“Takamatsu” International Symposium for PD & MD in Tokyo

Let's learn the Hot Topics In "Movement Disorders" from international experts!

Date

2018. 2. 23 (Fri) ～ 2. 25 (Sun)

Venue

Tokyo International Exchange Center
Tokyo Academic Park, 2-2-1 Aomi, Koto-ku, Tokyo, Japan

Secretariat

Department of Neurology, Juntendo University School of Medicine

Venue：
Tokyo International Exchange Center
Tokyo Academic Park, 2-2-1 Aomi, Koto-ku, Tokyo 135-8630 Japan
会場：
東京国際交流館内　国際交流会議場・会議室
〒135-8630 東京都江東区青海2-2-1

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Welcome to Takamatsu International Symposium for PD and MD in Tokyo 2018

Dear colleagues,
It is our great honor and pleasure to invite all of you to “The 17th Takamatsu international symposium for Parkinson’s disease and Movement disorders in Tokyo 2018” which will be held in Odaiba, Tokyo, February 23-25, 2018. This symposium was initiated by Dr. Yamamoto, and this symposium has been operated by Dr. Yamamoto for 16 years and this year, Department of Neurology, Juntendo University will host the symposium. As planned for the time being, we plan to hold it every other year in Tokyo and Takamatsu. We invited many experts from the world, Asian and Oceania, EU, South and North America. It is a very exciting chance to exchange knowledge and expertise, and further a good chance of education for young neurologists.
It is a very important step for globalization of movement disorders area for Asian colleagues and us. We do hope that many colleagues, especially young to participate to this symposium. Odaiba is a large artificial island in Tokyo Bay, Japan. It was initially built for defensive purposes in the 1850s, dramatically expanded during the late 20th century as a seaport district, and has developed since the 1990s as a major commercial, residential and leisure area. Odaiba, along with Yokohama Minato Mirai 21, is the only place in the metropolitan area that is accessible to the coast and is not blocked by industry and port areas. Odaiba is well accessible from Haneda Airport and it is in a convenient place. In contrast, although there is a little distance from the city center, it is an opportunity for everyone to participate in acquiring various knowledge. Finally, through this symposium, we hope to warm up old friends and make new friends. This would be really fantastic time for all participants.

Sincerely,

Nobutaka Hattori, MD, PhD
Chair

Atsushi Takeda, MD, PhD
Co-Chair

The Organizing Committee

The Organizing Committee

Chair

Nobutaka Hattori, MD, PhD
Department of Neurology, Juntendo University School of Medicine, Tokyo

Co-Chair

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National Hospital Organization, Sendai Nishitaga Hospital, Sendai

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Takamatsu Neurology Clinic, Takamatsu

Genjiro Hirose, MD, PhD
Epilepsy Center, Asanogawa General Hospital, Kanazawa

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National Center Hospital, National Center of Neurology and Psychiatry, Tokyo

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Yoshikazu Ugawa, MD, PhD
Department of Neurology, Fukushima Medical University, Fukushima

The Organizing Committee（alphabetical order in family name）

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Renpei Sengoku, MD, PhD
Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Tokyo

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Brain and Mind Research Center, Nagoya University, Nagoya

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Medical Sciences, Newcastle University, Newcastle, UK.

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Department of Neurology, Technische Universitaet Dresden, Germany

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Institute of Neurogenetics, University of Lübeck, Lübeck, Germany

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Clinical Pharmacology at Toulouse University Hospital, Toulouse, France

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Wrong-Woo Lee, MD, PhD
Department of Neurology, Eulji University, Seoul, South Korea

Yih-Ru Wu, MD
Chang-Gung Memorial Hospital, Taipei, Taiwan

Program

1st Day: 23 Feb 2018 (Friday)

08:30-08:50

Opening remarks & Welcome speech

Nobutaka Hattori / Werner Poewe / Eduardo Tolosa

08:50-10:20

Symposium I

Evidence-based medicine (EBM) applied to Parkinson's disease treatment

Chair: Atsushi Takeda / Yasushi Shimo

1. Recent updates in the diagnosis and diagnostic criteria for PD
   Speaker: Werner Poewe
2. Evidence Based Treatment for Non-Motor Symptoms in PD
   Speaker: Kazushi Takahashi
3. Device Aided Therapy, When?, How?, Which?
   Speaker: Shinsuke Fujioka

10:20-10:35 **Break**

10:35-12:05

Symposium II

How to diagnose Parkinsonism and related Movement disorders

Chair: Yoshikazu Ugawa / Hideki Mochizuki

1. Eye movements in Parkinsonism and related movement disorders.
   Speaker: Genjiro Hirose
2. Clinical Features and Pathophysiology of Motor Complications in Parkinson's disease
   Speaker: Louis Tan
3. Immune- Mediated Movement Disorders
   Speaker: Yih Ru Wu

12:05-12:25 **Break**

12:25-13:25

Luncheon Seminar (Sponsored Seminar: Kyowa Hakko Kirin Co., Ltd.)

Does PD start in the gut?

Chair: Hirohisa Watanabe

Speaker: Werner Poewe

13:25-13:45 **Break**

13:45-14:45

Symposium III

Indispensable issues in Movement Disorders

Chair: Hirohisa Watanabe / Tetsuya Maeda

1. Emergencies in parkinsonism
   Speaker: Eduardo Tolosa
2. Getting a good night's sleep? The importance of recognising and treating sleep disorders in Parkinson's disease?
   Speaker: Roongroj Bhidayasiri

14:45-15:00 **Break**

15:00-16:45

VTR session (open)

Chair: Mitsutoshi Yamamoto / Nobutaka Hattori

Speaker: Mai Hamaguchi / Jongsam Baik / Akimitsu Suda / Katsuo Kimura / Junya Ebina / Shogo Furuya / Hitomi Onomura

16:45-17:00 **Break**

17:00-18:00

Evening Seminar (Sponsored Seminar: Novartis Pharma K.K.)

Medical treatment in advanced Parkinson's Disease

Chair: Kenjiro Ono

Speaker: Olivier Rascol

2nd Day: 24 Feb 2018 (Saturday)

08:30-10:00

Symposium IV

Biomarkers in Parkinson's Disease and Related Disorders (I):
How to diagnosis early Parkinson's Disease

Chair: Norihiro Suzuki / Hidefumi Ito

1. Genetic and Environmental factors in Parkinson's Disease
   Speaker: Eng-King Tan
2. Metabolomics and Parkinson's Disease and Related Disorders; New Technology for diagnosis of parkinsonism.
   Speaker: Shinji Saiki
3. Peripheral tissue markers in PD
   Speaker: Beomseok Jeon

10:15-11:45

Symposium V

Biomarkers in Parkinson's Disease and Related Disorders (II): Neuroimaging and Neuropathology in Parkinson's Disease and related Disorders

Chair: Seiji Kikuchi / Hidemoto Saiki

1. Functional Nueroimaging in Parkinsonism and Dementia
   Speaker: Makoto Higuchi
2. What's New; Cranial MRI in Movement Disorders
   Speaker: Joaquim Ferreira
3. The key pathological and clinical features of Parkinsonism
   Speaker: Renpei Sengoku

11:45-12:00 **Break**

12:00-13:00

Luncheon Seminar (**Sponsored Seminar: AbbVie Inc.**)

Medical Management of Fluctuations in Parkinson's Disease

Chair: Satoshi Orimo

Speaker: Francisco Cardoso

13:15-14:00

Education Seminar (**Sponsored Seminar: Takeda Pharmaceutical Co., Ltd.**)

Non-Motor Symptoms in Parkinson's disease: ethnic difference and the impact on the QOL

Chair: Ryosuke Takahashi

Speaker: Yoshio Tsuboi

14:00-14:15 **Break**

14:15-15:45

(Parallel session) Small Conference for Young Neurologist

Room A International Conference Hall (1F)

Update on Treatment for Motor and Non-Motor Symptoms of Parkinson's Disease

Lecturer: Roongroj Bhidayasiri / Werner Poewe / Eduard Tolosa

Case Presenter and Facilitator: Taku Hatano / Keisuke Suzuki

Room B (4F)

Update on Treatments for Neuropsychiatric Symptoms of Parkinson's Disease

Lecturer: Olivier Rascol /Heinz Reichmann

Case Presenter and Facilitator: Hidetomo Murakami / Katsuo Kimura

Room C (4F)

Update on NeuroImaging in Neurodegenerative Disorders

Lecturer: Joaquim Ferreira / Beomseok Jeon

Case Presenter and Facilitator: Shigeki Hirano / Hitoshi Shimada

Room D (4F)

How to diagnose and treat atypical parkinsonism.

Lecturer: Eng King Tan / Louis CS Tan / Yi-Ru Wu

Case Presenter and Facilitator: Jun Tashiro / Osamu Kano

Room E (4F)

How to diagnose and treat dystonia and hyperkinetic movement disorders.

