

CAN THO S.I.S GENERAL HOSPITAL



Stroke International Services
Safeguard Against Stroke

TRAINING MAJORITY

INTERVENTIONAL NEURORADIOLOGY

Can Tho City

1. Overview of the training course

Stroke is the leading cause of death in Vietnam, accounting for 21.7% of all deaths due to diseases, an estimated 150,000 deaths per year. Of these, ischemic stroke constitutes 85%, while hemorrhagic stroke accounts for 15%. Can Tho S.I.S General Hospital has built and implemented a stroke emergency model with the aim of enhancing treatment efficacy and reducing mortality rates.

The S.I.S Emergency Department visits for acute stroke accounted for about 44% of the total number of emergency patients. Among these, ischemic strokes constituted 80% and hemorrhagic strokes 20%. The proportion of “golden hour” timeframe-fitted patients among acute ischemic stroke patients was about 21%. From the third quarter of 2022 to the first quarter of 2024, Can Tho S.I.S General Hospital received the “Diamond” award in the WSO Angels Award tier system seven consecutive times.

Besides the important function of treating patients, the Can Tho S.I.S General Hospital also aims to build a research and training center in the field of stroke diagnosis & treatment. It has provided training support to doctors from countries facing difficulties in stroke treatment, such as Malaysia, Philippines, Indonesia, and India, and *has been approved by the Ministry of Health to become a training center and transfer of high technology to regional units and hospitals as well as countries in the region with training code C40.08.*

With the emergence of endovascular intervention, especially neurovascular intervention, clinicians can easily diagnose cerebrovascular diseases as well as intervene to treat these lesions with the least invasive but the most effective. Cerebral angiography is the use of a catheter and wire system that travels from the femoral artery (in some cases a rotary or brachial artery) selectively to the cerebral arteries through a digital background-erase angiography (DSA) system.

Neurovascular interventions require extensive knowledge of neurovascular pathology and imaging. It is also indispensable that intervention skills are intended to limit complications and provide a high likelihood of success.

In that condition, we developed the training program of "Basic & Advanced Interventional Neuroradiology". With this program, we hope to train and transfer high technology to doctors & hospitals in the region as well as countries in the region. Provides timely diagnosis and treatment interventions for stroke patients – reducing the risk of permanent disability and mortality.

A – BASIC INTERVENTIONAL NEURORADIOLOGY PROGRAM

2. Course Objectives

2.1. Overall objectives

At the end of the course, attendees have the ability to recognize, diagnose, read results, and perform diagnostic scans and basic interventions for neurovascular diseases.

2.2. Specific objectives

2.2.1. Knowledge Objectives

1. Be able to present the basic knowledge of the anatomy of the neurovascular system and pathological knowledge about neurovascular diseases
2. Diagnose and identify the optimal treatment for patients with neurovascular diseases

2.2.2. Skill Objectives

3. Be able to read and analyze neurovascular images on MRA; CTA and DSA-based into the Hospital's database and on clinical patients
4. Be able to perform digital subtraction angiography procedures on patients at the hospital
5. Participate in supporting cases at the hospital
6. Be able to perform basic and simple neurovascular interventions through thrombectomy in acute cerebral ischemic stroke; place coils in brain aneurysm rupture,...

2.2.3. Attitude Objective

7. Demonstrate meticulousness, caution, and decisiveness.
8. Demonstrate urgency and decisiveness when handling situations during the procedure.

3. Target attendee

The radiologists, neurologists, and neurosurgeons have practice medical licenses and are oriented to participate in the field of neurovascular intervention at hospitals in the region and countries in the region.

4. Table of Content

BASIS TRAINING (6 months) <i>Focus on basic principles and approach to below topics</i>
Unit 1: Principles of digital subtraction angiography (DSA) and Radiation safety
Unit 2: Anatomy of extra- and intra-cerebral vessels (Remarks)
Unit 3: Diagnostic imaging modalities - MSCT and MRI (Remarks)
Unit 4: Application of Diagnostic imaging in Ischemic stroke (Remarks)
Unit 5: Application of Diagnostic imaging in Intracranial hemorrhage (Remarks)
Unit 6: Application of Diagnostic imaging in Spinal disease
Unit 7: Diagnosis and Optimal medical therapy of Ischemic stroke
Unit 8: Acute Ischemic Stroke: Indications of Intravenous Thrombolysis
Unit 9: Acute Ischemic Stroke: Indications of Mechanical Thrombectomy
Unit 10: Decompressive Craniectomy therapy in Ischemic Stroke
Unit 11: Diagnosis and Optimal Medical Therapy In Meningeal and Parenchymal Hemorrhages
Unit 12: Surgery in Meningeal and Parenchymal Hemorrhages
Unit 13: Endovascular therapy in Cerebral Arteriovenous Malformation (AVM)
Unit 14: Endovascular therapy in Cerebral Aneurysm versus clipping: patient selection
Unit 15: Diagnosis and Treatment of Traumatic Carotid-Cavernous Fistula (CCF)
Unit 16: Diagnosis and Treatment of Dural Arteriovenous Fistula
Unit 17: Diagnosis, classification and treatment of spinal vascular disease

Unit 18: Diagnosis and treatment of pediatric Vein of Galen malformation

Unit 19: Classification and Endovascular therapy of Cerebral Vascular Anomalies

Unit 20: Post-stroke Rehabilitation therapy

B – ADVANCED INTERVENTIONAL NEURORADIOLOGY PROGRAM

5. Course Objectives

5.1. Overall objectives

At the end of the course, attendees have the ability to recognize, diagnose, read results, and perform diagnostic scans and basic interventions for neurovascular diseases.

