Volume pre1 Number pre1 September 2015

The Cambodian Journal of Nephrology

Meeting Issue

The Cambodian and International Seminar for Nephrology and Dialysis 2015

Toru Hyodo, Congress President

JAC-DSC

Reiseikai Media

Vol.pre1, No.pre1, September 2015

The Cambodian Journal of Nephrology

CONTENTS

Where a manuscript is posted in the Journal in multiple languages and where there is any discrepancy between the versions in different languages, the English language version will prevail over the others.

សារណាដែលបានចុះផ្សាយក្នុងទស្សនាវដ្តីយើងខ្ញុំត្រូវបានសរសេរជាភាសាផ្សេងៗ ហេតុដូច្នេះក្នុងករណីមានការស្រពិចស្រពិលទៅលើពាក្យឬភាសាណាមួយ យើងសូមផ្តល់អាទិភាពទៅដល់អត្ថន័យនៃប្រយោគដែលជាភាសាអង់គ្លេស ។

JAC-DSC

Cngress President, Vice President of the Japanese Assistance Council of Establishing Dialysis Specialist System in Cambodia (JAC-DSC)

Toru Hyodo, M.D., Ph.D.

Director, Eijin Clinic, Hiratsuka, Japan / Invited Associate Professor, Department of Urology, Kitasato University, Sagamihara, Japan
Congress President of the Japanese Society for Hemodialfiltration 2011 / Council Member, Japanese Society for Dialysis Therapy (JSDT)
Council Member, Japanese Society for Hemodiafiltration / Council Member, Japanese Society for Peritoneal Dialysis
Council Member, Japanese Society for Dialysis Access / Council Member, Japanese Society for Renal Nutrition
Vice Chairperson of JSDT Committee to Support Young Doctors and Co-medical Staffs in Dialysis Fields in Developing Countries
Secretary General, NGO Ubiquitous Blood Purification International, Yokohama, Japan / Guest Professor, International University, Phnom Penh, Cambodia

It is my great pleasure to organize the Cambodian and International Seminar for Nephrology and Dialysis in Phnom Penh.
This seminar is open for the persons including doctors, medical students, nurses, nursing students and staffs who are related not only to nephrology and dialysis therapy but also all medical fields in Cambodia.

I have the good news for such persons at this time. I belong to the committee of Japanese Society for Dialysis Therapy (JSDT) to support dialysis staffs in the developing countries. Cambodia is selected as the country that JSDT will support. The content of this support is to invite to the dialysis centers for 7 days in Japan. JSDT will support 100000 yen per a person for this staying in Japan. The travel fee from Cambodia to Japan must be prepared by him or herself. The selection of the candidate for this program will be performed by the recommendation from the dialysis or nephrology related association, the hospital or the university that the candidate attends to. This committee of JSDT welcomes not only doctors but also the co-medical staffs as nurses and other professions. Maybe I think that 2 or 3 persons will be invited to Japan per a year from Cambodia.

The medical instruments and machines are very sophisticated and complicated. These devices are too difficult to operate only by doctors and nurses. The clinical engineer is the profession to operate such complicated devices and take care patients. The department of clinical engineering is common in every hospital and clinic in Japan. There are many universities that have the clinical engineering course as the faculty in Japan. The medicine cannot go ahead without clinical engineers in the present medical world. I am looking forward to seeing the faculty of clinical engineering in Cambodia. So I invited two clinical engineers “Prof. Naramura and Ms. Kojima as the education ambassadors from Japan Association for Clinical Engineers (JACE).

ខ្ញុំពិតជាមានសេចក្តីសោមនស្សរីករាយជាខ្លាំងដោយមានកិត្តិយសរៀបចំសិក្ខាសាលាអន្តរជាតិកម្ពុជាសំរាប់ Nephrology និងការលាងឈាម (Cambodian and International Seminar for Nephrology and Dialysis)
ឡើងនាឯរាជធានីភ្នំពេញ។ សិក្ខាសាលានេះគឺប្រារព្ធឡើងក្នុងគោលបំណងចែករំលែកចំណេះដឹងទៅដល់ វេជ្ជបណ្ឌិត
និស្សិតផ្នែកវេជ្ជសាស្ត្រ គិលានុបដ្ឋាយិកា សិស្សនិស្សិតផ្នែកឆ្មប និង បុគ្គលិកទាំងឡាយដែលជាប់ពាក់ព័ន្ធផ្នែកវេជ្ជសាស្ត្រទាំងអស់
នៅក្នុងប្រទេសកម្ពុជា។ ខ្ញុំមានដំណឹងល្អសម្រាប់អ្នកទាំងអស់គ្នា។
ខ្ញុំជាសមាជិកគណៈកម្មាធិការសម្រាប់ការលាងឈាមប្រចាំប្រទេសជប៉ុន (Japanese Society for Dialysis Therapy)
ហៅកាត់ (JSDT) គាំទ្រដល់បុគ្គលិកផ្នែកលាងឈាមនៅក្នុងប្រទេសកំពុងអភិវឌ្ឍន៍។ ក្នុងនោះក៏មានប្រទេសកម្ពុជាផងដែរ ។
គំរោងនេះគឺធ្វើឡើងដើម្បីអញ្ជើញអ្នកដែលជាប់ពាក់ព័ន្ធទៅចុះកម្មសិក្សាមណ្ឌលលាងឈាមនាឯប្រទេសជប៉ុនរយៈពេល 7 ថ្ងៃ ។
JSDT នឹងផ្តល់ 100000 យ៉ែន ក្នុងមួយរូបសម្រាប់ការស្នាក់នៅក្នុងប្រទេសជប៉ុននេះ។ ថ្លៃដំណើរពីប្រទេសកម្ពុជាទៅកាន់ប្រទេស
ជប៉ុនត្រូវរ៉ាប់រងដោយខ្លួនឯង។
ការជ្រើសរើសបេក្ខជនសម្រាប់កម្មវិធីនេះនឹងត្រូវអនុវត្តដោយយោងតាមអនុសាសន៍ពីសមាគមលាងឈាម ឬ Nephrology
ដែលពាក់ព័ន្ធ ក៏ដូចជាមន្ទីរពេទ្យឬសាកលវិទ្យាល័យដែលបេក្ខជនកំពុងតែសិក្សា។ គណៈកម្មាធិការ JSDT
នឹងធ្វើការស្វាគមន៍ចំពោះ វេជ្ជបណ្ឌិត សហការីពេទ្យ គិលានុបដ្ឋាយិកា និងអ្នកដែលមានវិជ្ជាជីវៈដទៃទៀត។ ខ្ញុំគិតថា ប្រហែល
ជាមានបេក្ខជនពីប្រទេសកម្ពុជា 2 ឬ 3 នាក់នឹងត្រូវបានអញ្ជើញទៅកាន់ប្រទេសជប៉ុនក្នុងមួយឆ្នាំម្តង។
ឧបករណ៍វេជ្ជសាស្ត្រនិងម៉ាស៊ីនផ្សេងៗទៀតគឺពិតជាមានភាពស្មុគស្មាញក្នុងការប្រើប្រាស់ណាស់។ ឧបករណ៍ទាំងនេះគឺពិបាកសម្រាប់
វេជ្ជបណ្ឌិតនិងគិលានុបដ្ឋាយិកាក្នុងការយកទៅប្រើប្រាស់ផងដែរ។
មានតែវិស្វករផ្នែកវេជ្ជសាស្ត្រដែលមានវិជ្ជាជីវៈប៉ុណ្ណោះដែលអាចប្រតិបត្តិការឧបករណ៍ដ៏ស្មុគ្រស្មាញទាំងនេះ
ដើម្បីធ្វើការថែទាំអ្នកជំងឺបាន។ ផ្នែកវិស្វករផ្នែកវេជ្ជសាស្ត្រនេះគឺតែងតែមាននៅក្នុងគ្រប់មន្ទីរពេទ្យនិងគ្លីនិកព្យាបាលជំងឺទាំងឡាយ
នាឯប្រទេសជប៉ុន ហើយក៏មានសាកលវិទ្យាល័យជាច្រើនដែលមានបង្រៀនជំនាញវិស្វករផ្នែកវេជ្ជសាស្ត្រផងដែរនៅក្នុងប្រទេសជប៉ុន ។
បើគ្មានវិស្វករផ្នែកវេជ្ជសាស្ត្រទេ ថ្នាំពេទ្យក៏មិនអាចឈានជំហានទៅមុខបានដែរនៅក្នុងពិភពវេជ្ជសាស្ត្រនាពេលបច្ចុប្បន្ននេះ។ ខ្ញុំកំពុង
រង់ចាំវត្តមាននៃមហាវិទ្យាល័យវិស្វករវេជ្ជសាស្ត្រក្នុងប្រទេសកម្ពុជា។ ហេតុដូច្នេះខ្ញុំក៏បានអញ្ជើញវិស្វករផ្នែកវេជ្ជសាស្ត្រ២រូបគឺ
"លោកសាស្ត្រាចារ្យ ណារ៉ាមូរ៉ា (Naramura) និង លោកស្រីខូយីម៉ា(Kojima) ដែលជាឯកអគ្គរដ្ឋទូតប្រចាំសមាគមវិស្វករផ្នែក
វេជ្ជសាស្ត្រនៃប្រទេសជប៉ុន (Japanese Association for Clinical Engineers) ហៅកាត់ (JACE).

President of the JAC-DSC

Hideki Kawanishi, M.D., Ph.D.