Lecturer: Christine Klein / Francisco Cardoso

Case Presenter and Facilitator: Masashi Hamada / Takashi Osada

15:45-16:00 **Break**

16:00-17:00

Hot Topics (**Sponsored Seminar: Sumitomo Dainippon Pharma Co., Ltd.**)

Monogenic Movement Disorders

Chair: Tatsushi Toda

Speaker: Christine Klein

17:00-17:20 **Break**

17:20-18:20

Symposium VI

Social cares for Parkinson's Disease

Chair: Tadashi Ichikawa / Miho Murata

1. Neurorehabilitation for Parkinson's Disease and related movement disorders
   Speaker: Toshiyuki Fujiwara
2. Not-so-big data analysis: What Korean Health Insurance Data tells us.
   Speaker: Woong-Woo Lee

19:00

Reception & Gala dinner (**Buffet**)

Room: Pegasus B2C at the Hilton Hotel Odaiba Tokyo

3rd Day: 25 Feb 2017 (Sunday)

08:30-9:00

Japanese Symposium 1 日本ベーリンガーインゲルハイム株式会社

レボドパ併用療法におけるドパミンアゴニストの役割

Chair: 長谷川 一子　Kazuko Hasegawa

Speaker: 前田 哲也　Tetsuya Maeda

09:00-9:30

Japanese Symposium 2 エフピー株式会社

運動障害疾患における情報通信技術（ICT）の応用

Chair: 永山　寛　Hiroshi Nagayama

Speaker: 大山 彦光　Genko Oyama

09:30-10:00

Japanese Symposium 3 大塚製薬株式会社

パーキンソン病における歩行障害

Chair: 服部 信孝　Nobutaka Hattori

Speaker: 大熊 泰之　Yasuyuki Okuma

10:00-10:30

Japanese Symposium 4 日本メジフィジックス株式会社

Neuroradiological diagnosis for Parkinson's disease and the related disorders by nuclear medicine

Chair: 下畑 享良　Takayoshi Shimohata

Speaker: 高橋 牧郎　Makio Takahashi

10:30-11:00

Japanese Symposium 5 グラクソ・スミスクライン株式会社

エビデンスに基づいたパーキンソン病治療

Chair: 宇川 義一　Yoshikazu Ugawa

Speaker: 武田　篤　Atsushi Takeda

11:00-11:30

Closing remarks Nobutaka Hattori

Information for Participants

Tokyo International Exchange Center Meeting Facilities

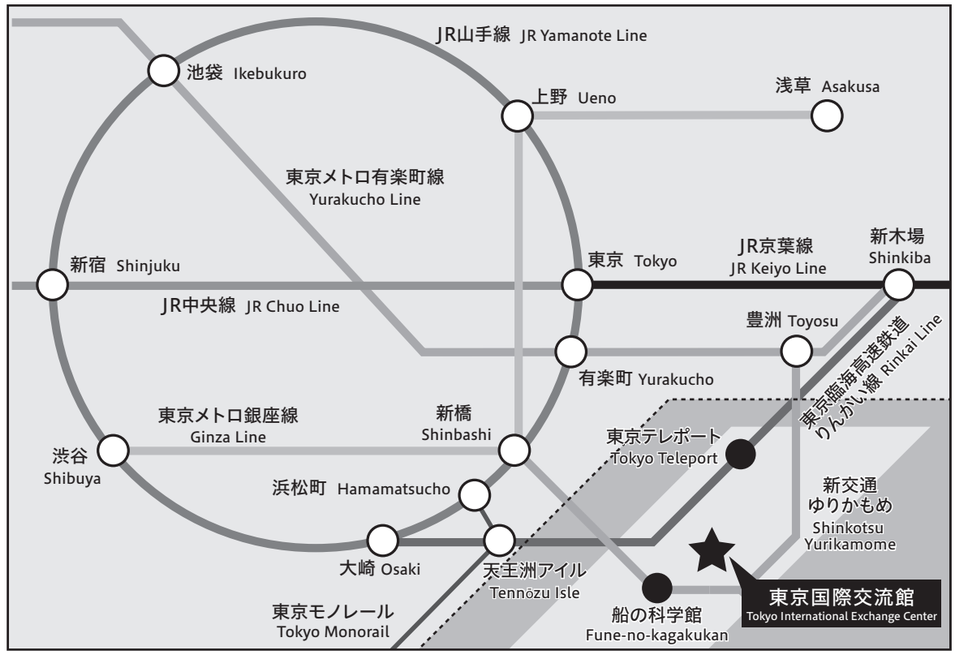
Tokyo International Exchange Center (TIEC), Plaza Heisei, have International Conference Hall, Media Hall, and 5 conference rooms of varying sizes.
As a rule, use of the entrance hall, foyers, and other common areas is limited to guest reception and related usage only. The user wishing to use common areas for coffee breaks or other nonstandard purposes need to consult with TIEC.

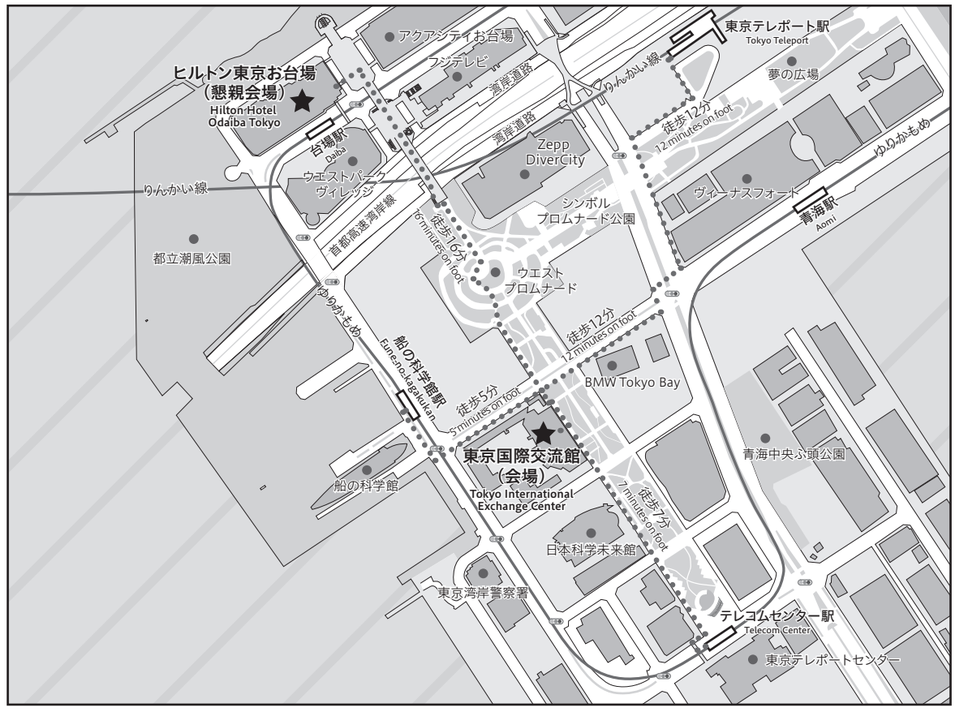
- Please avoid spilling a drink. There is a possibility that damage to the electrical system under the floor of the International Conference Hall.
- Smoking is permitted only in the designated smoking areas.

Reception & Gala Dinner (Buffet)

