

50th Year Anniversary of Department of Anesthesiology, Faculty of Medicine Siriraj Hospital, Mahidol University

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Department of Anesthesiology, Faculty of Medicine Siriraj Hospital, has started to be a formal anesthesia division, divided from division of Surgery in 1965; hence our 50th year anniversary in 2015. Research is now a priority and mandatory mission, according to the vision of Mahidol University. Second mission is to teach and train, and we produce the highest number of states-of-the-art anesthesiologists and anesthetic nurses each year. Curriculum and training are being continuously improved. From a small unit, now it is one of the largest departments and extends the service, our third mission, to more than only in the operating theaters. We look after pre-anesthesia assessment, inside and outside operating room anesthesia, post-operative pain relief, Intensive Care Unit, and chronic pain management. The number of patients and their diseases increase; so do the complexities of surgeries. There are tremendous changes in drugs and equipment. There is the fourth mission on administration, IT and resource management. And the fifth mission which is corporate social responsibility. However, we still believe that compassion, responsibility and integrity are most important. We have taught and tried to live by the teaching of HRH the King's Father. And these will contribute to our progress and shine in the next 50 years.

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Within one year after ether was used to anesthetize a patient for the first time in America, ether was used in Bangkok by Dr. Samuel Reynold House in 1848. The practice of modern medicine in Thailand in those days was by missionaries and foreign doctors in their clinics. Siriraj Hospital is founded in 1888. For the next 70 years, anesthesia was given by surgeons or by lay persons, using ether, chloroform and some spinal anesthesia⁽¹⁾.

Starting Department of Anesthesiology

A young female surgeon-to-be, Dr. Salard Tupawongs was persuaded to change her profession and travel to America to train in Anesthesiology. After she came back to Thailand, a Unit of Anesthesia was set up in Division of Surgery in 1952, then spun out to be Division of Anesthesia on 13 November 1965 (our Birthday!). Under the energetic guidance of Prof. Salard, a Department of Anesthesiology was declared by Mahidol University on 18 November 1969.

Structured residency training program was

also started by Prof. Salard in 1951⁽²⁾. She also initiated the training of anesthetic nurses in 1965 to help alleviate the anesthesia manpower shortage in Thailand. Prof. Salard has a very distinguished character, smart, loyal, and full of fun. She inspired many graduates to train in Anesthesiology.

Vision and Mission

The vision of the department is to reach international excellence in education, patient care and research. The missions of the Department are: (1) to conduct research for the advancement of medicine, (2) to teach medical students and train anesthesia personnel (such as residents and anesthetic nurse students), (3) to give anesthesia service for patients in Siriraj Hospital and Siriraj Piyamaharajkarun Hospital, (4) to excel in administration, information technology and resource management, and (5) corporate social responsibility. These are rigorously followed in accordance with the Faculty of Medicine Siriraj Hospital's vision and missions.

Anesthesia staff

The strength of our department is the dedication of our staffs. Most are graduates from Siriraj, but we welcome graduates from other institutes. And in a short time, they settle into the department and

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adopt the culture of Siriraj very nicely. All staffs are sent to train abroad, such as in USA, UK, Australia, Canada and Japan. Equipped with knowledge and experience, we teach, anesthetize patients and conduct research at the same time. In the past, the job was anesthesia in operating theater only, but now we also cover Siriraj Preanesthesia Assessment Center, Postoperative Intensive Care Unit, Acute Pain Service, Chronic Pain Management Clinic, and many out-of-OR services. There are other tasks that staffs have to do, such as teaching, hospital quality assurance, administration, preparation for mass casualty, etc. Though flooded with missions, very few have left the department, a proof of loyalty and engagement. Now we have 73 staff anesthesiologists, working with 70 anesthetic nurses. We also enrolled the first foreign staff in Siriraj Hospital.

Anesthesia higher education/training

Residents and anesthetic nurse students comprise a very important workforce. From 2 residents per year, the Department expands and draws more trainees. Nowadays, we have a three-year residency training program that produces 25 new anesthesiologists each year. We also have post-graduate (fellow) training in neuro-anesthesia, cardio-thoracic anesthesia, pain management, pediatric anesthesia, and also join training in critical care (with Society of Critical Care). Other trainings, such as ultrasound-guided peripheral nerve block, cardiopulmonary resuscitation, and sedation anesthesia, are also offered. At the time of writing, 561 anesthesiologists and 59 fellows have graduated from our Department. New development in training are formative evaluation, anesthesia non-technical skills (ANTS), and more time in affiliated provincial hospitals to better prepare them for the job after graduation. High-fidelity simulation is adopted more and more to teach both critical and not-so-critical scenarios and our department is a leader in this field. Faculty of Medicine Siriraj Hospital supports our residents to go abroad and exchange ideas with colleagues around the world. The department started co-training with Pitsanulok Hospital in 2015 to increase the number of anesthesiologists for the country.