Director of kidney center and surgery, Tsuchiya General Hospital
Clinical professor of Faculty of Medicine, Hiroshima University, Hiroshima Japan

Dear Participants.
Congratulation for the second seminar in International University. This seminar will be informed the important message for ESRD field in Cambodia and South Asia countries.
The number of patients being treated for ESRD globally was estimated to be 3,200,000 at the end of 2013 and, with a 6% growth rate, continues to increase at a significantly higher rate than the world population. In particular, the remarkable increasing rate was shown in Asian countries. However, the access to treatment is still limited in many developing countries and a number of patients with terminal renal failure do not receive treatment. In order to save these patients, it is necessary to enhance the dialysis system, the educated staff and association of each countries.
Japanese Assistance Council of Establishing Dialysis Specialist System in Cambodia (JAC-DSC) was started the education programs of “Dialysis, Renal Transplantation, Clinical Engineering, and Diet Therapy for DM and CKD”
We will expect to be built the cooperation between JAC-DSC and Cambodian Nephrology Team.

គោរពជូនអ្នកដែលបានចូលរួមទាំងអស់គ្នា
សូមអបអរសាទរចំពោះការបើកសិក្ខាសាលាលើកទីពីរដែលបានប្រារព្ធនៅឯសាកលវិទ្យាល័យអន្តរជាតិនេះ។ សិក្ខាសាលានេះនឹងជូនដំណឹងដ៏មានសារៈសំខាន់ស្តីពី ESRD នៅក្នុងប្រទេសកម្ពុជានិងបណ្តាប្រទេសដែលស្ថិតនៅតំបន់អាស៊ីខាងត្បូងផ្សេងៗទៀត។
ចំនួននៃអ្នកជំងឺ ESRD ដែលត្រូវបានទទួលការព្យាបាលនៅទូទាំងពិភពលោកត្រូវបានគេប៉ាន់ប្រមាណ 3.200.000នាក់
ត្រឹមចុងឆ្នាំ2013 ជាមួយនឹងអត្រាកំណើន 6% ។ ហើយជំងឺនេះនៅតែបន្តកើនឡើងក្នុងអត្រាមួយដ៏ខ្ពស់បើធៀបទៅនឹងអត្រាប្រជាជនពិភពលោក។ ជាពិសេស អត្រានៃការកើនឡើងគួរឱ្យកត់សម្គាល់នេះ ត្រូវបានបង្ហាញថាស្ថិតនៅក្នុងបណ្តាប្រទេសអាស៊ី។
ទោះជាយ៉ាងណាក៏ដោយ ការទទួលបាននូវការព្យាបាលនេះនៅមានកំណត់នៅក្នុងបណ្តាប្រទេសកំពុងអភិវឌ្ឍន៍ជាច្រើន ហើយចំនួននៃអ្នកជំងឺដែលមានបញ្ហាតំរងមួយចំនួនមិនបានទទួលនូវការព្យាបាលថែមទៀតផង។ ដើម្បីជួយសង្គ្រោះអ្នកជំងឺទាំងនោះ យើងចំាបាច់ត្រូវបង្កើនប្រព័ន្ធលាងឈាម បុគ្គលិកដែលមានចំណេះដឹង និងសមាគមប្រចាំប្រទេសនីមួយៗ។
ក្រុមប្រឹក្សាជំនួយការរបស់ប្រទេសជប៉ុនក្នុងការ បង្កើតប្រព័ន្ធឯកទេសលាងឈាមនៅកម្ពុជា (Japanese Assistance Council of establishing Dialysis Specialists system in Cambodia) ហៅកាត់ (JAC-DSC) ក៏បានចាប់ផ្តើមកម្មវិធីអប់រំស្តីពី "ការលាងឈាម, ប្រព័ន្ធភាពសិនៃតំរងនោម, វិស្វកវេជ្ជសាស្ត្រ, របបអាហារព្យាបាលជំងឺទឹកនោមផ្អែម និង CKD" ។
យើងខ្ញុំរំពឹងថា កិច្ចសហប្រតិបត្តិការរវាង JAC-DSC និងក្រុម Nephrology ប្រចាំប្រទេសកម្ពុជានឹងត្រូវបានបង្កើតឡើង។

Associate Professor of International University, Cambodia

Sovandy Chan, M.D.

Director, Cambodia-Japan Friendship Blood Purification Center,
Sen Sok International University Hospital, Phnom Penh, Cambodia
Vice President, Sen Sok International University Hospital, Phnom Penh, Cambodia

It is my great pleasure to organize the Cambodian and International Seminar for Nephrology and Dialysis at International University (IU) Hall in Phnom Penh. This seminar is organized with Japanese Assistance Council of establishing Dialysis Specialists system in Cambodia (JAC-DSC), Japan Association for Clinical Engineers (JACE) and International Kidney Evaluation Association Japan (IKEAJ).

This seminar is open for the persons including doctors, medical students, nurses, nursing students and staffs who are related not only to nephrology and dialysis therapy but also all medical fields in Cambodia.

The two dialysis related papers from IU will be presented in this scientific meeting. One is the paper that was accepted and presented in American Society of Nephrology, Annual Meeting 2014 and the other is the case report that was presented by two IU medical students in the 3rd Annual Meeting of Japanese Society for Renal Nutrition 2015. Cambodia-Japan Friendship Dialysis Center of Sen Sok International University Hospital was established in 2010. Our dialysis center is young, but we have accomplished not only daily clinical dialysis works but also the scientific and educational activities.

I hope this seminar will benefit medical professional workers, students and the citizens of Cambodia

ខ្ញុំពិតជាមានសេចក្តីសោមនស្សរីករាយជាខ្លាំងដោយមានកិត្តិយសរៀបចំសិក្ខាសាលាអន្តរជាតិកម្ពុជា
សំរាប់ Nephrology និងការលាងឈាម (Cambodian and International Seminar for Nephrology and Dialysis) ឡើងនាឯរាជធានីភ្នំពេញនៅក្នុងសាលប្រជុំរបស់សាកលវិទ្យាល័យអន្តរជាតិ។
សិក្ខាសិលានេះត្រូវបានរៀបចំឡើងដោយ ក្រុមប្រឹក្សាជំនួយការរបស់ប្រទេសជប៉ុនក្នុងការ បង្កើត
ប្រព័ន្ធឯកទេសលាងឈាមនៅកម្ពុជា (Japanese Assistance Council of establishing Dialysis Specialists system in Cambodia) ហៅកាត់ (JAC-DSC) , សមាគមជប៉ុនសម្រាប់វិស្វកររង្វើកវេជ្ជសាស្ត្រ (Japanese Association for Clinical Engineers) ហៅកាត់ (JACE) និង សមាគមវាយតម្លៃតម្រងនោមអន្តរជាតិប្រចាំប្រទេសជប៉ុន (International Kidney Evaluation Association Japan) ហៅកាត់ (IKEAJ) ។ សិក្ខាសាលានេះគឺប្រារព្ធឡើងក្នុងគោលបំណងចែករំលែកចំណេះដឹងទៅដល់ វេជ្ជបណ្ឌិត
និស្សិតផ្នែកវេជ្ជសាស្ត្រ គិលានុបដ្ឋាយិកា សិស្សនិស្សិតផ្នែកឆ្មប និង បុគ្គលិកទាំងឡាយដែលជាប់
ពាក់ព័ន្ធផ្នែកវេជ្ជសាស្ត្រទាំងអស់នៅក្នុងប្រទេសកម្ពុជា។
ឯកសារដែលទាក់ទងនឹងការលាងឈាមរបស់សាកលវិទ្យាល័យអន្តរជាតិ (IU) ចំនួន២ នឹងត្រូវលើក
បង្ហាញនៅក្នុងកិច្ចប្រជុំតាមបែបវិទ្យាសាស្ត្រ ។ មួយគឺឯកសារដែលត្រូវបានទទួលស្គាល់និងបានធ្វើ
បទបង្ហាញនៅក្នុងសង្គមអាមេរិកស្តីពី Nephrology នៅក្នុងកិច្ចប្រជុំប្រចាំឆ្នាំ 2014 និងមួយទៀតគឺជា
របាយការណ៍ដែលត្រូវបានធ្វើបទបង្ហាញដោយនិស្សិតផ្នែកវេជ្ជសាស្ត្រចំនួន២រូបរបស់សាកល
វិទ្យាល័យអន្តរជាតិ (IU) នៅក្នុងកិច្ចប្រជុំលើកទី 3 នៃនាឯប្រទេសជប៉ុនសម្រាប់ឆ្នាំ 2015 Renal ស្តីពីអាហា
រូបត្ថម្ភសម្រាប់តម្រងនោម ។ មជ្ឈមណ្ឌលលាងឈាមមិត្តភាពកម្ពុជាជប៉ុននៃមន្ទីរពេទ្យសាកលវិទ្យា
ល័យអន្តរជាតិសែនសុខត្រូវបានបង្កើតឡើងក្នុងឆ្នាំ 2010។ ទោះបីជាមជ្ឈមណ្ឌលលាងឈាមរបស់
យើងនៅមានវ័យក្មេងមែនពិត ក៏ប៉ុន្តែយើងបានសម្រេចកិច្ចការមកជាច្រើន មិនត្រឹមតែសកម្មភាព
លាងឈាមនាឯមន្ទីរពិសោធន៍ប្រចាំថ្ងៃប៉ុណ្ណោះទេ ថែមទាំងមានសកម្មភាពផ្នែកវិទ្យាសាស្ត្រនិងការ
អប់រំផងដែរ។
ខ្ញុំសង្ឃឹមថាសិក្ខាសាលានេះអាចផ្តល់អត្ថប្រយោជន៍ទៅដល់បុគ្គលិកដែលមានជំនាញផ្នែកវេជ្ជសាស្ត្រ
សិស្សនិស្សិតនិងប្រជាពលរដ្ឋកម្ពុជាទាំងមូល។

From Japan Association for Clinical Engineers (JACE)

Tomotaka Naramura, C.E., Ph.D.[1), 2), 3)] and Tadayuki Kawasaki, C.E.[4)]

Council Member and International Committee, Japan Association for Clinical Engineers (JACE) [1)]
Department of Medical Engineering, Junshin Gakuen University, Fukuoka, Japan [2)]
Guest Professor, International University, Phnom Penh, Cambodia [3)]
President, Japan Association for Clinical Engineers (JACE) [4)]

Dear Participants:

Congratulations for the holding of the Cambodian and International Seminar for Nephrology and Dialysis in Phnom Penh.