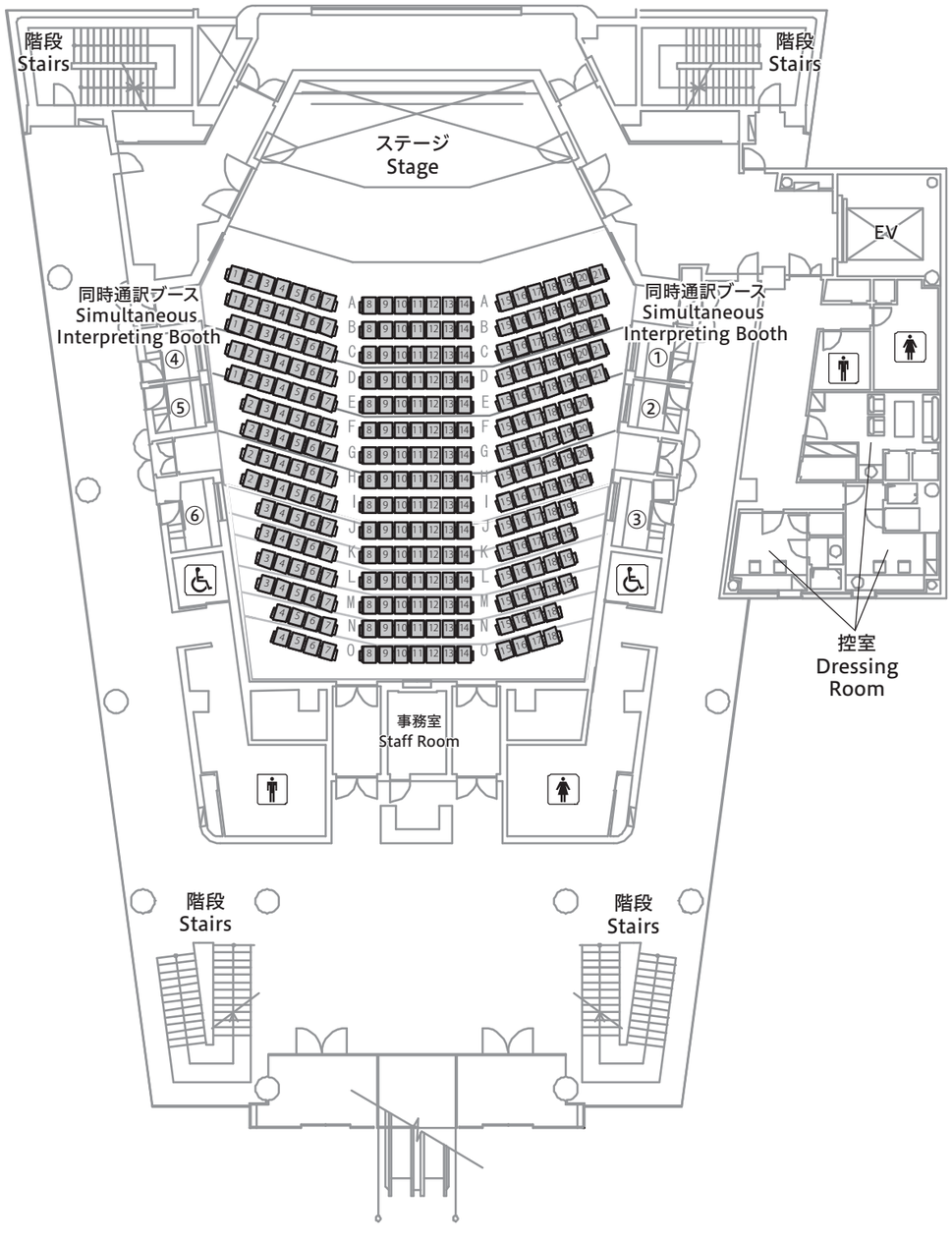
Date and Time：Feb. 24, 2018 19:00-21:00
Place：Room Pegasus, B2 C, Hilton Tokyo Odaiba
(refer to Access Map on page 12)
Participation fee：JPY 15,000 -

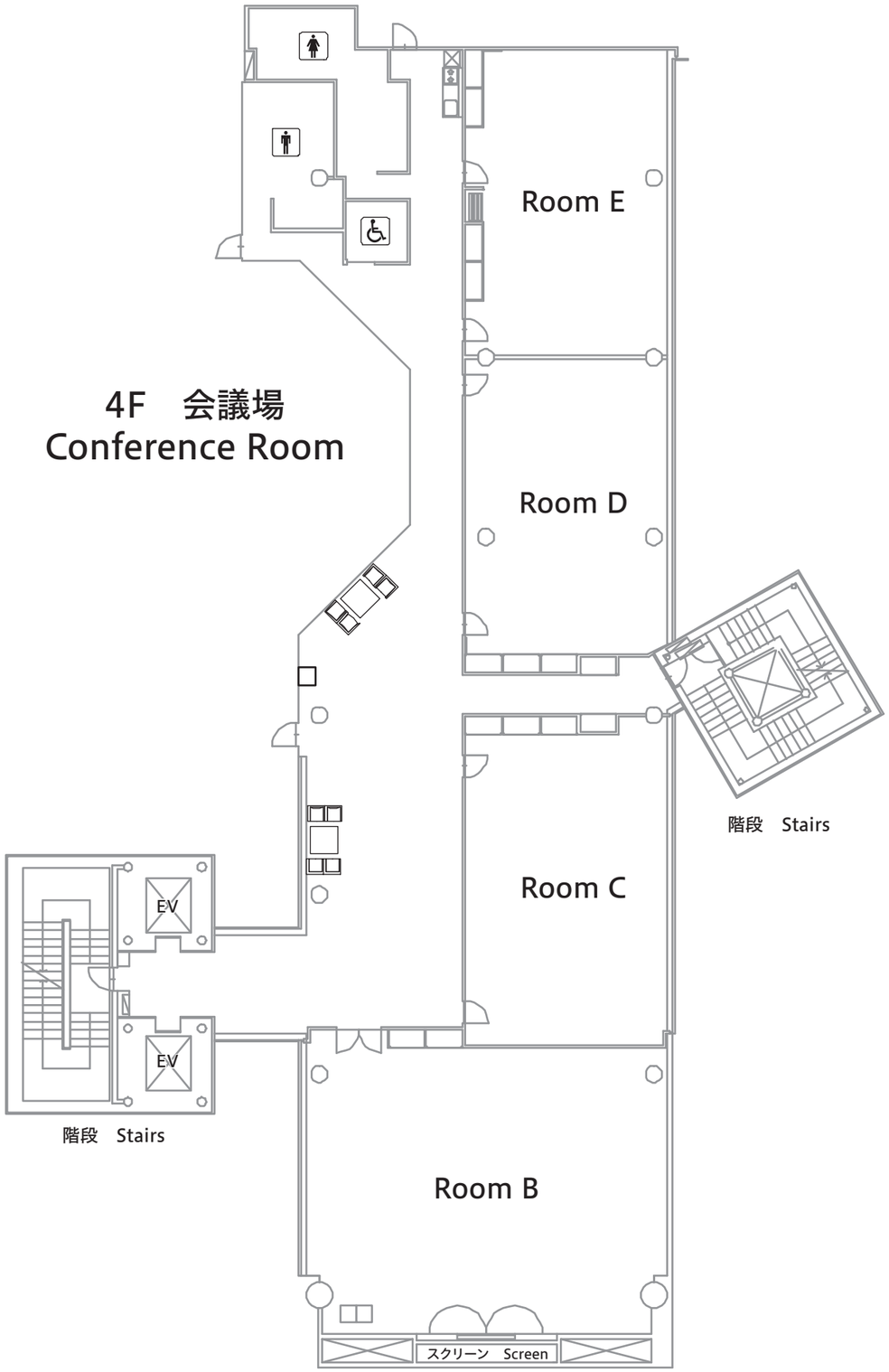
Access, Floor Map





1F　国際交流会議場（Room A）
International Conference Hall





Abstracts

1st Day
23 Feb 2018（Friday）

Chair:
Atsushi Takeda, MD, PhD
National Hospital Organization, Sendai Nishitaga Hospital
Yasushi Shimo, MD, PhD
Department of Neurology, Juntendo University

1. Recent updates in the diagnosis and diagnostic criteria for PD

Speaker:
Werner Poewe, MD, PhD
Department of Neurology Medical University Innsbruck
Anichstraße 35, A-6020 Innsbruck, Austria

Abstract:
The clinical diagnosis of Parkinson's Disease can be straight forward in subjects with full expression of the classical clinical features. Nevertheless, there is considerable overlap of clinical signs with other conditions, like MSA, PSP or secondary forms of parkinsonism and 20 % or more of patients are initially misclassified. Recently, an MDS Task Force has proposed revised clinical diagnostic criteria for PD and preliminary results of a validation study suggest superior specificity and predictive value for a gold standard expert diagnosis of PD over previous sets of criteria. Nevertheless, it remains unlikely that clinical criteria in themselves will be able to provide optimum diagnostic accuracy and current efforts focus on the performance of diagnostic biomarkers. These include a variety of imaging modalities, molecular and genetic markers, as well as tissue biopsies. The latter focus on detection of pathological alpha synuclein aggregates in components of the peripheral autonomic nervous system. Some of these markers might also be useful to detect the early stages of disease in at-risk populations – a crucial need when it comes to the development of disease-modifying therapies. Preliminary studies support that the recently proposed MDS criteria for prodromal PD might be useful in predicting future PD at the population level.

Curriculum Vitae:
Professor Werner Poewe is Professor of Neurology and Director of the Department of Neurology at Medical University Innsbruck, Austria since 1995.
Professor Poewe's main research interests in the field of movement disorders are focussed on differential and early diagnosis of Parkinson's disease, its natural history and pharmacological treatment. He has been involved in the steering committees of numerous drug trials in different stages of Parkinson's disease for the past 20 years and has authored and co-authored more than 650 original articles and reviews in the field of movement disorders.
Professor Poewe served as President of the Austrian Society of Neurology from 2002-2004 as well as as President of the Austrian Parkinson's Disease Society from 1996-2009. He has been awarded Honorary Membership of the German Society of Neurology as well as the Japanese Society of Neurology and the International Parkinson & Movement Disorder Society. His awards include the Walther-Birkmayer-Prize of the Austrian PD Society, the Dingebauer-Prize of the German Neurological Society as well as the Research Excellence Award of Innsbruck Medical University.
Professor Poewe served as President of the International Movement Disorder Society from 2000-2002. Professor Poewe took over as chair of the MDS European Section from 2011-2013 and is currently active as member of the Managing Board of the Movement Disorder Scientific Panel of the European Academy of Neurology.
He has served on the Editorial Board of international neurology journals, including Movement Disorders, Journal of Neurology and European Journal of Neurology and is a regular reviewer for major journals, like Lancet Neurology, Brain, Movement Disorders, Neurology and Annals of Neurology.