Anesthetic nurses are highly needed in Thailand and we have supplied 2,047 anesthetic nurses to the country. The School of Anesthesia Nurse Training is administered in the same structure as the resident training, with curriculum, formative evaluation and examination. This one-year training program

supplies 40 new anesthetic nurses each year to all large hospitals in Thailand. However, the demand is never decreasing.

Not only we train anesthesia personnel for Thailand, but we also train personnel from other countries, e.g., Laos, Myanmar, Cambodia, Vietnam, Bhutan and as far as Mongolia. In the 80's, we assisted Nepali anesthesiologists in establishing their training program. Bangkok Anesthesia Regional Training Center, founded by Prof. Thara Tritrakarn in 1996, is a collaboration among 3 medical schools and 4 hospitals, and supported by the World Federation of Societies of Anesthesiologists. The head quarter of BARTC is also situated in our department.

Medical students

Historically, the Department of Anesthesia allocated 4 medical students in clinical years to one staff anesthesiologist. The teacher looked after the group for 1 month, teaching how to put up drips and giving anesthetics and spinal blocks. This resulted in very good relationship and satisfaction. The number of medical students has increased from 160 to 300. With the confirmation of patients' right and change in medical curriculum, the medical students are now working in our department for 2 weeks and rotating among 2-3 staffs. The curriculum has also changed from training like an anesthesiologist to training in perioperative medicine because newly graduated physicians are not supposed to give anesthesia or spinal block any more. The Faculty's aim is now to integrate pre-clinical and clinical teaching and change into system-based curriculum. This is still in evolving stage now and anesthesiologist will participate more in inter-department teaching during the preclinical years.

Anesthesia service

The training programs grow along with the increase in sub-specialization and the service of patients. In the 80's we worked in Sala Salgakum (Surgery Pavillion Building) in 10 operating rooms. There was only one dining room where the whole department ate lunch together. In 2016, we covered ORs in the Syamintr Building, 100th year Somdech Phrasrinagarindra (Obstetric) Building, Trauma Building, and many other out-side-OR service sites, such as at the Cardiac Center, Imaging Center, Pediatric Department, etc, total more than 60 sites per day. The number of patients who received anesthesia service was 48,820 anesthesia in 2014. Cases that received acute pain management totaled 1,793 in 2014, with 5,546 cases

in the Pain Clinic and 5,032 cases in Pre-anesthesia Assessment Center⁽³⁾. The complexity of operations increased as our surgeons bring new capabilities to Siriraj Hospital. The age of patients increases as more Thai people become elderly. Working time increases, too. There are emergency out-of-office-hour cases, special clinic cases and in 2012, we also started to cover patients in Siriraj Piyamaharajkarun Hospital. The number of anesthesia service in this new hospital increased exponentially and 7,590 cases is recorded in 2015.

Changes in practice

From only finger on the pulse and manual noninvasive blood pressure, the action of anesthesia has changed during these 50 years. Now the standard monitoring includes pulse oximetry, automated blood pressure, electrocardiogram, capnogram, temperature, gas analysis and ventilator pressure record. Invasive monitoring are peripheral arterial pressure, central vein and pulmonary artery pressure. Bispectral index is sometimes used to prevent awareness. The techniques in the old days were only general or regional anesthesia. Now we have combined general-epidural anesthesia and intrathecal opiates to control post-operative pain. We have also added total intravenous anesthesia, ultrasound-guided peripheral nerve blocks, and intra-operative echocardiography into our armamentarium. Ether and even halothane have long been abandoned and now the inhalation agents used in our ORs are isoflurane, desflurane and sevoflurane. Anesthesia record have been changed many times to ensure vigilance, record complications, and improve communication. However, we still believe in watching over the patients; compassion, responsibility and integrity are most important.

Research work

Research is a priority in university hospitals. Faculty of Medicine Siriraj Hospital requests a 0.5-1 publication per person per year and that boosts the number of research conducted in our department. Grants are not difficult to be acquired and research assistants are now available. Our staffs are capable to conduct research as many have graduated in Master of Epidemiology. However, the research questions need to be upgraded to more interesting and innovative topics. Our strategy is to combine force with preclinical departments and other genetic or molecular science initiatives. The drawback of high demand for anesthesia service is less time to concentrate on research. Better

human resource management for the whole Faculty of Medicine is needed to satisfy both the University and its employees.

Other missions

In order to reach excellence and support the main missions above, the department has set off to follow the Thailand Quality Award journey. We strengthened the administration system by setting vision and empowerment. Information was improved by using better computerized data recording, though not yet instantaneous or extensive. Resource management composed of ethical reward and punishment, good governance, promoting income via hard working, and extracurricular activities. The culture of Siriraj resides in all personnel, even some who may not know that they have it.