It would not be too much to say that routine daily treatment is not possible without medical equipment now. However, with progress in medical science, medical equipment has become complex, leading to an indispensable need for medical staff specializing in both engineering and medical science. Therefore, in Japan, the Clinical Engineers Act for clinical engineers was established approximately 30 years ago to allow clinical engineers to specialize in medical equipment. The main work of clinical engineers in Japan is operation and maintenance of medical equipment, including life support equipment. Furthermore, a characteristic of clinical engineers in Japan is that they are able to administer medical care to patients as medical staff. Dialysis therapy involves the use of a dialysis machine as life support equipment; therefore, it is indispensable for medical staff to have knowledge not only regarding medical science but also engineering to ensure safe and efficient treatment.

We will be delighted if this meeting can be helpful for gaining knowledge about techniques related to dialysis therapy for participants.

From International Kidney Evaluation Association Japan (IKEAJ)

Susumu Takahashi, M.D.

President, International Kidney Evaluation Association Japan (IKEAJ)

Greetings

It is my great honor to be able to offer greetings for this meeting on behalf of International Kidney Evaluation Association Japan.

Chronic Kidney Disease is a severe public health problem. It is recognized as a priority issue for national health by WHO in its basic intervention strategy for non-communicable diseases.

There are five stages of severity for CKD, from having persistent kidney impairment (stage 1), to a slight reduction in kidney function (stage 2), or a moderate to severe reduction in kidney function (stages 3a, 3b, and 4). Finally, as everyone is well aware, Stage 5 CKD indicates severe, progressively worsening kidney impairment, and requires life-sustaining dialysis or a kidney transplant.

CKD patients suffer from serious symptoms and a high mortality rate. It is also a fact that in each country around the world, CKD has a major impact in terms of insurance costs, quality of life, and medical fees.

I strongly convinced that exchanging your experience and knowledge of both Cambodian and Japanese people concerned nephrology gathered together here will greatly contribute the progress of nephrology research and treatment not only in both countries but also in other Asian countries.

I hope that this will be a very fruitful meeting for you all.

Masafumi Fukagawa, M.D., Ph.D.

Professor of Medicine, Division of Nephrology, Endocrinology and Metabolism,
Tokai University School of Medicine, Isehara, Japan

It is my great pleasure to attend Cambodian and International Seminar for Nephrology and Dialysis in Phnom Penh.

I hope such activities will benefit the citizens of your country, not only in the availability of dialysis therapy, but also in the prevention and management of chronic kidney disease.

The Cambodian and International Seminar for Nephrology and Dialysis 2015 Preliminary Program

Date:September 22, 2015

Venu:International University (IU): No 89-95, St.1984-1911. Phnom Penh Thmey, Sen Sok, Phnom Penh, Cambodia

8:30-9:00 **Registration**

9:00-9:10 **Opening Ceremony**

9:10-10:10 **Cambodian and Japanese Oral Presentations**

1: Thim Pich Thida and Rith Susan (Medical Students, IU, Cambodia): Introduction to Maintenance Haemodialysis for a Poor Cambodian Patient: The Nutritional Status Under the Present Dialysis Condition

2: Dr. Sovandy Chan (IU, Cambodia): The Dialysate Purification and Introduction of High Flux Dialyzers in Cambodia

3: Prof. Toru Hyodo (Eijin Clinic & Kitasato University, Japan): A Simple Method of Dietary Management for Glycemic Control in Diabetic Hemodialysis Patients: The Usefulness of Basic Carbohydrate Counting

10:10-10:35 **Japanese Assistance Council of establishing Dialysis Specialists system in Cambodia (JAC-DSC) Education Lecture 1**

Prof. Kenichi Kokubo: Principles and Methods of Hemodialysis (Kitasato University, Japan)

10:35-11:00 **Nipro Corporation Industrial Seminar**

Mr. Kaname Sadahiro (Nipro Corporation) : Dialysis Machine & Medical Devices of Nipro Corporation

11:00-11:15 **Break**

11:15-12:00 **Special Education Lecture**

Prof. Masafumi Fukagawa(Tokai University, Japan): Prevention and Management of Chronic Kidney Disease (CKD)

12:00-12:10 **Break**

12:10-13:00 **DKSH Cambodia (Roche) Luncheon Seminar**

Prof. Hideki Kawanishi (Tsuchiya General Hospital): Anemia Management for CKD

13:00-13:10 **Break**

13:10-13:35 **International Kidney Evaluation Association Japan (IKEAJ) Lecture**

Mr. Nobuo Ito (IKEAJ, Japan): CKD Screening Program in Japan --- Activities of IKEAJ ---

13:35-14:25 **Japan Association for Clinical Engineers Education Lectures**

Ms. Moe Kojima (Tokai University Oiso Hospital, Japan): The Role of Clinical Engineer as a Profession

Prof. Tomotaka Naramura (Junshin Gakuen University, Japan): Dialysis Fluid Purification

14:25-14:50 **JAC-DSC Education Lecture 2**

Dr. Kanenori Maeda (Maeda Clinic, Japan): Long-hour Hemodialysis

14:50-15:05 **Break**

15:05-15:30 **JAC-DSC Education Lecture 3**

Dr. Minoru Ito (Yabuki Hospital, Japan): The Nutritional Assessment of Dialysis Patients using a Malnutrition-Inflammation Score (MIS)

15:30-15:55 **JAC-DSC Education Lecture 4**

Prof. Toshihide Naganuma (Osaka City University Hospital, Japan): Vascular Access

15:55-16:00 **Closing Remarks**

16:00-16:30 **Delivery of Certifications to All Audience**

Abstracts

Introduction to Maintenance Hemodialysis for a Poor Cambodian Patient: The Nutritional Status Under the Present Dialysis Condition.

1) Thim Pich Thida MS, 1) Rith Susan MS, 2) Yim Sovannbophea MD, 2) Som Leakhena MD, 1, 2) Sovandy Chan MD, 2, 3) Haruki Wakai MD, 2, 3) Toshihide Naganuma MD, 2, 3) Kenichi Kokubo PhD, 2, 3) Toru Hyodo MD, 2, 3) Kazunari Yoshida MD, 2, 3) Hideki Kawanishi MD, 3) Yukie Kitajima RD, 3) Satoko Tamura RD, 1, 2) Sabo Ojano MD

1) School of Medicine, International University, Phnom Penh, Cambodia
2) Cambodia-Japan Friendship Blood Purification Center, Sen Sok International University Hospital (SSIUH), Phnom Penh, Cambodia
3) Japanese Assistance Council of establishing Dialysis Specialists system in Cambodia (JAC-DSC), Tokyo, Japan

[Background]
People living in Phnom Penh earn an average of $100-$250 a month for government salary, and the hemodialysis (HD) costs $45-60 per time in 2015. In Cambodia, patients are responsible for all medical costs. Thus, HD is not fully accessed for low-income patients. In this study, we are reporting the nutritional and psychological status of a poor female patient who has been receiving HD supported financially by her neighbors.

[Case]
A 56-year-old non-diabetic female patient was given a diagnosis of the end stage renal disease (ESRD) on November 22, 2014. A local physician suggested HD, but it was not performed because of the unaffordable cost. Owing to her neighbor's financial donation, she was able to receive HD. At the end of December, approximately $1,500 has been donated. From November 29, 2014 to May 15, 2015, 26 times of dialysis were performed at SSIU Hospital. The interval between each dialysis was 4-7 days. The predialysis data on November 29, 2014 were: Creatinine 12.0 mg/dl, Blood urea 209 mg/dl, Hematocrit 28.7%, and Potassium 3.7 mmol/l. The predialysis data on May 15, 2015 were: Creatinine 10.1 mg/dl, Blood urea 118 mg/dl, Hematocrit 21.4%, Phosphorus 4.4 mmol/l, Albumin 4.3 g/dl, SGA (Subjective Global Assessment) B, and CESD-R (Center for Epidemiologic Studies Depression Scale Revised) 25/60. After receiving HD, her Blood Urea level decreases to 28 mg/dl. No erythropoietin was available due to the financial problems. Dialysis time was 4 hours from November 2014 until April 2015 but 6 hours long dialysis started from May 2015.

[Discussion]
Nutritional status was assessed using biochemical values and SGA questionnaires, and the psychological status CESD-R questionnaires; leading to the final conclusion, the patient is moderately malnourished and slightly depressed. No significant difference was detected for biochemical profiles with the exception of Hematocrit, while SGA and CESD-R results were unsatisfactory. Many studies have reported the enough dialysis dose is needed to keep good nutritional status. The 2 times 4 hours dialysis per a week is common in the Southeast Asian developing countries. In improving nutritional status, six-hour dialysis is thought to be more beneficial than four-hour dialysis. The improvement of depressive status needs the further observation for this case.

[Conclusion]
Hence, introduction of six-hour dialysis to developing countries is extremely crucial.