2. Evidence Based Treatment for Non-Motor Symptoms in PD

Speaker:
Kazushi Takahashi, MD, PhD
Department of Neurology, Saitama Medical University

Abstract:
Although Parkinson's disease (PD) is generally considered a movement disorder, a majority of PD patients also suffer from non-motor symptoms (NMS). NMS in PD are numerous and include sleep disturbance (insomnia, excessive daytime sleepiness, sudden onset of sleep, REM sleep behavior disorders (RBD), restless legs syndrome), mood disorders (depression, anxiety, apathy) and fatigue, neuro-psychiatric disturbance (hallucination, delirium, delusion, impulse control disorders, dopamine dysregulation syndrome, cognitive dysfunction, dementia), autonomic dysfunction (orthostatic hypotension, constipation, urinary dysfunction, sexual dysfunction, hyperhydrosis) and sensory disturbance (pain, olfactory disturbance). Despite the importance of NMS is now widely acknowledged, we are still hampered by a lack of well-conducted research into effective treatments. Many symptoms are managed by strategies that are time-honored, but have never been scientifically assessed.
The new Japanese "Practical Guideline for PD 2018 (in press)" updates the previous Japanese "Therapeutic Guideline for PD 2011" and incorporates new data (published from Jan 2009 to Feb 2016) on efficacy, safety, and implications for clinical practice of treatments for NMS of PD. The present available therapeutic approach of major NMS (RBD, dementia, psychosis, depression and autonomic dysfunction) will be outlined, based on "Q & A" in the new Japanese "Guideline 2018" and "NICE Guideline 2017". Latest major evidence, such as systematic review and meta-analysis will be introduced.

Curriculum Vitae:
Kazushi Takahashi obtained his MD degree from Keio University School of Medicine in 1987 and received his neurological training at Keio University Hospital in Tokyo. He spent seven years as assistant professor at Department of Neurology, Keio University School of Medicine from 2005 to 2012. He is Professor of Neurology, Saitama Medical University since 2014. He is a present committee member of the Movement Disorder Society of Japan and a member of International Parkinson and Movement Disorder Society.

Symposium I
Evidence-based medicine (EBM) applied to Parkinson's disease treatment

3. Device Aided Therapy, When?, How?, Which?

Speaker:
Shinsuke Fujioka, MD*, Yoshio Tsuboi, MD, PhD
Department of Neurology, Fukuoka University

Abstract:
Motor symptoms of patients with Parkinson's disease (PD) can adequately be managed with conventional oral medications during the early stage of the illness. The management with the oral medications becomes challenging in advanced stage of the illness because of severe motor complications including wearing off, dyskinesia, and sudden on-off. The advanced PD patients can also present with other problems such as cognitive impairment, drug induced psychiatric symptoms, and swallowing problems during the disease course which make it more difficult to treat the patients with only oral medications. So far, three device-aided therapies have been available as additional therapeutic options for advanced PD patients with severe motor complications: deep brain stimulation; continuous jejunal infusion of levodopa-carbidopa intestinal gel; bolus or continuous subcutaneous infusion of apomorphine. The decision-making process regarding the selection of the therapies is complex and is influenced by multiple factors including patient ages, patients' preference and lifestyle, cognitive and psychiatric status, domestic environment, and availability of the therapies. It is also noted that patients need to be assessed by multidisciplinary treatment team including neurologists, neurosurgeons, nurses, psychiatrist, physical therapists, occupational therapists, speech therapists, neuropsychologists, and social workers before making a decision. Increasing number of papers have reported the advantage and disadvantage of each therapy; however, no definite guidelines for which therapy should be chosen for individual patients have been available. Thus, head-to-head randomized clinical trials are definitely warranted to overcome the problem.

Curriculum Vitae:
Dr. Fujioka was born and raised in Hiroshima, Japan. He obtained his medical degree (2003) and completed his residency (2003-2005) at Fukuoka University in Fukuoka, Japan. He then pursued a fellowship in clinical and pathological research on movement disorders and frontotemporal dementia at the Mayo Clinic in Florida (2010-2014). Since 2014, he has worked as an Assistant Professor of Neurology at Fukuoka University. Dr. Fujioka is currently a clinical neurologist in the Movement Disorders Unit of the Neurology Division at Fukuoka University. He has published many peer-reviewed articles in international journals and is also the author of several book chapters. His research interests are in Parkinson's disease (particularly non-motor symptoms such as dysphagia and osteoporosis as well as device aided therapy), atypical parkinsonism, including progressive supranuclear palsy, multiple system atrophy, and corticobasal degeneration.

Symposium II
How to diagnose Parkinsonism and related Movement disorders

Chair:
Yoshikazu Ugawa, MD, PhD
Department of Neurology, Fukushima Medical University
Hideki Mochizuki, MD, PhD
Department of Neurology, Osaka University Graduate School of Medicine

1. Eye movements in Parkinsonism and related movement disorders.

Speaker:
Genjiro Hirose, MD, PhD, FANA
Neurological Center, Asanogawa General Hospital, Kanazawa City, Japan

Abstract:
The careful clinical examination of eye movements in patients with Parkinsonism and related movement disorders can be a valuable tool to the neurological assessment and in some cases serves to make a diagnosis (e.g. PSP). For diagnostic purposes, the laboratory oculomotor assessment adds little to the well performed clinical eye movement examination. As a general rule, slow saccades and excessive small amplitude square wave jerks (SWJ) are indicative of brainstem involvement, nystagmus is evidence of brainstem and cerebellar dysfunction, increased latency of saccade is consistent with cortical and associative cognitive disorders, and errors on antisaccade are consistent with frontal dementia.
Will review the eye movement abnormalities in patients with the Parkinsonian disorders and show some cases with their slides and video.

Curriculum Vitae:
CURRENT STATUS:
Full-time Consultant, Director of Neurological Center
Director of Epilepsy Center, Asanogawa General Hospital, Kanazawa City, Japan

MEDICAL SCHOOL:
Kyoto Prefectural University of Medicine (1959-1966)

INTERNSHIP:
US Air Force Hospital, Tachikawa, Japan (1966-1967)

RESIDENCY:
Medical resident at the US Air Force Hospital (1967-1968)
Neurology resident at the University of Virginia (1968-1971)

FELLOWSHIP:
Clinical Fellow, Department of Neurology Harvard Medical School Neurophysiology Section, Children's Hospital Medical Center, Boston (1971-1973)

ACADEMIC POSITION:
Assistant professor, Department of Medicine Kanazawa Medical University (1973-1974)
Associate Professor, Department of Medicine Chief Neurologist of Division of Neurology Kanazawa Medical University (1974-1985)
Professor & Chairman, Department of Neurology Kanazawa Medical University (1985-2005)
Emeritus Professor, Kanazawa Medical University (2005)
Full-time Consultant, Neurological Center, Asanogawa General Hospital (2005-2018)

2. Clinical Features and Pathophysiology of Motor Complications in Parkinson's disease

Speaker:
Louis Tan, MBBS, MRCP, FAMS, FRCP
National Neuroscience Institute, Singapore

Abstract:
Levodopa is the most potent medication available to treat the Parkinson's disease. There are however, both short term and long term complications associated with its use. The long term complications of levodopa include motor fluctuations and dyskinesias (abnormal involuntary movements) . Motor fluctuations most commonly manifest as predictable wearing-offs; unpredictable sudden offs; or no-on, delayed or partial-ons. Levodopa-induced dyskinesias may manifest as peak-dose dyskinesias in the form of chorea, dystonia, myoclonus, or respiratory dyskinesia. End of dose or low-dose dyskinesia often manifest as off-period dystonia or diphasic dyskinesia. Non-motor fluctuations in the form of neuropsychiatric, autonomic, or sensory symptoms may also occur.
The pathophysiology of motor fluctuations and levodopa-induced dyskinesias are complex. The underlying pathophysiological mechanism is related to a combination of severe nigro-striatal deficit; higher doses of levodopa used; and the effect of discontinuous, pulsatile levodopa administration. Various pharmacokinetic and pharmacodynamics factors underlying motor complications will be discussed.

Curriculum Vitae:
Dr Louis Tan Chew Seng
MBBS, MRCP(UK), FAMS(Neurology), FRCP(Edin)
Senior Consultant, Department of Neurology;
Deputy Director, Research
National Neuroscience Institute

Co-Director
Parkinson's Disease and Movement Disorders Centre
USA National Parkinson Foundation
International Centre of Excellence

Dr Louis Tan is a Senior Consultant Neurologist and Deputy Director, Research at the National Neuroscience Institute, Singapore. He is also Co-Director of its Parkinson's Disease and Movement Disorders Centre (TTSH campus) and an Adjunct Associate Professor of Duke-NUS Graduate Medical School, Singapore.