5.2. Overall objectives

5.2.1 Knowledge Objectives

1. Be able to diagnose all types of neurovascular diseases.
2. Evaluate and provide optimal treatment methods for patients with complex neurovascular diseases. Diagnose and identify the optimal treatment for patients with neurovascular diseases

5.2.2 Skill Objectives

3. Read and analyze neurovascular images on MRA, CTA, and DSA based on the Hospital database and on clinical patients.
4. Perform vascular intervention (intracranial - extracranial) in ischemic stroke, thrombectomy in acute cerebral ischemic stroke; place coils in brain aneurysm rupture,... according to the hospital's technical procedures, on patients at the hospital

5.2.3 Attitude Objectives

5. Demonstrate meticulousness, caution, and decisiveness.
6. Demonstrate urgency and decisiveness when handling situations during the procedure

6. Target attendee

The doctors had the “Basic Interventional Neuroradiology” Certificate.

7. Table of content

ADVANCE TRAINING
<i>Focus on advance principles and approach to below topics</i>
Unit 1: Radiological anatomy and Diagnostic imaging modalities - MSCT and MRI
Unit 2: Application of Diagnostic imaging in Ischemic stroke
Unit 3: Application of Diagnostic imaging in Intracranial hemorrhage
Unit 4: Application of Diagnostic imaging in Spinal disease
Unit 5: Diagnosis and Optimal medical therapy of Ischemic stroke
Unit 6: Acute Ischemic Stroke: Indications of Intravenous Thrombolysis
Unit 7: Acute Ischemic Stroke: Indications of Mechanical Thrombectomy
Unit 8: Decompressive Craniectomy therapy in Ischemic Stroke
Unit 9: Diagnosis and Optimal Medical Therapy In Meningeal and Parenchymal Hemorrhages
Unit 10: Surgery in Meningeal and Parenchymal Hemorrhages
Unit 11: Endovascular therapy in Cerebral Arteriovenous Malformation (AVM)
Unit 12: Endovascular therapy in Cerebral Aneurysm
Unit 13: Diagnosis and Treatment of Carotid-Cavernous Fistula (CCF)
Unit 14: Diagnosis and Treatment of Dural Arteriovenous Fistula
Unit 15: Post-stroke Rehabilitation therapy
Unit 16: Diagnosis, classification and treatment of spinal vascular disease
Unit 17: Diagnosis and treatment of pediatric Vein of Galen malformation
Unit 18: Classification and Endovascular therapy of Cerebral Vascular Anomalies

8. Training duration & venue

This is a focused training program consisting of 80 theoretical lessons and 780 practical lessons lasting 6 months (for each period, basic & advanced) at Can Tho S.I.S General Hospital, located at 397 Nguyen Van Cu Street, An Binh Ward, Ninh Kieu District, Can Tho City, Viet Nam.

9. Training course fee

This table provides a clear and comprehensive breakdown of all the costs associated with the training, making it easier for participants to understand and budget accordingly.

CATEGORY	DESCRIPTION	COST (PER MONTH)	COST FOR 6 MONTHS
Tuition fee	Cost of the training course, including certificate	800\$	4800\$
Meals (optional)	Daily meals at the hospital cafeteria (breakfast, lunch, dinner)	300\$	1800\$
Accommodation (optional***)	Cost of staying at the hospital's motel (***)	350\$	2100\$
TOTAL GRAND		1450\$	8700\$

**The decision of the Department of Science Technology & Training – Ministry of Health
on granting continuous coding facilities to members of S.I.S Hospital**

MINISTRY OF HEALTH
DEPARTMENT OF SCIENCE
TECHNOLOGY AND TRAINING

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom – Happiness

No: 93/ QD-K2DT

Hanoi, June 17, 2021

DECISION

On granting continuous coding facilities to members of SIS Can Tho International

DIRECTOR GENERAL OF THE DEPARTMENT OF SCIENCE, TECHNOLOGY AND TRAINING

Pursuant to Decision No.1388/QD-BYT dated 22/02/2018 of the Minister The Ministry of Health stipulates the functions, tasks, limitations and organization of the Department of Science, Technology and Training under the Ministry of Health;

Pursuant to Circular No.22/2013/TT-BYT dated August 9, 2013 on guidance on continuous training for the Ministry of Health:

Pursuant to compiling the meeting of the grassroots-level Advisory Council for continuous coding of diseases SIS Can Tho International Dermatologist on June 11, 2019 according to Decision No. 2330 / QD-BYT dated June 6, 2019 of the Minister of Health;

At the proposal of the Head of Training Management Department;

DECISION:

Article 1. To recognize SIS Can Tho International General Hospital as a unit eligible to participate in continuous training of medical staff with the contents according to their functions and duties and approved by the competent authority for training programs and documents. Continuity training facility code is **C40.08**.