ការអនុវត្តន៍ការលាងឈាមឲយលើអ្នកជំងឺជនជាតិខ្មែរដែលមានជីវភាពខ្វះខាត៖ ការវាយតំលៃលើស្ថានភាពអាហាររូបត្ថម្ភនិងផ្លូវចិត្តរបស់អ្នកជំងឺលាងឈាម

១) ធីម ពេជ្រធីតា MS, ១) រិទ្ធ ស៊ូសាន MS, ២) យីម ចាន់បូផា MD, ២) សំ លក្ខិណា MD, ១,២) ចាន់ សុវណ្ណឌី MD, ២,៣) ហារុគិ វ៉ាកៃ MD, ២,៣) ថូសីហាយ ណាហ្គានូម៉ា MD, ២,៣) កេងអ៊ីជិ កុគូបូ PhD, ២,៣) ថូរ៉ ហ្យ៉ូដូ MD, ២,៣) កាស៊ុណារី យ៉ូស៊ីជា MD, ២,៣) ហ៊ីឌេគី កាវ៉ានីស៊ី MD, ៣) យូគី គីតាជីម៉ា RD, ៣) សាតាគូ តាមូរ៉ា RD, ១,២) សាបូ អូហ្សាណូ MD

១) សាកលវិទ្យាល័យ អន្តរជាតិ, ភ្នំពេញ, ប្រទេសកម្ពុជា
២) មជ្ឈមណ្ឌលលាងឈាមកម្ពុជា-ជប៉ុន, មន្ទីរពេទ្យសាកលវិទ្យាល័យអន្តរជាតិសែនសុខ (SSIU), ភ្នំពេញ, ប្រទេសកម្ពុជា
៣) ក្រុមបឹក្សាផ្តល់ជំនួយពីជប៉ុនក្នុងការបង្កើតប្រព័ន្ធឯកទេសលាងឈាមក្នុងប្រទេសកម្ពុជា (JAC-DSC), តូក្យូ, ប្រទេសជប៉ុន

សេចក្តីផ្តើម
ប្រជាជនរស់នៅក្នុងទីក្រុងភ្នំពេញទទួលបានប្រាក់ប្រៃវត្សជាមធ្យម ១០០-២៥០ ដុល្លា។ ក្នុងឆ្នាំ២០១៥, អ្នកជំងឺត្រូវចំណាយប្រមាណ ៤៥-៦០ ដុល្លា ក្នុងការលាងឈាមម្តង។ ក្នុងប្រទេសកម្ពុជា អ្នកជំងឺត្រូវទទួលខុសត្រូវថ្លៃព្យាបាលដោយខ្លួនឯង។ ដូច្នេះហើយអ្នកជំងឺដែលមានប្រាក់កម្រៃទាប មានការពិបាកក្នុងការទទួលយកការលាងឈាម។ ក្នុងការសិក្សានេះ យើងនឹងបង្ហាញអំពីស្ថានភាពអាហាររូបត្ថម្ភ និងផ្លូវចិត្តរបស់អ្នកជំងឺកីប្រក្រម្នាក់ដែលធ្វើការព្យាបាលដោយការលាងឈាមក្រោមការឧបត្ថម្ភពីអ្នកជិតខាងរបស់គាត់។

ស្ថានភាពអ្នកជំងឺ
អ្នកជំងឺភេទស្រីអាយុ៥៦ឆ្នាំ គ្មានប្រវត្តិលើសឈាម ត្រូវបានធ្វើរោគវិនិច្ឆ័យឃើញថាមានជំងឺតម្រងនោមដំណាក់កាលចុងក្រោយ(ESRD) ក្នុងថ្ងៃទី២២ ខែវិច្ឆិកា ឆ្នាំ២០១៤។ លោកគ្រូពេទ្យស្នើអោយគាត់ព្យាបាលដោយការលាងឈាម តែគាត់មិនមានលទ្ធភាពគ្រប់គ្រាន់។ បន្ទាប់ពីទទួលបានជំនួយពីអ្នកជិតខាងរបស់គាត់ គាត់ក៏បានទទួលការព្យាបាលដោយការលាងឈាម។ គាត់បានទទួលការឧបត្ថម្ភសរុបចំនួន ១៥០០ដុល្លា បើគិតគិតមកដល់ចុងខែធ្នូ។ ចាបពីថ្ងៃទី២៩ ខែវិច្ឆិកា ឆ្នាំ២០១៤ រហូតដល់ថ្ងៃទី១៥ ខែឧសភា ឆ្នាំ២០១៥, គាត់ទទួលបានការលាងឈាម ២៦ដង នៅក្នុងមជ្ឈមណ្ឌលលាងឈាមកម្ពុជា-ជប៉ុន, មន្ទីរពេទ្យសាកលវិទ្យាល័យអន្តរជាតិសែនសុខ (SSIU)។ ចន្លោះពីការលាងឈាមម្តងៗជាមធ្យមមានរយៈពេល ៤-៧ ថ្ងៃ។ លទ្ធផលវិភាគឈាម មុនធ្វើការលាងឈាមក្នុងថ្ងៃទី២៩ ខែវិច្ឆិកា ឆ្នាំ២០១៤៖ Creatinine 12mg/dl, Blood urea nitrogen 209mg/dl, Hematocrit 28.7%, and Potassium 3.7mmol/l។ លទ្ធផលវិភាគឈាមមុនធ្វើការលាងឈាមក្នុងថ្ងៃទី១៥ ខែឧសភា ឆ្នាំ២០១៥៖ Creatinine 10.1mg/dl, Blood urea nitrogen 118mg/dl, Hematocrit 21.4%, Phosphorus 4.4mmol/l, and Albumin 4.3g/dl។
លទ្ធផលរបស់Subjective Global Assessment (SGA) គឺ B និង របស់ Center for Epidemiologic Studies Depression Scale Revised (CESD-R) គឺ ២៥/៦០។ បន្ទាប់ពីធ្វើការលាងឈាម លទ្ធផល Blood urea nitrogen 28mg/dl។ គាត់មិនបានប្រើ Erythropoietin ទេ ដោយគាត់មិនមានលទ្ធភាព។ រយៈពេលនៃការលាងឈាមម្តងគឺ ៤ ម៉ោង ហើយចាបពី ខែឧសភា ឆ្នាំ២០១៥ រយៈពេលនៃការលាងឈាមម្តងគឺ ៦ ម៉ោង។

ការពិភាក្សា
ស្ថានភាពអាហាររូបត្ថម្ភនិងផ្លូវចិត្តត្រូវបានវាយតម្លៃដោយប្រើលទ្ធផលវិភាគឈាម កម្រងសំនួរSGA និងកម្រងសំនួរCESD-R។ សរុបមក អ្នកជំងឺមានកង្វះអាហាររូបត្ថម្ភកម្រិតមធ្យម និង មានការបាក់ទឹកចិត្តកម្រិតមធ្យម ។ ចំពោះលទ្ធផលវិភាគឈាម យើងឃើញថាមិនមានភាពប្រែប្រួលខ្លាំងគួរអោយកត់សម្គាល់ទេ លើកលែងតែតម្លៃ Hematocrit គឺធ្លាក់ចុះខ្លាំង។
រីឯលទ្ធផលរបស់SGAនិងCESD-R វិញ គឺមិនសូវល្អឡើយ។
មានការសិក្សាជាច្រើនបានលើកឡើងថាការលាងឈាមអោយបានគ្រប់គ្រាន់គឺសំខាន់ណាស់ក្នុងការរក្សាស្ថានភាពអាហាររូបត្ថម្ភអោយមានលំនឹង។
ជាទូទៅនៅក្នុងប្រទេសកំពុង អភិវឌ្ឍន៍ ការលាងឈាម ៤ម៉ោងក្នុង១ដង និង២ដងក្នុងមួយសប្តាហ៍ គឺត្រូវបានអនុវត្ត។ ក្នុងការរក្សាស្ថានភាពអាហាររូបត្ថម្ភអោយបានល្អ ការលាងឈាម ៦ម៉ោងក្នុង១ដងគឺមានអត្ថប្រយោជន៍ ជាងការលាងឈាម៤ម៉ោងក្នុង១ដង ។
ចំពោះការធ្វើអោយប្រសើរឡើងនៃស្ថានភាពផ្លូវចិត្តគឺ ត្រូវការស្រាវជ្រាវបន្ថែមទៀត ។

សរុបសេចក្តី
ដូច្នេះហើយ ការអនុវត្តន៍ការលាងឈាម ៦ម៉ោងម្តង គឺមានសារៈសំខាន់ណាស់សម្រាប់ប្រទេសកំពុងអភិវឌ្ឍន៍ ។

The Dialysate Purification and Introduction of High Flux Dialyzers in Cambodia

1) Sovandy Chan, 1) Yim Sovannbophea MD, 1) Som Leakhena MD, 2) Hirokazu Matsubara, 2) Moe Kojima CE, 1, 2) Tomotaka Naramura CE, 1, 2) Haruki Wakai MD,
1, 2) Toshihide Naganuma MD, 1, 2) Kenichi Kokubo PhD, 1, 2) Fumitaka Nakajima MD,
1, 2) Toru Hyodo MD, 1, 2) Nobuhisa Shibahara MD,
1, 2) Kazunari Yoshida MD,
1, 2) Hideki Kawanishi MD, 1) Sabo Ojano MD

1) Cambodia-Japan Friendship Blood Purification Center, Sen Sok International University Hospital, Cambodia
2) NGO Ubiquitous Blood Purification International, Yokohama, Japan

[Background]
Dialysate purification systems have not been established in developing countries and so high flux dialyzers have not been introduced in such countries.