He is Treasurer-elect of the International Parkinson and Movement Disorder Society and previously served as Chair of the Education committee and Asian-Oceanian Section of the Society.

Upon graduating from the National University of Singapore and completing his neurology training at Tan Tock Seng Hospital, he underwent a movement disorders fellowship at the Parkinson's Institute in Sunnyvale, California.

His areas of specialty and research interests are Parkinson's disease and movement disorders. He is also interested in the interested in the epidemiology, clinical studies and clinical trials in Parkinson's disease and other movement disorders.

3. Immune- Mediated Movement Disorders

Speaker:
Yih Ru Wu, MD
Chang Gung Memorial Hospital and Chang Gung University, Taipei, Taiwan

Abstract:
There are growing list of movement disorders previously considered idiopathic or degenerative, which are now recognized as immune-mediated. Some are paraneoplastic, such as anti-CRMP5-associated chorea, anti-Ma2 hypokinesia/rigidity, and anti-Yo cerebellar ataxia/tremor. Another category of disorders, either paraneoplastic or nonparaneoplastic, are associated with antibodies against cell-surface or synaptic proteins. These disorders include anti-N-methyl-D-aspartate receptor (anti-NMDAR) encephalitis, the spectrum of stiff-person syndrome (glutamic acid decarboxylase, amphiphysin, GABA(A)-receptor-associated protein, or glycine receptor antibodies) , neuromyotonia (Caspr2 antibodies) , and opsoclonus--myoclonus--ataxia (unknown antigens) . Futhermore, the field of anitibody-associated movement disorders keeps expanding with the discovery of antibodies against leucine rich glioma inactivated protein 1 (LGI1) , dipeptidyl-peptidase-like protein-6, ARHGAP26- or Na/K ATPase, and alpha 3 subunit (ATP1A3) . Other nonparaneoplastic movement disorders including Sydenham's chorea, or chorea related to systemic lupus erythematosus and antiphospholipid syndrome are known to be triggered by molecular mimicry or unknown mechanisms.
In this talk, I will discuss the most relevant advances in immune-mediated movement disorders, with emphasis on the clinical--immunological associations and treatment.

Curriculum Vitae:
Dr Wu was trained in the department of Neurology at the Chang Gung Memorial Hospital, LinKou Medical Center from 1990-1994 and became an attending physician since 1994. She then undertook one-year research fellowship training in Movement Disorders Center at Toronto Western Hospital from1998-1999.
Her research interests include genetics of Parkinson's diseases and other movement disorders as well as non-motor symptoms and clinical researches of Parkinson's disease. She has published more than 150 related peer-reviewed, Science Citation Index papers and has been a reviewer of more than 30 SCI Journals. Currently she is the Section Editor of Movement Disorder in BMC Neurology and is on the editorial board of Parkinsonism and Related Disorders.
Dr. Wu was the present of Taiwan Movement Disorder Society from 2015 to 2017 and she has served on AOS-MDS education committee from 2011 to 2015. She is also an executive committee member of AOS-MDS and a web editor committee member of MDS since 2015.Currently, she is the professor of the Chang Gung Memorial Hospital and Chang Gung University.

Luncheon Seminar (Kyowa Hakko Kirin Co., Ltd.)

Chair:
Hirohisa Watanabe, MD, PhD
Brain and Mind Research Center, Nagoya University Graduate School of Medicine

Does Parkinson's Disease start in the gut?

Speaker:
Heinz Reichmann, MD, PhD
Department of Neurology, Technische Universitaet Dresden, Germany

Abstract:
Parkinson's disease (PD) follows a rather uniform pattern of progression. There are roughly 10% of all patients in Europe suffering from a genetically defined PD while the others have a so-called idiopathic Parkinson syndrome. These patients present with preclinical signs such as hyposmia, which is present in about 80-90% , REM sleep behavior disorder, constipation and depression. If there are more than one of these preclinical signs present in a person his risk to develop PD increases steadily. Only after years with just a preclinical sign patients develop a typical Parkinson syndrome, i.e. a movement disorder consisting of bradykinesia, rigidity, tremor and postural instability.
There is good evidence that Lewy bodies with α-synuclein pathology are present in the enteric nervous system before they can be found in the basal ganglia. A possible hypothesis for these findings of Braak and others is that an exogenous toxin or virus may be inhaled and swallowed and then start to cause abnormal α-synuclein accumulation in the enteric nervous system of the stomach and gut. In line with these neuroanatomical findings is the work by Shannon and others who demonstrated that patients with PD present with Lewy bodies in the colon which was shown by colon biopsies. In addition, this group could gain colon biopsies who presented with PD and had coloscopy years before they developed motor symptoms. In these biopsies again Lewy bodies with abnormal α-synuclein could be found. In addition, our group could demonstrate that the application of rotenone via a tubing system to the gut could create in mice Lewy bodies and typical PD pathology via the vagal nerve to the brain. In summary there is ample evidence from post-mortem studies, from animal models and from clinical observations that PD begins in the gut.

Curriculum Vitae:
Heinz Reichmann MD PhD graduated from the University of Freiburg, Germany in 1979. He spent the following four years as a research fellow at the Institute for Biochemistry, University of Konstanz, Germany and the Institute of Neurology, Columbia University, USA. This was paid for by honorary grants for excellency to Dr. Reichmann. He returned to Germany where he held a number of positions at the University of Würzburg, becoming Professor of Neurology in 1990. In 1996, he was appointed Chairmann of the Department of Neurology at the University of Dresden, where he is now also Dean of the Medical Faculty.
Heinz Reichmann is a member of numerous scientific societies including the German Neurological Society, the European Neurological Society, the American Academy of Neurology, the Royal Society of Medicine and the Movement Disorder Society. In addition, Dr Reichmann serves on the editorial boards for a number of prestigious neurology journals. His major research interests are energy metabolism, neuroprotection, premotor symptoms in Parkinson's disease, etiopathogenesis and treatment in PD. Prof. Reichmann is a Fellow of the Royal College of Physicians and of the American Academy of Neurology. He serves on many Neurological Boards and was President of the German Parkinson Society and the German Muscle Society. In 2009 Professor Reichmann started his 2-year term as President of the German Neurological Society. He is Past-President of the European Neurological Society and has helped to initiate the new European Academy of Neurology, starting from 2014.

Symposium III
Indispensable issues in Movement Disorders

Chair:
Hirohisa Watanabe, MD, PhD
Brain and Mind Research Center, Nagoya University Graduate School of Medicine
Tetsuya Maeda, MD, PhD
Department of Neurology, Iwate Medical University

1. Emergencies in parkinsonism

Speaker:
Eduardo Tolosa, MD, PhD
Neurology Service, Hospital Clinic de Barcelona, IDIBAPS, CIBERNED,
Barcelona, Spain

Abstract:
Although Parkinson's disease is characterized by slow progression of disability over years, a growing number of patients can experience life-threating complications. Identifying and managing this situations is challenging, even for the specialist. Some complication,e.g. "sleep attacks" or prominent dysphagia, even though not "emergencies" in the sense of life threatening, are also critical and if not addressed properly can lead to serious problems.
My presentation will summarize the precipitant factors, clinical presentation and optimal treatment of the major emergencies in Parkinson's disease, which include : severe OFF´s and dyskinesias, Parkinsonism–hyperpyrexia and dyskinesia–hyperpyrexia syndrome, acute psychosis and pseudo intestinal obstruction. Emergencies related to advanced therapies such as levodopa-carbidopa intestinal gel infusion, subcutaneous apomorphine infusions and deep brain stimulation will also be reviewed.

Curriculum Vitae:
Eduardo Tolosa obtained his MD degree from the University of Barcelona and received his neurological training at the University of Minnesota in Minneapolis.. He is a founding member and past President of the Movement Disorder Society. He is also past President of the Spanish and of the European Neurological Society. He is the recipient of the American Academy of Neurology 2014 Movement Disorders Research Award. Prof. Tolosa is currently Vice Director of Research of the Centro de Investigacion en Red de Enfermedades Neurodegenerativas at the Instituto de Salud Carlos III in Spain and Emeritus Professor at the University of Barcelona
Professor Tolosa's research interests are in movement disorders. He was involved in pioneering studies defining the mechanisms underlying levodopa-related motor fluctuations and the role of DAT SPECT in the diagnosis of Parkinson disease and his team has been among the first in Europe to evaluate the efficacy of novel therapeutic strategies for Parkinson's disease, such as subthalamic nucleus stimulation, subcutaneous dopamine agonist infusions and intraduodenal infusions of levodopa. Areas of current research include assessment of non-motor symptoms in asymptomatic carriers of Parkinson-associated genetic mutations and the study of diagnostic biomarkers in premotor Parkinson disease.