Article 2. S.I.S Can Tho International General Hospital is responsible for continuing training in accordance with the regulations and training medical staff in the hospital's network. The hospital is responsible for managing and implementing continuous training activities for medical staff in accordance with Circular 22/2013/TT-BYT dated August 9, 2013 and other current regulations of the Government.

Article 3. Decisions take effect from the date of signing and promulgation.

Article 4. Mr/Ms. Chief of Office of the Department, Head of Training Management Department; The Director of Can Tho Department of Health and the Director of S.I.S Can Tho International General Hospital are responsible for implementing this Decision.

TỊCH
ÔNG
PHÁ
U-TP.C

Ngày 14 tháng 6 năm 2021/ On June 14th 2021
Tại UBND quận Ninh Kiều/ At Ninh Kieu District
People's Committee

Tôi, I
Trưởng/Phó phòng Tư pháp quận Ninh Kiều, TP.Cần
Tho/ Head/Vice Head of Justice Division, Ninh Kieu
District, Can Tho City

chứng thực/ hereby certify that
bà Nguyễn Thúy Diễm là người đã ký vào bản dịch
này/ Ms. Nguyen Thuy Diem is the person signing
this translation.

Số/Notary No. 254.8. Quyền/Book No. 1 -
SCT/CKND 2021


.....**Võ Phương Thảo**.....

**PP DIRECTOR GENERAL
PHÓ CỤC TRƯỞNG
PHÓ CỤC TRƯỞNG PHỤ TRÁCH**



Nguyễn Ngô Quang

**The decision of the Department of Science Technology & Training – Ministry of Health
on approving the continuous training program of S.I.S Hospital**

MINISTRY OF HEALTH
DEPARTMENT OF SCIENCE
TECHNOLOGY AND TRAINING

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom – Happiness

No: 84/QD-K2DT

Hanoi, June 16, 2021

DECISION

On the promulgation of Continuous Training program and materials: “Basic neurovascular intervention, Updates on diagnosis and treatment of cerebral stroke, Equipment preparation and taking care of patients in the angiography room”.

**DIRECTOR GENERAL OF THE DEPARTMENT OF SCIENCE,
TECHNOLOGY AND TRAINING**

Pursuant to Decision No.1388/QĐ - BYT dated February 22, 2018 of the Minister of Health stipulating the functions, tasks, powers and organizational structure of the Department of Science, Technology and Training under the Ministry of Health;

Pursuant to Circular No.22/2013/TT-BYT dated August 9, 2013 guiding the continuous training for health workers;

Pursuant to the minutes of the Professional advisory Council to appraise the training program and documents according to Decision No.65/QĐ-K2DT dated May 11, 2020 and Decision No.66/QĐ-K2DT dated May 11, 2020 of the Department of Science, Technology and Training;

At the request of the Head of Management and Training Department.

DECISION

Article 1. To issue 03 programs and continuous training documents drafted by SIS Can Tho International General Hospital, including: "Basic vascular intervention, Updates on diagnosis and treatment of cerebral stroke, Equipment preparation and taking care of patients in the angiography room".

Article 2. The continuous training programs and materials specified in Article 1 are used for training and retraining in order to improve the capacity of doctors and nurses working at medical examination and treatment establishments.

Article 3. The definition takes effect from the date of promulgation.

Article 4. Mr/Ms. Chief of Office of the Department, Head of Training Management Department; The Director of SIS Can Tho International Hospital and the assigned training institutions are responsible for the implementation of this Decision.

Ngày 14 tháng 6 năm 2021/ On June 14th 2021
Tại UBND quận Ninh Kiều/ At Ninh Kieu District
People's Committee
Tôi, I **Võ Phương Thảo**
Trưởng/ Phó phòng Tư pháp quận Ninh Kiều, TP. Cần
Tho/ Head/Vice Head of Justice Division, Ninh Kieu
District, Can Tho City
chứng thực/ hereby certify that
bà Nguyễn Thủy Diễm là người đã ký vào bản dịch
này/ Ms. Nguyen Thuy Diem is the person signing
this translation.
Số/Notary No. 84.8. Quyền/Book No. 1 -
SCT/CKND 2021



.....**Võ Phương Thảo**.....

**PP DIRECTOR GENERAL
KẾ CỤC TRƯỞNG
PHÓ CỤC TRƯỞNG PHỤ TRÁCH**



Nguyễn Ngô Quang