[Purpose]
The trial of dialysate purification systems in Cambodia.

[Methods and Results]
Blood Purification Center of Sen Sok International University (SSIU) Hospital was established at March 1st in 2010. The dialysis was performed by using low flux dialyzers. At July in 2011, the endotoxin(ET) measurements and bacterial counting of the tap water, reverse osmosis water and dyalysate were checked in order to reveal whether high flux dialyzers could be used or not. The results of dialysate ET were 309, 246, 395 EU/mL and the bacterial counting were 800, 800, 900 cfu/mL. At July in 2013, the ET retentive filter (ETRF) was installed and the line after the ETRF was changed into the new one. Until December in 2013, no ET and bacteria were determined. We have started to use high flux dialyzers since December 14th in 2013.

[Discussion]
The equipment of the blood purification center of SSIU hospital is not old. So it is thought to be easier to perform dialysate purification. But the hints were grasped to perform dialysate purification in developing countries by these methods.

ការចំរោះ dialysate និងការប្រើប្រាស់ dialyzer ដែលមានលំហូរខ្ពស់ក្នុងប្រទេសកម្ពុជា

១) ចាន់ សុវណ្ណឌី MD, ១) យឹម ចាន់បូផា MD, ១) សំ លក្ខិណា MD, ២) ហ៊ីរ៉ូកាស៊ុ មាស៊ីបារ៉ា, ២) ម៉ៅ កូជីម៉ា CE, ១,២) តូម៉ាកាតា ណារ៉ាមុរ៉ា CE, ១,២) ហារុគិ វ៉ាកៃ MD, ១,២) ថូសីហាយ ណាហ្គានុម៉ា MD, ១,២) កេងអ៊ីជិ កុគុបុ PhD, ១,២) ហ្វូមីតាកា ណាកាយីម៉ា MD, ១,២) ថូរុ ហ៊ីរ៉ូដូ MD, ១,២) ណូបូហ៊ីសា ស៊ីហាបារ៉ា MD, ១,២) កាស៊ូណារី យ៉ូស៊ីដា MD, ១,២) ហ៊ីរ៉ូឌគី កាវ៉ានីស៊ី MD, ១) សាបូ អូហ្សាណូ MD

១) មជ្ឈមណ្ឌលលាងឈាមកម្ពុជា-ជប៉ុន, មន្ទីរពេទ្យសាកលវិទ្យាល័យអន្តរជាតិសែនសុខ (SSIU), ភ្នំពេញ, ប្រទេសកម្ពុជា
២) អង្គការលាងឈាមអន្តរជាតិ, តូក្យូ, ប្រទេសជប៉ុន

សេចក្តីផ្តើម
ប្រព័ន្ធនៃការចម្រោះ dialysate មិនទាន់ត្រូវបានអនុវត្តន៍ក្នុងប្រទេសកំពុងអភិវឌ្ឍន៍ ។
ដូច្នេះហើយ dialyzer ដែលមានលំហូរខ្ពស់មិនទាន់ត្រូវបានប្រើប្រាស់ក្នុងប្រទេសទាំងនោះឡើយ ។

គោលចំណង
ការសាកល្បងប្រើប្រាស់ប្រព័ន្ធនៃការចម្រោះ dialysate។

វិធីសាស្ត្រ និង លទ្ធផល
មជ្ឈមណ្ឌលលាងឈាមកម្ពុជា-ជប៉ុនរបស់មន្ទីរពេទ្យសាកលវិទ្យាល័យអន្តរជាតិសែនសុខត្រូវបានបង្កើតឡើងក្នុងថ្ងៃទី១ ខែមិនា ឆ្នាំ២០១០។
ការលាងឈាមគឺដំណើរការដាយប្រើ dialyzer ដែលមានលំហូរទាប។
ក្នុងខែកក្កដា ឆ្នាំ២០១១ ការវាស់បរិមាណ endotoxin និងការរាប់ចំនួនបាក់តេរីក្នុងទឹកម៉ាស៊ីន, ទឹក reverse អូស្មូស៊ីស និង dialysate ត្រូវបានធ្វើដើម្បីបញ្ជាក់ពីលិទ្ធភាពនៃការប្រើប្រាស់ dialyzer ដែលមានលំហូរខ្ពស់ ។
លទ្ធផលនៃការវាស់បរិមាណ endotoxin គឺ ៣០៩, ២៤៦, ៣៩៥EU/ml។
លទ្ធផលនៃការរាប់ចំនួនបាក់តេរីគឺ ៨០០, ៨០០, ៩០០cfu/ml។ ក្នុងខែកក្កដា ឆ្នាំ ២០១៣ ចំរោះ endotoxin (ETRF) ត្រូវបានតំឡើង និងខ្សែបន្តពី ETRF ត្រូវបានផ្លាស់ប្តូរថ្មី ។ រហូតមកដល់
ខែធ្នូគ្មាន endotoxin និងបាក់តេរីត្រូវបានរកឃើញទេ ។
យើងបានចាប់ផ្តើមប្រើប្រាស់ dialyzer ដែលមានលំហូរខ្ពស់ចាប់ពីថ្ងៃទី១៤ ខែធ្នូ ឆ្នាំ២០១៣។

ការពិភាក្សា
ឧបករណ៍សម្រាប់ប្រើប្រាស់ក្នុងការលាងឈាមនៅក្នុងមជ្ឈមណ្ឌលរបស់មន្ទីរពេទ្យសាកលវិទ្យាល័យអន្តរជាតិសែនសុខ មិនទាន់មានភាពចាស់ទេ ។
ដូច្នេះហើយការចម្រោះ dialysate មានភាពងាយស្រួល
ហើយពួកយើងបានធ្វើការចម្រោះ dialysate ដោយប្រើ dialyzer ដែលមានលំហូរខ្ពស់ ។

A Simple Method of Dietary Management for Glycemic Control in Diabetic Hemodialysis Patients: The Usefulness of Basic Carbohydrate Counting

Toru Hyodo M.D., PhD

Dialysis Center, Eijin Clinic, Hiratsuka, Japan
Department of Urology, Kitasato University, Sagamihara, Japan

[Abstract]
Basic carbohydrate counting, a method used in the dietary management of diabetes, is based on the concept that the postprandial rise in blood glucose levels is primarily affected by ingested carbohydrates. In this method, patients are instructed to eat a consistent amount of carbohydrates across their three daily meals to minimize fluctuations in postprandial blood glucose levels. In the present study, 16 diabetic patients undergoing maintenance hemodialysis were instructed in basic carbohydrate counting and followed for 6 months to assess changes in their predialysis blood glucose, hemoglobin A1c , Hemoglobin, triglycerides, Potassium, Phosphorus, albumin, total cholesterol, high-density lipoprotein-Cho, low-density lipoprotein-Cho, protein catabolic rate, dry weight, body mass index, and the Geriatric Nutritional Risk Index. Furthermore, the relative contribution of carbohydrates to the daily total energy intake was evaluated in 6 patients who completed basic carbohydrate counting sessions. Predialysis blood glucose(189.1±87.9 to 132.4 ± 38.7 mg/dL), HbA1c(7.63±1.37 to 6.58±0.48 %), and TG (197.3±114.9 to 143.1±75.6 mg/dL) levels were significantly decreased from the pre-instruction values, but no marked changes were observed for the other parameters. The patients who had learnt basic carbohydrate counting had a mean carbohydrate intake of 51.0 ± 4.7% of the total energy per meal and did not consume low-carbohydrate diets.
The results demonstrated that basic carbohydrate counting is a useful method of dietary management for glycemic control that can be applied independently of, but concurrently with, the control of potassium and phosphorus intake in dietary therapy for dialysis patients.

Principles and Methods of Hemodialysis

Kenichi Kokubo, PhD

Kitasato University School of Allied Health Sciences, Kanagawa, Japan
NGO Ubiquitous Blood Purification International, Japan

Hemodialysis is used to treat patients with end-stage renal failure and to substitute patient's kidney functions. Extracorporeal circulation is carried out during hemodialysis therapy, which enables us to modify blood taken out from the body, i.e., to remove toxins from the blood and to correct electrolyte concentration and pH of the blood.
Dialyzer is the main component of the hemodialysis therapy in which mass transfer between blood and dialysis fluid through the dialysis membrane occurs based on diffusion and filtration. During hemodialysis, uremic toxins accumulated in the blood are removed, and electrolyte concentration and pH are corrected. Dialysis efficiency depends on many factors. From an engineering point of view, important determinants of dialysis efficiency include operating conditions such as blood flow rate and dialysate flow rate, membrane area, and solute permeability of the dialysis membrane. It is important to know how operating conditions affect dialysis efficiency.
To safely carry out dialysis therapy, the dialysis machine should be capable of controlling extracorporeal circulation, fluid removal rate, temperature, and dialysis fluid concentration; monitoring blood pressure in the circuit; and detecting bubbles in the blood circuit and blood leakage from the dialyzer.

Nipro Corporation Industrial Seminar: Dialysis Machine & Medical Devices of Nipro Corporation

Kaname Sadahiro (Mr.)

Nipro Corporation
General Manager
Products Sales And DevelopmentII

Nipro continues to develop and provide products and technologies required by people around the world, to fulfill their wishes to be healthy.
In this seminar, We mainly introduce Nipro's corporate profile and medical devices for dialysis treatment; two kinds of dialyzers (triacetate dialyzer and polyether-sulfone dialyzer,) arteriovenous fistula needle, Blood tubing set, and dialysis machine .