Symposium III
Indispensable issues in Movement Disorders

2. Getting a good night's sleep? The importance of recognising and treating sleep disorders in Parkinson's disease?

Speaker:
Roongroj Bhidayasiri, MD, FRCP, FRCPI
Neurology, Chulalongkorn Comprehensive Movement Disorders Center,
Chulalongkorn University Hospital, Bangkok, Thailand

Abstract:
Despite a high prevalence of sleep disturbances amongst Parkinson's disease (PD) patients, these problems are frequently overlooked and many physicians still consider night-time symptoms as secondary problems. One the main reasons is the difficulty for patients and carers to recall their night-time symptoms during consultations. Some PD patients may not even aware that their night-time symptoms occur as a continuum of day-time manifestations. Although specific scales (e.g. Modified Parkinson's Sleep Scale; PDSS-2) have been evaluated and recommended by the Movement Disorder Society Task Force for rating overall sleep problems, they are not designed to capture specific night-time symptoms and do not have the capability for monitoring. With the advances of circuit technology, wearable sensors have been developed to monitor movement patterns during the night in PD patients. The advantages of these sensors include their capability to capture real-time data; thus, providing the opportunities for monitoring various night-time symptoms in real-life situations. It is likely that continuous nocturnal monitoring will open many new applications for physicians and researchers to understand the spectrum and the fluctuations of night-time symptoms, delineate the subtle differences, and identify new objective outcomes that can be applied for therapeutic armamentarium of sleep disorders amongst PD patients.
How can we apply the above information in the treatment of night-time symptoms in PD patients? In order to deliver successful treatment, we need to first involve patient' s carers to help identify the most troublesome night-time symptom for treatment. Analyse individual symptom but involve multidisciplinary team early is the key for optimal night-time management. If the main problem is related to dopamine responsive night-time symptoms, good strategy to replace nocturnal dopamine is warranted with the aim to balance motor benefits and the risk of adverse events, such as psychosis. For dopamine non-responsive symptoms, individualised approach is recommended to target disabling symptom if pharmacologic interventions are available, but not to forget that a practice of good sleep hygiene is equally important. For example, bedroom modifications can provide sleep-friendly environment; thus, potentially improving sleep-related breathing disorders and lessen the risk of night-time injuries. In this lecture, examples of pertinent PD-related sleep disorders will be highlighted with proposed assessment methods, evidence-based therapeutic approach and roles for adaptation.

Curriculum Vitae:
Graduated in medicine at Chulalongkorn University, Thailand in 1994. Received the membership of the Royal College of Physicians of London and Ireland in 1998 and certified by the American Board of Psychiatry and Neurology in 2005. Awarded the fellowship of the Royal College of Physicians of London in 2008 and the Royal College of Physicians of Ireland in 2010.
In addition to his role as a clinician and fellowship program director, Dr. Bhidayasiri's research interest is in objective monitoring and assisted devices in Parkinson's disease. He co-develops devices for tremor and nocturnal monitoring as well as tremor's glove for tremor suppression. His development on adjustable laser-guided walking stick has been adopted nationwide by the Ministry of Social Development and Human Security of Thailand for patients with freezing of gait.
Dr. Bhidayasiri has published over 140 articles in peer-reviewed journals in the field of movement disorders and 5 international textbooks in neurology. He serves in the editorial board of Parkinsonism and Related Disorders journal and Journal of the Neurological Sciences as well as a writing committee panel member of the American Academy of Neurology on the practice parameters of tardive syndromes. Dr. Bhidayasiri is currently a chair-elect of the Asian Oceanic section of the International Movement Disorder Society.

VTR session（open）

Chair:

Mitsutoshi Yamamoto, MD, PhD
Takamatsu Neurology Clinic, Takamatsu

Nobutaka Hattori, MD, PhD
Department of Neurology, Juntendo University School of Medicine, Tokyo

Speaker:

Mai Hamaguchi, MD
Dokkyo Medical University, Tochigi, Japan
Title：A 77-year-old man presenting with involuntary movement of the left leg.

Jongsam Baik, MD, PhD
Department of Neurology,Sanggye Paik Hospital,College of Medicine, Inje University, Seoul, Korea
Title：58-year man with an unsteady posture.

Akimitsu Suda, MD
Juntando University, Tokyo, Japan
Title：A 77-year-old female with gait disturbance.

Katsuo Kimura, MD, PhD
Yokohama City University Medical Center, Kanagawa, Japan
Title：A 67-year-old man presenting with choreic involuntary movement.

Junya Ebina, MD
Toho University, Tokyo, Japan
Title：48-year-old female presenting with involuntary movement in lower extremities

Shogo Furuya
Juntendo Shizuoka Hospital, Shizuoka, Japan
Title：73-year-old man with involuntary movements of the left arm and leg.

Hitomi Onomura, MD
TOYOTA Memorial Hospital, Aichi, Japan
Title：A 78-year-old male with gait disturbance.

Evening Seminar (Novartis Pharma K.K.)

Medical treatment in advanced Parkinson’s Disease

Chair:

Kenjiro Ono, MD, PhD
Department of Neurology, Showa University School of Medicine

Speaker:

Olivier Rascol, MD, PhD
Department of Neurology and Clinical Pharmacology Toulouse University Hospital, Toulouse, France

Abstract:

Later stage Parkinson's disease（PD）, often referred to as “advanced” disease, is characterized by motor complications（L-DOPA-induced fluctuations and dyskinesia）, as well as by the emergence of L-DOPA-resistant motor（falls）and non-motor（mood, cognitive and behavioral disorders, cognitive and autonomic dysfunction, and sleep disorders...）symptoms. Significant improvement have been achieved during the last 3 decades to treat such problems, but an optimal management of PD patients at this stage of the disease often remains complex, challenging and sometimes disappointing
Briefly, following the end of the L-DOPA “honeymoon”, OFF problems can be initially successfully managed by L-DOPA optimization regimen（dose and timing adjustments）, combined with dopaminergic（oral or transdermal dopamine agonists , catechol-O-methyltransferase（COMT）inhibitors and monoamine oxidase B（MAO-B）inhibitors）and non-dopaminergic（A2A and glutamate antagonists）agents. This strategy generally reduces the duration of time spent OFF by few hours per day, which is usually sufficient for few years. However, as PD continues to worsen, the severity and duration of OFF episodes increases. The efficacy of such conventional approaches then wanes and can be limited by the emergence of dyskinesia. At this stage, more invasive and expensive devise-based therapies（deep-brain stimulation, subcutaneous apomorphine or intra-jejunal L-DOPA）are considered as second-line strategies to manage such drug-refractory OFF problems. Unfortunately comparative studies that could help choosing between these invasive approaches are still lacking.
Treatment strategies to overcome dyskinesia include adjustment of timing, type and amount of dopaminergic medications, treatment with NMDA antagonists like amantadine and, in resistant cases, second-line devise-based approaches.
In many patients in the late stage of PD, non-motor symptoms, especially dementia, affect quality of life more than motor PD symptoms. Their management is still in its infancy, mostly based on empirical and unsuccessful treatments. This remains one of the main unmet needs of the current management of PD. Similarly, there is no efficacious medication to treat L-DOPA-resistant balance problems and falls, while the benefit of physical- and/or physio-therapy remains limited and poorly known.
Many advanced Parkinson's disease patients will likely benefit from multi and interdisciplinary PD teams with multiple professionals collaborating to develop a collective and tailored strategy for an individual patient.
Ongoing clinical and preclinical research has led to the discovery of promising new therapeutic targets that offer new hopes for a better management of advanced PD. Newer approaches modulating non-dopaminergic systems including for example adenosine A2A antagonists, glutamatergic antagonists, adrenergic receptor antagonists and serotonergic agents have been developed, with variable results. We also home that recent developments in L-DOPA or dopamine agonist delivery formulations（including for example subcutaneous infusion or inhaled formulations of a L-DOPA/carbidopa, new extended-release L-DOPA and oral pro-L-DOPA form, sublingual apomorphine）will improve in the future our therapeutic armamentarium to better manage advanced PD.

Curriculum Vitae:

Doctor Olivier Rascol is Professor of Clinical Pharmacology at the Toulouse University Hospital since 1993. He obtained his MD in Neurology (Toulouse, 1985) and his PhD in Neurosciences (Paris, 1992) . Dr Rascol is running the Toulouse Clinical Investigation Centre since 1994 and the Toulouse European Space Clinic since 1998. He is also running a Research Group on Motricity in the Research Unit INSERM U1436 and is the coordinator of the French Reference Center for Multiple System Atrophy (Atypical Parkinsonism) . Dr Rascol is the chair of the national network of the 56 French Clinical Investigation Centers since 2008 and the chair of the NS-Park Neurosciences Network of the French CIC since 2010. From 2011, Dr Rascol is now coordinating the National French Clinical Research Infrastructure Network F-CRIN.