Beyond place and time

Our impact is evident not only in our medical school. In the old days, during Prof. Salard's time, alumni from Siriraj went to work in other hospitals and started or had important roles in anesthesia departments in all corners of Thailand, such as in Chiang Mai, Khon Kaen and Songkhla. Now our graduates are working hard to save patients' lives in hospitals around the country. We have also helped lead Thailand to the world-class standard. With our Annual Scientific Meetings, short courses and textbooks, we distribute knowledge to anesthesiologists, anesthetic nurses and personnel in Thailand. There are many ex-presidents of the Royal College of Anesthesiologists in our department and also founders of many other institutes, such as the Royal College of Anesthesiologists of Thailand, Critical Care Society, Regional Anesthesia Society, Pain Society, and Bangkok Anesthesia Regional Training Center.

Looking back in time, changes are abundant in equipment, techniques and drugs. But the spirit of our department and Siriraj to follow the footsteps of HRH the King's Father, Prince Mahidol na Songkhla, is still the guiding light. We strive to improve our knowledge and relay knowledge to trainees. Not only knowledge but also the ethical behaviors are taught in our department. Students, residents and personnel are reminded of professionalism and spiritual aim. For 50 years now, Department of Anesthesiology has served Siriraj Hospital, Thailand, and international colleagues. We wholeheartedly believe that if we are true to our vision of excellence and work with dedication for the common good, our department will continue to shine over the next 50 years.

Conclusion

Department of Anesthesiology is now 50 years old. There are progresses in all missions which are elaborated in this article. The key success factor is the dedication of our staffs. With our aim to reach excellence in many missions, the staff work very hard and the culture of Siriraj is very evident. However, we still believe that compassion, responsibility and integrity are most important. These will contribute to our progress and shine over the next 50 years.

What is already known on this topic?

Department of Anesthesiology Siriraj Hospital is the oldest, largest department in Thailand. We have contributed to the advancement in Surgery and other specialties.

What this study adds?

A critical look at the character and progress of Department of Anesthesiology, how it has survived the test of time and remains an excellent department.

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Potential conflicts of interest

None.

References

1. Lertakyamane J. Department of Anesthesiology, past present and the future. In: Chinachote T, editor. Looking forward and back, 2015. Bangkok: Printinghall; 2014: 33-8.
2. Aroonpruksakul N. Postgraduate training. In: Chinachote T, editor. Looking forward and back, 2015. Bangkok: Printinghall; 2014: 47-52.
3. Mahidol University. In: Annual report 2014. Bangkok: Department of Anesthesiology Faculty of Medicine Siriraj Hospital Mahidol University; 2014: 368-71.

ครบรอบ 50 ปี ภาควิชาวิสัญญีวิทยา คณะแพทยศาสตร์ศิริราชพยาบาล มหาวิทยาลัยมหิดล

จรรยา เลิศอรรมยณี

ภาควิชาวิสัญญีวิทยา คณะแพทยศาสตร์ศิริราชพยาบาล เริ่มต้นเป็นแผนกวิสัญญีโดยแบ่งแยกออกมาจากแผนกศัลยศาสตร์เมื่อปี พ.ศ. 2508 จึงครบรอบอายุ 50 ปี ในปี พ.ศ. 2558 การวิจัยได้กลายเป็นพันธกิจที่หนึ่งและจำเป็นตามวิสัยทัศน์ของมหาวิทยาลัยมหิดล พันธกิจที่สองคือการสอน และฝึกอบรม แต่ละปีภาควิชาได้ผลิตวิสัญญีแพทย์และวิสัญญีพยาบาลคุณภาพทันสมัยเป็นจำนวนมากที่สุด หลักสูตรการศึกษาและฝึกอบรม มีการปรับปรุงอยู่ตลอดเวลา จากหน่วยงานขนาดเล็ก ปัจจุบันได้เติบโตเป็นภาควิชาที่มีบุคลากรมากที่สุดภาควิชาหนึ่ง และขยายงานบริการ ซึ่งเป็นพันธกิจที่สามออกไปนอกห้องผ่าตัด มีทั้งการประเมินและเตรียมผู้ป่วยก่อนผ่าตัด การระงับความรู้สึกในและนอกห้องผ่าตัด การระงับปวดหลังผ่าตัด หออภิบาลผู้ป่วยหนัก และการระงับปวดเรื้อรัง จำนวนผู้ป่วยที่รับบริการและโรคของผู้ป่วยเพิ่มขึ้นและความซับซ้อนของการผ่าตัดก็เพิ่มขึ้นด้วย ยาและอุปกรณ์ต่างๆ มีการเปลี่ยนแปลงไปมาก พันธกิจที่สี่ คือการพัฒนาการบริหาร การสื่อสาร และการบริหารบุคคล ส่วนพันธกิจที่ห้า คือการรับผิดชอบต่อสังคม อย่างไรก็ตามภาควิชามีความเชื่อว่า ความเมตตา กรุณา ความรับผิดชอบ และความซื่อสัตย์เป็นสิ่งสำคัญยิ่ง ภาควิชาได้ทำการสอนและปฏิบัติงานตามพระบรมราชโองการของสมเด็จพระบรมราชชนก สิ่งเหล่านี้เป็นสิ่งที่ส่งเสริมความก้าวหน้าและเกียรติคุณของภาควิชาในอีก 50 ปีต่อไป