Prevention and Management of Chronic Kidney Disease (CKD)

Masafumi Fukagawa, MD, PhD

Professor of Medicine, Tokai University School of Medicine, Isehara, Japan

CKD is a globally popular disease. Because no subjective symptoms develop until the end stage, early screening and regular follow-up are extremely important processes for the recognition and appropriate management of the disease. Routine screening tests usually include dipstick and eGFR. Considering the cost effectiveness and local economical state, target populations should be determined carefully. AFCKDI has already published recommendations for early detection for Asian countries. During follow-up, further referral from primary care physician to nephrologists may be needed.
In addition to specific therapies depending on the cause, supportive cares such as management of hypertension and hyperkalemia are mandatory.

Nevertheless, recent data suggested that mineral abnormalities develop and affect the progression of CKD and cardiovascular risk from the early phase of CKD without abnormal laboratory data. Mechanisms include the formation of calciprotein particles and the effects of increased FGF23. Accumulation of uremic toxins is another risk for CKD patients, which is not routinely tested. Uremic toxins cause oxidative stress in cells, and also promote DNA methylation in important genes.

Anemia Management for CKD

Hideki Kawanishi MD,

Tsuchiya General Hospital / Faculty of Medicine, Hiroshima University, Hiroshima Japan,
NGO Ubiquitous Blood Purification International, Japan

[Renal anemia]
In patients with chronic kidney disease, normochromic normocytic anemia mainly develops from decreased renal synthesis of erythropoietin. The anemia becomes more severe as the glomerular filtration rate (GFR) progressively decreases. No reticulocyte response occurs, red blood cell survival is decreased and there is an associated increased bleeding tendency due to uremic-induced platelet dysfunction. Renal anemia refers to anemia caused by decreased renal EPO-producing capacity due to renal disease. Other causes of renal anemia include shorter lifespan of red blood cells, hyporesponsiveness of erythroid progenitor cells to EPO, and residual blood in the dialysis blood circuit in hemodialysis (HD) patients.
[ESA therapy]
ESA therapy in patients undergoing HD in GL should target an Hb level of 10 to 11 g/dL at the beginning of the week. Hb levels exceeding 12 g/dL should be the criteria for dose reduction or interruption of ESAs. Moreover, Hb levels exceeding 13 g/dL should be the criteria for dose reduction or interruption of ESAs.
[Conclusion]
The time taken for ESA treatment to be effective will depend on individual patient factors, such as degree of anemia, degree of kidney disease and presence of other adverse factors - eg, iron deficiency.

CKD Screening Program in Japan --- Activities of IKEAJ ---

Nobuo Ito and Susumu Takahashi
International Kidney Evaluation Association Japan (IKEAJ)

IKEAJ which was founded in 2005 has performed three main activities; (1) international activity, (2) education and public relations activity and (3) health checkup activity.
As the health checkup activity, IKEAJ started the Japanese version of Kidney Early Evaluation Program (KEEP JAPAN) in 2006, one of the charge-free detection programs for chronic kidney disease (CKD), following the National Kidney Foundation (NKF) in the United States.
The characteristics of KEEP JAPAN are:
1. The participants are targeted to the population with history of diabetes or hypertension, or family history of diabetes, hypertension, or kidney disease.
2. Yearly follow-up examination is available for the participants.
3. Participants can be referred to nephrologists if they have CKD.

As of December 2014, more than 7,800 people participated in this program, cumulatively. The prevalence of CKD was as high as 25.2% among the participants of KEEP JAPAN, which was much higher than that among general population reported by other programs, and approximately 10% of participants with CKD were categorized in the very high risk for prognosis in KDIGO classification. The history of diabetes, history of hypertension, history of cardiovascular disease, older than 60 years of age, obesity, poor control of blood pressure were the significant risk factors

for the prevalence of CKD.
By the yearly follow-up results, changes in lifestyle such as cessation of smoking, weight control and periodical follow-up by home doctor could prevent the progression of kidney disease.
In conclusion, KEEP JAPAN by IKEAJ is an established health checkup system targeting the detection of CKD as well as metabolic syndrome, dyslipidemia and diabetes. Blood pressure control and improvement of lifestyle are important for the prevention of CKD progression.

The Role of Clinical Engineer as a Profession

Moe Kojima, C.E.1), 2), 3)
Tomotaka Naramura, C.E., Ph.D. 1), 3)

Japan Association for Clinical Engineers 1)
Tokai University Oiso Hospital 2)
NGO Ubiquitous Blood Purification International 3)

In Japan, the Clinical Engineers Act for clinical engineers was established in 1987 because of the use of various medical equipment in the development of medical engineering. In recent years, a national license for clinical engineers was established, thus highlighting the importance of safety and efficiency.
Thirty years have passed since the establishment of the Clinical Engineers Act, and approximately 35,000 people have obtained the national license until now. It is specified by the law that “A clinical engineer can operate, maintain, and inspect life support equipment under the direction of a physician.” Life support equipment is intended to replace or assist some of the functions related to a person’s breathing, circulation, and metabolism. In general, it refers to a mechanical ventilator, anesthetic machine, heart-lung machine, or dialysis machine. Clinical engineers work in various fields, being active in many locations such as the dialysis room or operating room.
The best feature of clinical engineers in Japan is that they are able to administer medical care to patients. For example, in the blood purification treatment, a clinical engineer can be puncture to shunt vascular, monitor during treatment, and return blood to the patient. Clinical engineers perform not only maintenance of the equipment but also propose methods of dialysis fluid purification and new dialysis treatments by taking advantage of their highly specialized field. The significance of a clinical engineer in the current medical practice that requires a medical care team is greatly increasing. With the improvement of medical technology worldwide, I think that there will be a requirement of staff similar to Japan’s clinical engineers, with knowledge of medical and engineering fields in order to fulfill sophisticated and complicated needs.
I hope this presentation will help you to understand the professional role of a clinical engineer.

Dialysis Fluid Purification

Tomotaka Naramura, C.E., Ph.D. 1), 2), 3)
Moe Kojima, C.E. 1), 3)

Japan Association for Clinical Engineers1)
Department of Medical Engineering, Faculty of Health Sciences, JUNSHIN GAKUEN UNIVERSITY 2)
NGO Ubiquitous Blood Purification International 3)

Quality assurance in the purification of dialysis fluid is a vital component of dialysis treatments. The response from toll-like receptors to produce cytokines is a known result of dialysis fluid having been contaminated by bacterial endo-toxins during dialysis treatment. Inflammation during hemo-dialysis treatment, which may be a result of contaminated dialysis fluid, has contributed to the rise in Malnutrition Inflammation Arteriosclerosis (MIA) syndrome becoming problematic.
For quality assurance of dialysis fluids, proper water management is vital. Both scheduled and random water quality testing needs to be managed alongside equipment maintenance, such as the endotoxin retentive filter (ETRF) and the daily requirements of the reverse osmotic (RO) distribution network for quality conformity.
The installation of an ETRF is easy and safe step in the purification of dialysis fluid. However, the existence of smaller endotoxins and fine structure of bacterial cell can pass through the ETRF, hence the need to systematically purify the network, with the RO distribution systems first.
This presentation focuses on the importance of quality assurance and the problems faced in the production process of dialysis fluid, highlighted by the strategy of Cambodia dialysis facility.

Long-hour Hemodialysis

Kanenori Maeda, Yuki Maeda

The department of Urology and Nephrology, Maeda Clinic, Nagasaki, Japan.

[Background]
The hemodialysis medical care system evolves day by day, as symbolized by the improvements of hemodialysis equipment, of dialyzer’s quality, of dialysate purification, and of the biocompatibility of devices. Renal replacement therapy has accumulated a lot of experiences and treatments for a variety of complications, including drug therapies is certainly progress.
The functions of the kidneys are “filtration”, “reabsorption” and “endocrine.” On the other hand, the functions of hemodialysis are “diffusion”, “convection” and “adsorption.” These very simple principles have not changed at all in 60 years to the present day from the early days of hemodialysis. Hemodialysis is not as adequate as the kidneys.
Our normal kidneys work 24 hours a day. However, conventional hemodialysis is performed only 12 hours a week. At the present stage, insufficient hemodialysis care system (hemodialysis shortage) should not be accepted at least, since the upper limit of the hemodialysis dosage is not shown.
[Contents]
I will introduce data from DOPPS that is the Dialysis Outcomes and Practice Patterns Study from 11 countries and areas. DOPPS is a prospective cohort study of in–center hemodialysis patients. In this study, when treatment time was 30 minutes longer per one session, we recognized improvement in all-cause mortality, the rate of sudden death, risk of any hospitalization, risk of cardiovascular hospitalization and the risk of hospitalization due to chronic heart failure or fluid overload.
Additionally, I will show data from the Japanese Society for Dialysis Therapy Renal Data Registry (JRDR). A huge observational cross-sectional study from JRDR was conducted to determine the relationship between the treatment time and some objectives. In this study, as the treatment time becomes longer per one session, Kt /V urea, the control of serum phosphate levels and nPCR (normalized protein catabolic rate) are improving. As the treatment time becomes longer, the reduction rate of serum ß2MG levels, the serum albumin levels and blood hemoglobin levels increases.
[Conclusion]
Long-hour hemodialysis is meaningful.

The Nutritional Assessment of Dialysis Patients using a Malnutrition-Inflammation Score (MIS)

1) Minoru Ito, 1) Ikuto Masakane, 2) Yumiko Seino

1) Dept. of Nephrology and Dialysis Center, 2) Dept. of Nutritional Care, Yabuki Hospital, Yamagata, Japan

[Background and Purpose]
Most of the dialysis patients present signs of malnutrition at the initiation of dialysis therapy. Nutritional assessment of dialysis patients is very important because nutritional status of dialysis patient is correlated with their increased morbidity and mortality. Several factors, such as

chronic inflammation, accumulation of ureic toxins, aging, dietary restriction, etc. could influence dialysis patients' nutritional status. MIS is reported by Kalantar-Zadeh in 2001 as an assessment tool of malnutrition inflammation complex syndrome of dialysis patients. In this presentation, we repot our usage experiments and the efficacy of MIS.