As a neuropharmacologist, Dr Rascol's main fields of interest are Parkinson's disease and movement disorders, drug development for Parkinson's disease and functional neuroimaging. Dr Rascol has been actively involved in the development of several marketed antiparkinsonian medications (ropinirole, rasagiline) . He is currently running several research programs for disease progression and symptomatic management of PD (motor signs, dyskinesias and on-off problems, non-motor signs such as pain and sleep problems) with new dopaminergic (dopamine agonists, dopamine reuptake inhibitors, MAO-B inhibitors...) and non-dopaminergic (serotonergic, glutamatergic, adenosine, alpha-adrenergic...) drugs in collaboration with several academic and industry research centres in the US and in Europe. He is acting in this field as an external advisor for French and European scientific organisations, patients' associations, drug agencies and international pharmaceutical companies. He is at the board of the Evidence-Based Medicine MDS Task Force in charge of the continuous assessment of all antiparkinsonian treatments. He is involved in the process of editing French (HAS) and European (EFNS / MDS-ES) guidelines for the treatment of Parkinson's disease. As the chair of the French CIC Network and of the National F-CRIN Clinical Research infrastructure, Dr Rascol has been deeply involved within the last few years in the management and organisation of clinical research in France.

Dr Rascol is member of several French and American neurological and pharmacological societies. He was the Secretary of the international Movement Disorders Society (2006-2009) and is a member of the WFN Research Committee on Parkinsonism and Related Disorders. Dr Rascol is chair of the European Section of the Movement Disorders Society (2013-15) . Dr Rascol is working or has worked as associate-editor for the Journal Fundamental and Clinical Pharmacology and is or has been a member of the editorial board of Lancet Neurology, Neurology, the European Journal of Neurology, the Evidence Medicine.

Dr Rascol has published more than 400 articles in International Scientific journals (New England Journal of Medicine, Lancet, Lancet neurology, Annals of Neurology, Neurology, Archives of Neurology, Brain, Movement Disorders...) . His H factor is 50. He has also been invited to give more than 250 lectures in various European, North and South American and Asian universities or national and international meetings.

Abstracts

2nd Day
24 Feb 2018 (Saturday)

Chair:
Norihiro Suzuki, MD, PhD
Department of Neurology, Keio University Hospital
Hidefumi Ito, MD, PhD
Department of Neuroloty, Wakayama Medical University

1. Genetic and Environmental factors in Parkinson's Disease

Speaker:
Eng-King Tan, MD, MRCP, FRCP
Singapore General Hospital, National Neuroscience Institute, Singapore

Abstract:
The relative role of genes and environmental factors in Parkinson's disease (PD) has been debated. To date, more than 20 gene loci and numerous disease-causing genes have been linked with PD or parkinsonism. Studies of proteins encoded by disease causing genes have uncovered pathogenic pathways and provided new insights into mechanisms of neurodegeneration in familial and sporadic PD. Potential screening for genetic PD-related risk factors, risk stratification and the role of genetic testing are becoming important issues to address in a clinical setting. This is especially so with the widespread availability of high throughput genomic screening to the public. There is also increasing evidence that environmental and lifestyle factors can modulate risk of PD. Some of these include chronic pesticide exposure, caffeine intake and cigarette smoking. The role of gene and environmental interactions has received limited attention. Studies in prospective large population cohorts can yield important information that could provide the basis for future biological validation that may ultimately lead to an integrated behavioural and genetic program that can lead to better informed patient care.

Curriculum Vitae:
Dr EK Tan is a senior consultant neurologist and clinician scientist at the National Neuroscience Institute (NNI), a Professor at Duke-NUS medical school and an honorary Professor at Lee Kong Chian school of medicine(a joint initiative with Imperial College London). Dr Tan is the director of research at NNI.

Dr Tan is an editor of European Journal of Neurology, Parkinsonism Related Disorders, and Parkinson's disease Journal, among others. Dr Tan has served in various committees in the International Movement Disorders Society (MDS) and a founding member of the MDS Asian Oceanic Section. He is also member of American Neurological Association. He has been involved in numerous educational activities in the Asian Oceanic region and has received various national and international research awards.

Dr Tan's primary research interests are in clinical and functional genomics and experimental therapeutics in Movement Disorders.

2. Metabolomics and Parkinson's Disease and Related Disorders; New Technology for diagnosis of parkinsonism.

Speaker:
Shinji Saiki, MD, PhD
Department of Neurology, Juntendo University Graduate School of Medicine

Abstract:
Several lines of evidences illuminate on the critical signature in body fluids that reflect the pathophysiology of Parkinson's disease (PD) , but dominant therapeutic strategies for PD, which is dopaminergic medications, result in temporal reduction of the disease severity with no cure. Thus, it is highly prioritized to establish the novel disease-modifying therapy to attenuate or halt the underling pathologic processes because 30-50 % neurons of the substantia nigra pars compact have been already lost when apparent motor symptoms are detected.
First of all, what we need is to establish easily obtained, disease-specific, surrogating biomarkers reflecting PD pathogenesis. Thus, we have been performing metabolome analysis in serum/plasma of PD patients in association with validations of the related genes, especially highlighting presymptomatic or early diagnostic profile. According to this concept, 5 independent cohorts studies are ongoing in our lab including patients with PD, progressive supranuclear palsy, multiple system atrophy and Alzheimer's disease.
In this presentation, I would like to summarize the latest achievements of PD-associated metabolic biomarkers discovered in bio specimen. Next, I would like to show two novel metabolic findings, skeletal muscle beta-oxidation changes and caffeine metabolic changes detected in early stage of PD (Scientific Reports 72:7328, 2017; Neurology 2018). Adding on that, we will mention some preliminary results.

Curriculum Vitae:
Current Position：
Associate Professor(Department of Neurology, Juntendo University Graduate School of Medicine)
Education and Degrees：

2011	PhD	Juntendo University Graduate School of Medicine
1999	MD	Faculty of Medicine, Kyoto Prefectural University of Medicine
		Research and Professional experience
2011.4		Associate Professor, Department of Neurology, Juntendo University School of Medicine
2008.4		Instructor, Department of Neurology, Juntendo University School of Medicine
2006.8-2008.3		Research Associate, Department of Medical Genetics, Cambridge Institute for Medical Research, University of Cambridge
2001-2005.6		Instructor, Department of Neurology, Kanazawa Medical University, Ishikawa, Japan
1999-2001		Resident in Internal Medicine, Kanazawa Medical University Hospital

Honours and Awards：
Eli Lilly Pergolide Fellowship(2005-2006), Fellowship from British Council Japan Association(2005)

Symposium IV
Biomarkers in Parkinson's Disease and Related Disorders(I):
How to diagnosis early Parkinson's Disease

3. Peripheral tissue markers in PD

Speaker:
Beomseok Jeon, MD, PhD
Seoul National University Hospital, Seoul, South Korea

Abstract:
There has been a growing interest in detecting alpha-synuclein (AS) accumulation in peripheral tissues using immunohistochemistry (IHC) as a possible in vivo pathological and prodromal biomarker of Parkinson's disease (PD) . Among such peripheral tissues, Gastrointestinal (GI) tract including submandibular gland and skin biopsies have shown considerable promise as potential biomarkers. According to Braak's hypothesis, AS aggregation is first observed in the enteric nervous system (ENS) , following which aggregates travel to the dorsal motor nucleus of the vagus nerve- one of the earliest sites in the central nervous system affected by Lewy pathology in patients with PD. Autopsy studies have revealed that AS accumulation in the GI tract is more frequent in patients with PD than in healthy controls. Furthermore, AS pathology has also been identified in tissue biopsied from the stomach or colon of patients with PD, even at the prodromal stage. However, a substantial number of studies argue that positive AS IHC staining in GI tissues does not constitute a biomarker of PD because AS accumulation in the GI tract has been observed in neurologically healthy individuals. In this presentation, detecting AS accumulation in peripheral tissues using IHC as a possible in vivo pathological and prodromal biomarker of PD will be critically reviewed.

Curriculum Vitae:
Professor Beomseok Jeon is Medical Director of the Movement Disorder Center at Seoul National University Hospital. He is the past President of the Korean Movement Disorder Society, and served as the International Delegate of the Korean Neurological Association. He also served as the Director of Office of the Medical Policy and Communication, Seoul National University. Currently, he is President of the Asia-Oceanian Association of Neurology, and Chair of MDS-AOS.

Symposium V
Biomarkers in Parkinson's Disease and Related Disorders(II):
Neuroimaging and Neuropathology in Parkinson's Disease and related Disorders

Chair:
Seiji Kikuchi, MD, PhD
National Hospital Organization Hokkaido Medical Center
Hidemoto Saiki, MD, PhD
Department of Neurology, Kitano Hospital, The Tazuke Kofukai Medical Research Institute

1. Functional Nueroimaging in Parkinsonism and Dementia

Speaker:
Makoto Higuchi, MD, PhD
National Institute of Radiological Sciences, National Institutes for Quantum and Radiological Science and Technology, Chiba, Japan

Abstract:
Numerous research evidences have supported mechanistic links between depositions of alpha-synuclein and tau and deteriorations of neuronal functions in movement disorders. We have demonstrated that positron emission tomography (PET) ligands dubbed PBB3 and PM-PBB3 are capable of capturing tau lesions in diverse tauopathies with progressive supranuclear palsy and amyotrophic lateral sclerosis phenotypes. Derivatives of PBB3 were also proven to illuminate alpha-synuclein deposits in autopsy brain samples. As these compounds are also self-fluorescent, bimodal optical and PET imaging assays of alpha-synuclein-inoculated mice and marmosets are underway to track spreading of alpha-synuclein aggregations. Dysregulated neurotransmissions triggered by misfolded proteins can be assessed at an incipient stage by monitoring altered binding of PET ligainds to dopamine and glutamate receptors during stimulation of brain activities. Finally, our latest nonclinical findings indicate that the use of machine learning classifiers for analyzing optical imaging and functional MRI data allows detection of disrupted functional networks in proteinopathies.

Curriculum Vitae:
Makoto Higuchi a geriatrician/neuroscientist by training. He performed nuclear medicine research including clinical PET imaging in 1993-1997, and was awarded the PhD in medicine at Tohoku University. He worked as a postdoctoral research fellow at University of Pennsylvania in 1999-2003, being committed to the development of rodent models of neurodegenerative disorders. Higuchi became Staff Scientist at RIKEN Brain Science Institute in 2003, and was appointed Team Leader at National Institute of Radiological Sciences in 2005. His primary focus is translational molecular imaging research on Alzheimer's, Parkinson's and diverse other neuropsychiatric diseases bidirectionally connecting animal models and humans.

2. What's New; Cranial MRI in Movement Disorders

Speaker:
Joaquim Ferreira, MD, PhD
Department of Neurology and Clinical Pharmacology, Faculty of Medicine, University of Lisbon and Head of CNS - Campus Neurológico, Portugal

Abstract:
Advances in magnetic resonance imaging (MRI) support the move of neuroimaging from the single exclusion of secondary causes to the emergence of imaging biomarkers with impact in early diagnosis and disease progression monitoring and the true investigation of disease mechanisms. This results from the development of new MRI sequences like the neuromelanin-sensitive MRI, iron studies and the use of high- and ultra-high-field MRI.
Diffusion Tensor Imaging colour maps and tractigraphy also complement the conventional structural MRI, identifying reduction of specific neuronal fibres.
The capacity to represent structural connectivity in vivo also makes diffusion MRI an attractive tool for the evaluation and treatment of movement disorders.
In this review, we will also discuss the role of multi-modal MRI analysis algorithms and specific movement disorders MRI protocols.

Curriculum Vitae:
Joaquim Ferreira completed his medical degree and PhD in Neurology at the University of Lisbon. He is Professor of Neurology and Clinical Pharmacology at the Faculty of Medicine, University of Lisbon and Head of the Laboratory of Clinical Pharmacology and Therapeutics. He is also the head of CNS- Campus Neurológico Sénior in Portugal.
He became interested in movement disorders during his medical degree and later undertook a Clinical Pharmacology fellowship with Prof. Olivier Rascol in Toulouse, France.
He is currently the past-chair of the European Section of the International Parkinson and Movement Disorder Society. His major research interests are neuropharmacology, Parkinson's disease, dystonia and Huntigton's disease.

3. The key pathological and clinical features of Parkinsonism

Speaker:
Renpei Sengoku, MD, PhD
Departments of Neurology and Neuropathology, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology

Abstract:
Parkinson's disease (PD) is a progressive neurodegenerative disorder characterized by bradykinesia, rigidity, postural instability and tremor. In addition to previously mentioned symptoms, non-motor symptoms such as sleep disorder, orthostatic hypotension and olfactory dysfunction are known. PD is a syndrome that is impaired in the peripheral autonomic nervous system as well as in the central nervous system. The disease process is multifocal and involves select central nervous system neurons and peripheral autonomic nervous system neurons. Therefore, the pathological study of patients with PD requires not only the central nervous system including the spinal cord, but also the peripheral autonomic nervous system such as the skin and the sympathetic ganglion as systemic pathological findings. It seems to be related to the fact that PD is a heterogeneous disease and where the Lewy body pathology arises from the whole body. Based on the systematic pathology findings of our center, we outline the pathological findings of Parkinson 's disease including recent findings.

Curriculum Vitae:
Education and Training :
1999-2001 Resident Internal Medicine Tokyo Saiseikai Central Hospital
2001-2002 Resident Neurology Department of Neurology, The Jikei University Hospital
2002-2003 Resident Neurology Department of Neurology, Yokohama Rosai Hospital
2003-2005 Clinical Assistant Neurology Department of Neurology, The Jikei University Hospital
2005-2008 Research Fellow Neuropathology Tokyo Metropolitan Institute of Gerontology
2008-2009 Research Fellow Neuropathology Department of Neuropathology, New York Brain Bank, Columbia University
2012-2013 Assistant Professor Neurology Department of Neurology, The Jikei University Hospital
2013- Chief Physician Neurology and Neuropathology Departments of Neurology and Neuropathology, Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology

Honors :
- Moore Award for the Best Paper on Clinico-Pathological Correlation Presented at the American Association of Neuropathologists 2008 Annual Meeting. (2008 San Diego, USA)
- Best Award for Young Research of the Japan Foundation For Aging and Health. (2009 Tokyo, Japan)
- Award for Research of Jikei Medical Association. (2009 Tokyo, Japan)

Luncheon Seminar (AbbVie Inc.)

Medical Management of Fluctuations in Parkinson's Disease

Chair:
Satoshi Orimo, MD, PhD
Kanto Central Hospital

Speaker:
Francisco Cardoso, MD, PhD, FAAN
Medical School of the Federal University of Minas Gerais, Belo Horizonte, Brazil, Belo Horizonte, Brazil

Abstract:
Levodopa remains the gold standard of the management of Parkinson's disease (PD). Although the underlying mechanism remains to be determined, PD patients develop irregularities of the response to levo-dopa, fluctuations and dyskinesias, at a rate of 10% a year. Fluctuations are classified in motor and non-motor; as well as related to the cycle of levo-dopa in delayed on, wearing off, on-off phenomenon, nocturnal akinesia and early morning akinesia. As fluctuations are characterized by a hypodopaminergic state, their management is primarily based on increase of the dopamine content in the synapsis. The medical options currently available to achieve this goal are dopamine agonists (pramipexole, ropinirole, rotigotine, piribedil, apomorphine, and cabergoline), COMT inhibitors (tolcapone, entacapone, and opicapone), MAOB inhibitors (selegeline, rasagiline, and safinamide), and management of levo-dopa. The latter involves fractioning of the dosage, increase of individual dosages and use of different formulations (dispersible levo-dopa, long release levo-dopa and dual release levo-dopa). There are also non-dopaminergic options such as anti-adenosine agents (istradefylline) and drugs with unknown mechanism such as zonisamide. Dyskinesias are also classified according to their relationship to the levo-dopa cycle: peak dose, biphasic, square wave dyskinesias, and off dyskinesias. The main issue related to the treatment of dyskinesias is that they almost invariably co-exist with fluctuations and get worse with the treatment of the latter. The only proven agent to improve dyskinesias is amantadine. There are several issues relevant to clinical practice that are not addressed by available studies: proportion of patients who respond to each of the agents previously mentioned, effect of association of agents with different mechanisms of action, and number of individuals who fail to all available medical treatments and become candidates to invasive therapies.

Curriculum Vitae:
Dr. Cardoso, a Brazilian Neurologist, is Professor of Internal Medicine – Neurology at the Medical School of the Federal University of Minas Gerais (UFMG) in Belo Horizonte, MG, Brazil. He obtained his MD at the Alagoas School of Medical Sciences in 1986, did his Neurology Residency at UFMG and his movement disorders training at Baylor College of Medicine in Houston, TX, USA under the supervision of Joseph Jankovic MD. He is a clinician with particular interest in the investigation of infectious-induced auto-immune choreas, epidemiology of parkinsonism and genetics of movement disorders. He is one of the discoverers of the DYT16 gene. He has authored more than 200 peer reviewed papers and 110 book chapters. He is Honorary Member of the Japanese Neurological Society, Fellow of the American Academy of Neurology and has had a long career in the International Parkinson and Movement Disorders Society (MDS). He has been Secretary of MDS, Chair of the MDS Pan-American Section and is currently the Chair of the MDS Publications Oversight Committee.

Education Seminar (Takeda Pharmaceutical Co., Ltd.)

Non-Motor Symptoms in Parkinson's disease: ethnic difference and the impact on the QOL

Chair:
Ryosuke Takahashi, MD, PhD
Department of Neurology, Kyoto Univ. Graduate School of Medicine

Speaker:
Yoshio Tsuboi, MD, PhD
Department of Neurology, School of Medicine, Fukuoka University

Abstract:
Non-motor symptoms (NMS) in PD patients are common and can occur across all stages of the disease. NMS have a great impact on quality of life (QOL) of PD patients and the care givers. NMS are frequently unrecognized by general neurologists. We evaluated frequency and severity of NMS in Japanese PD patients to demonstrate the prevalence and the impact on QOL in PD patients.
Data of 1054 PD patients from 7 facilities in Japan were collected. