twenty-four patients were analyzed. The therapy compliant group had significantly less total clinical events in both the 6- and 12-month periods following intervention compared to 6 and 12 months prior to intervention, respectively, than in the non-compliant group. [Konikkara J et al. Early recognition of obstructive sleep apnea in patients hospitalized with COPD exacerbation is associated with reduced readmission. Hosp Pract. 2016;44(1):41–7.]



DR. NUSHROTUL LAILLIYYA
MD

Neurology Department, Padjadjaran University, Bandung, Indonesia

Dr. Nushrotul gives Highlights of INASleep/Indonesian Sleep Medicine Society Meeting 2-4Sep 2016 in Bandung, Indonesia.

Indonesia sleep medicine meeting

Organized by: Nushrotul Lailliyya MD, from Neurology Department, Padjadjaran University, Bandung, Indonesia in collaboration with Indonesia Sleep Society.

No. of participants: Around 300, from all over Indonesia and other ASEAN countries.

International Speakers: Prof. Christian Guilleminault MD, Prof. Colin Shapiro MD, Tayard Deesudchit MD, Ho Wen Hsuan MD, and Tripat Singh MD

Pre-Conference Workshop: Two workshops were organized one day before main event - "PSG-CPAP" and "Insomnia".

Dates for 2nd meeting: 2019 in Lombok Island Indonesia



Opening Ceremony. Nushrotul Lailliyya MD- Sixth from left



Participants attending the sessions



World Sleep Day Bandung



Angklung performance

Sleep matters past issues

To access the past issues of sleep matters, please go to the below webpage
www.philips.com.sg/healthcare-consumer/sleep-apnea/resources#sleep-physicians-newsletters

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Letters to the Editor:

Our readers are invited to write to the editor by volunteering content that they feel strongly about or feel needs coverage in a publication such as this. Your input is welcome and valued, particularly with case studies and hot topics currently debated in the field, as well as reviews of Asia Pacific congresses and conferences that you might like to share with the audience. Your letters will be featured in future issues of Sleepmatters, allowing an open forum between the experts, increasing the level of engagement amongst the audience.

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