[Methods]

We analyzed the MIS data of 144 patients with hemodialysis (HD) therapy (male 89, female 55). A mean age was 64.7 ± 13.5 years. All patients we-re classified into three subgroups corresponding to each score, normal nutritional group (MIS 0-3), mildly impaired group (MIS 4-7), severely impaired group (MIS over 8) respectively. The survival rates were compared among the three groups using the Kaplan-Meier analysis.

The prognostic factors were analyzed using the multivariable logistic regression analysis

[Results]

Three year survival rates of the normal group, the mildly impaired group and severely impaired group were 100%, 91% and 68% respectively. And we found a significant difference in the mortality between the severely impaired group and the other two groups with a Log-Rank test. The prognostic factors of HD patients were the total point of MIS and the patient's age.

[Discussion]

MIS is a comprehensive and quantitative nutritional assessment tool and consists of 10 components (medical history, physical examination, body mass index and laboratory parameters, etc.). According to the scores of each component, we can design therapeutic intervention for patients with malnutrition. Interestingly, each component of MIS was not independent prognostic factor by itself. However the total point of MIS was a significant predictive index for prognosis. Comprehensive, multidirectional and multi-factorial assessment is very important. MIS is powerful tool for nutritional assessment of dia-lysis patients.

Vascular Access

Toshihide Naganuma1,2)

1) Department of Urology, Osaka City University Graduate School of Medicine, Osaka, Japan
2) NGO Ubiquitous Blood Purification International, Japan

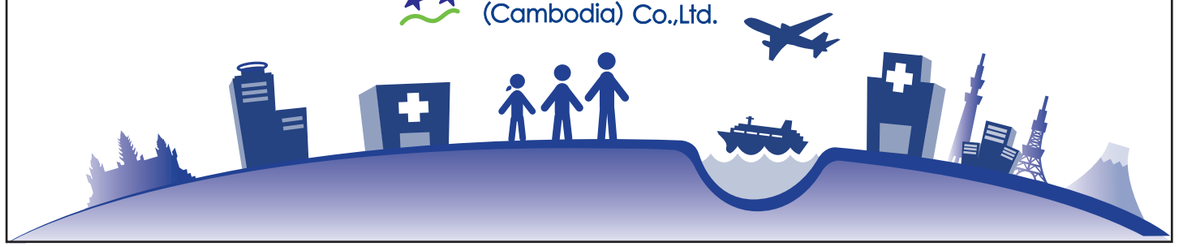
Vascular access (VA) is an essential component of dialysis treatment, and performing a successful VA procedure is critical for a favorable patient prognosis and quality of life. The most basic VA procedures are internal shunts (arteriovenous fistula; AVF), which have fewer complications and a patency rate higher than those of arteriovenous grafts (AVG) and catheters. In Asian patients who have less morbid obesity compared to European and American patients, AVF procedures are relatively easier to perform. We therefore should learn and master these procedures and be prepared for the various complications of AVF. In addition, these surgical tech-niques can be applied to AVG procedures. In this session, I will show you a video of the AVF procedure we use at our institution. I will also show you a video of the percutaneous transluminal angioplasty (PTA) procedure we use for the long-term patency of AVF which has increasingly become necessary in recent years.

The Cambodian Journal of Nephrology

Provisional Editors :

Hideki Kawanishi	Japan	**Kazunari Yoshida**	Japan
Akihiro Yamashita	Japan	**Toru Hyodo**	Japan
Nobuhisa Shibahara	Japan	**Sovandy Chan**	Cambodia
Fumitaka Nakajima	Japan	**Kenichi Kokubo**	Japan
Toshihide Naganuma	Japan	**Tomotaka Naramura**	Japan
Samnang Chin	Cambodia		

Publisher : The Cambodian Journal of Nephrology is published by Reiseikai Media (Cambodia) Co.,Ltd.
<Representative director, CEO> Haruki Wakai
<Office address> 18/F Canadia Tower, No.315, Ang Doung St, Corner Monivong Blvd, Phnom Penh, Cambodia
<Tel> 023-962-486 (+855-23-962-486) <Fax> 023-962-310 (+855-23-962-310) <Email> info@reiseikai-media.org
<Website> https://www.reiseikai-media.org/index-e.html
https://www.reiseikai-media.org/cambodia/index-e.html



Author Guidelines

1. The Cambodian Journal of Nephrology (hereinafter referred to as "Journal") is an English/Cambodian/Japanese language journal published by Reiseikai Media (Cambodia) Co., Ltd ("Company"). The purpose of the Journal is to widely introduce medical achievements in the fields of basic and clinical medicine on nephrology and thereby to contribute to the development of medicine and human beings.

2. Authors are requested to understand and accept to the content of this author guideline (hereinafter referred to as "Guideline") before submitting manuscripts to the Journal. The Guideline may be revised from time to time at the sole discretion of the Company.

3. Copyrights of the submitted manuscripts will, in principle, remain with the authors, provided, however, that during the effective period of copyrights and throughout the world, the Company has the non-exclusive right to reproduce, distribute and transmit to the public, all or part of the copies of the manuscripts, as well as the non-exclusive right to translate, proofread or adapt them to the extent necessary to post in the Journal. Where the copyright of the submitted manuscript belongs to someone other than the person who has submitted to the Journal, the person who has submitted shall obtain a prior approval from the copyright owner for submitting the manuscript to the Journal according to the Guideline.

4. Copyrights in any work of translation, proofreading or any other adaptation conducted by the Company on the submitted manuscripts will belong to the Company. The authors may not, without a prior written consent of the Company, use such works in any medium other than the Journal, notwithstanding section 28 of the Japanese Copyrights Act and its counterpart provision of a law of the relevant countries.

5. Authors must not make any objection to the translation, proofreading or any other adaptation conducted by the Company to the submitted manuscripts.

6. Authors must warrant that the submitted manuscripts would not infringe any third party's copyrights, moral rights including rights in relation to privacy and defamation or any other rights. Clinical researches must have been performed according to the Declaration of Helsinki and ethical consideration must have been fully taken into. Experiments involving animals must have been conducted in the manner giving careful consideration to animal protection. Where the content of the submitted manuscripts involves interest of particular individuals or organizations/bodies, authors are requested to expressly write down such interest or possible conflict of interest in the text of the manuscripts.

7. Manuscripts acceptable to be submitted are not limited to those that are not yet submitted to or published in, the other journals or academic societies etc. If, however, authors intend to submit to the Journal, manuscripts that contain substantially the same part(s) of the content of those which are already submitted to or published in, other journals or academic societies etc., authors are requested to, including but not limited to, look up the author guidelines of the journals or members' rules of the academic societies etc.; make inquiries to the journals or academic societies etc. in advance where necessary; and obtain approvals for citation or reproduction, so as to avoid any violation of ethics as researchers. Authors are requested to state citations (name of author, name of book, year of publication, page number etc.) in the text of the manuscripts where suitable.

8. The Journal does not prohibit authors from submitting the same manuscripts to other journals. However, the authors must understand and accept that under the authors guideline of other journals, submission to the Journal of a manuscript might cause prohibition of the same manuscript from being submitted to other journals; and that in case where the authors are not allowed to submit a manuscript to other journals because the same manuscript has been submitted to the Journal, the Company will not owe any liability at all to the authors for posting the manuscript in the Journal.

9. Whether or not to post in the Journal the manuscripts submitted will be decided by the Editing Committee after the peer review by peers designated by the Editing Committee.

10. The manuscripts submitted to the Journal will not, in principle, be returned to the authors.

11. Proofreading by an author will be allowed only with the first proof, and the author must return the manuscript by the due date requested. The proofreading by an author will be allowed only as to corrections of omission of letters and typographers, and no additional writing to the manuscript in the proofreading is, in principle, permitted.

12. 1) Manuscripts to be submitted must be prepared using computer software.
2) Manuscripts must be in horizontal writing with appropriate spaces between the lines on A4 size papers.

13. Neither the Company nor authors whose manuscripts have been posted in the Journal will not be paid for the publication of them.

14. Manuscripts must be submitted to the following:

Reiseikai Media (Cambodia) Co., Ltd.
18/F Canadia Tower, No. 315, Ang Doung St,
Corner Monivong Blvd, Phnom Penh,
Cambodia
E-mail:

Vol.Pre1, No.Pre1, September 2015

បទប្បញ្ញត្តិជាផ្លូវការនៃការចុះផ្សាយ

1. ទស្សនាវដ្តី The Cambodian Journal of Nephrology ត្រូវបានបោះពុម្ពផ្សាយជាភាសាខ្មែរ អង់គ្លេស និង ជប៉ុនដោយក្រុមហ៊ុន Reiseikai Media (Cambodia) Co.,Ltd. ក្នុងគោលបំណងរួមចំណែកក្នុងវិស័យវេជ្ជសាស្ត្រ ក៏ដូចជាការអភិវឌ្ឍធនធានមនុស្សតាមរយៈការណែនាំពីមូលដ្ឋានគ្រិះនៃជំងឺតម្រងនោម និងសមិទ្ធិផលវេជ្ជសាស្ត្រក្នុងវិស័យសុខាភិបាលអោយបានទូលំទូលាយផងដែរ ។

2. អ្នកនិពន្ធ ត្រូវយល់ច្បាស់ និង ទទួលស្គាល់បទប្បញ្ញត្តិនៃការចុះផ្សាយនេះ ។ សូមចំណាំផងដែរថា បទប្បញ្ញត្តិនេះ អាចនឹងត្រូវបានធ្វើវិសោធនកម្មតាមការសំរេចចិត្តរបស់យើងខ្ញុំ ។

3. រាល់សារណាទាំងអស់ ដែលបានចុះផ្សាយជាមួយយើងខ្ញុំត្រូវបានរក្សាសិទ្ធដោយ អ្នកនិពន្ធ ។ ក៏ប៉ុន្តែ ក្រុមហ៊ុនយើងខ្ញុំនឹងទទួលបាននូវសិទ្ធធ្វើការថតចម្លង ចែកចាយ ផ្ទេរជាសាធារណៈ បកប្រែ និងកែសម្រួលផ្សេងៗ បានទូទាំងពិភពលោក ក្នុងកំឡុងពេលដែលបានព្រមព្រៀងមួយ ។ យោងទៅតាមបទបញ្ញត្តិ ក្នុងករណីដែលអ្នកនិពន្ធ ចង់ផ្តល់សិទ្ធនិពន្ធអោយអ្នកដទៃ ត្រូវមកសុំការអនុញ្ញាតិពីក្រុមហ៊ុនយើងជាខ្ញុំមុនសិន ។

4. សារណាដែលត្រូវបានបកប្រែ និង កែសម្រួលដោយក្រុមហ៊ុនយើងខ្ញុំនឹងត្រូវបានរក្សាសិទ្ធគ្រប់យ៉ាងដោយក្រុមហ៊ុនយើងខ្ញុំ ។ មាត្រាទី២៨ស្តីពីច្បាប់រក្សាសិទ្ធរបស់ប្រទេសជប៉ុន និង ច្បាប់រក្សាសិទ្ធរបស់ប្រទេសផ្សេងៗមិនត្រូវបានអនុវត្តិឡើយ បើសិនជាគ្មានការយល់ព្រមពីក្រុមហ៊ុនយើងខ្ញុំតាមរយៈលាយលក្ខណ៍អក្សរជាមុននោះទេ គឺមិនអនុញ្ញាតិអោយ អ្នកនិពន្ធ យកសារណាដែលបានកែសម្រួលរួចនៅក្រុមហ៊ុនយើងខ្ញុំយកទៅបោះពុម្ពនៅទស្សនាវដ្តីដទៃនោះទេ ។

5. អ្នកនិពន្ធ មិនអាចជំទាស់ទៅនឹងការបកប្រែ ឬការកែសម្រួលនៃសារណាដែលក្រុមហ៊ុនយើងបានធ្វើឡើយ ។

6. អ្នកនិពន្ធត្រូវធានាថា សារណាដែលបានសរសេរ មិនស្ថិតនៅក្រោមការរក្សារសិទ្ធរបស់អ្នកដទៃ ក៏ដូចជាប៉ះពាល់ដល់កិត្តិយស សិទ្ធិផ្ទាល់ខ្លួន ឯកជនភាព និងសិទ្ធិផ្សេងទៀតរបស់អ្នកដទៃឡើយ ។ ក្រុមអ្នកស្រាវជ្រាវផ្នែកវេជ្ជសាស្ត្រត្រូវតែធ្វើតាមសេចក្តីប្រកាសរបស់ទីក្រុង Helsinki និង ពិចារណាវិជ្ជាជីវៈប្រកបដោយក្រមសីលធម៌ ។
ការពិសោធន៍ទៅលើសត្វត្រូវធ្វើឡើងនៅក្នុងបែបបទមួយដែលផ្តល់ការយកចិត្តទុកដាក់ទៅលើការការពារសត្វ ។
ក្នុងករណីអត្ថបទដែលបានសរសេរមានជាប់ពាក់ព័ន្ធនឹងអត្ថប្រយោជន៍របស់បុគ្គល ឬ អង្គការ ឬ ក្រុមហ៊ុននោះ អ្នកនិពន្ធត្រូវសរសេរបញ្ជាក់អំពីអត្ថប្រយោជន៍ ឬ ផលប៉ះពាល់ដែលអាចកើតមានទាំងនោះទៅក្នុងអត្ថបទដែលបានសរសេរផងដែរ ។

7. អ្នកនិពន្ធ អាចយកសារណាដែលបានប្រកាសរួចនាឯសិក្ខាសិលាឬទស្សនាវដ្តីផ្សេងៗមកដាក់បាន ។ ក៏ប៉ុន្តែ ក្នុងករណីចំនុចមួយចំនួនដែលបានសរសេរនៅក្នុងសារណាដែលបានដាក់ជូន មានអត្ថន័យដូចគ្នាខ្លាំងទៅនឹងសារណាដែលបានចេញផ្សាយរួចរាល់នៅក្នុងទស្សនាវដ្តីដទៃនោះ អ្នកនិពន្ធ ត្រូវពិនិត្យអោយច្បាស់ដោយផ្ទាល់ជាមួយនឹងបទបញ្ញត្តិនៃការចុះផ្សាយក៏ដូចជាបទបញ្ជានៃការចូលរួមសិក្ខាសិលា ឬត្រូវធ្វើការទំនាក់ទំនងជាមុនទៅកាន់ម្ចាស់ដើមនៃសារណាក្នុងករណីចាំបាច់ដើម្បីធ្វើការសុំអនុញ្ញាតិសម្រង់អត្ថបទ ក្នុងគោលបំណងជៀសវាងការរំលោភបំពានលើក្រមសីលធម៌នៃការស្រាវជ្រាវ ។ លើសពីនេះ អ្នកនិពន្ធ ត្រូវសរសេរអោយបានច្បាស់ពីប្រភពដែលបានដកស្រង់ដូចជា ឈ្មោះស្សៀវភៅ ឈ្មោះអ្នកនិពន្ធ ថ្ងៃចេញផ្សាយ និង ទំព័រជាដើមផងដែរ ។

8. ទស្សនាវដ្តីរបស់យើងខ្ញុំ មិនធ្វើការហាមប្រាម អ្នកនិពន្ធ ពីការយកសារណាទៅចេញផ្សាយនៅទស្សនាវដ្តីដទៃឡើយ ។ ក៏ប៉ុន្តែ យើងខ្ញុំសូមជម្រាបផងដែរថា សារណាដែលដាក់ជូនទស្សនាវដ្តីយើងខ្ញុំហើយ អាចនឹងមិនអាចចុះផ្សាយម្តងទៀតនៅក្រុមហ៊ុនទស្សនាវដ្តីនោះទេ ។ ម្យ៉ាងវិញទៀត យើងក៏សូមបញ្ជាក់ផងដែរថា ក្នុងករណីអ្នកនិពន្ធយកសារណាមកដាក់ជូនយើងខ្ញុំ ធ្វើអោយសារណាដដែលនោះមិនអាចយកទៅផ្សាយក្នុងទស្សនាវដ្តីដទៃ យើងខ្ញុំមិនទទួលខុសត្រូវឡើយ ។

9. ការជ្រើសរើសសារណា ធ្វើឡើងដោយការវាយតម្លៃពីគណៈកម្មាធិការរៀបចំការបោះពុម្ពផ្សាយ ដោយមានការពិនិត្យឡើងវិញជាមុន ។

10. សារណាដែលបានដាក់ជូនហើយមិនអាចដកវិញបាននោះទេ ។

11. ការកែតម្រូវរបស់អ្នកនិពន្ធអាចធ្វើឡើងបានតែម្តងប៉ុណ្ណោះតាមកាលបរិច្ឆេទកំណត់ដែលបានស្នើ ។ អ្នកនិពន្ធ អាចកែតម្រូវបានក្នុងករណីបាត់ពាក្យ ឬ ខុសអក្ខារិរុទ្ធប៉ុណ្ណោះ ។ មិនត្រូវសរសេរបន្ថែមនោះទេ ។

12. 1) សារណាត្រូវសរសេរដោយប្រើកុំព្យូទ័រ ។
2) ត្រូវប្រើខ្នាត A4 បញ្ឈរ និង មានគំលាតសមស្រប ។

13. ទាំងអ្នកនិពន្ធ និង ក្រុមហ៊ុននឹងមិនត្រូវបានបង់ប្រាក់សម្រាប់ការបោះពុម្ពផ្សាយនៅក្នុងទស្សនាវដ្តីនោះទេ ។

14. សូមយកសារណារបស់អ្នកមកដាក់ជូនតាមរយៈអាស័យដ្ឋានខាងក្រោម :

Reiseikai Media (Cambodia) Co.,Ltd.
18/F Canadia Tower, No.315, Ang Doung St,
Corner Monivong Blvd, Phnom Penh,
Cambodia

E-mail:

第61回日本透析医学会学術集会・総会

THE 61ST ANNUAL MEETING OF THE JAPANESE SOCIETY FOR DIALYSIS THERAPY

61st JSDT

持続可能な透析療法をめざして

Toward a sustainable dialysis therapy

Date

Jun 9(Thu) - 12(Sun), 2016

President

Yoshiaki Takemoto,M.D.,Ph.D.

Clinical Professor
Dept.of Artifical Kidney.
Osaka City Univ.Med.Sch.

Venue

Osaka International Convention Center, RIHGA Royal Hotel Osaka
RIHGA Royal NCB, Dojima River Forum, ABC Hall

http://www2.convention.co.jp/61jsdt

Secretariat

Department of Artifical Kidney,Osaka City University Hospital
1-5-7 Asahimachi, Abeno-ku, Osaka 545-8585 JAPAN
Tel: +81-6-6645-2393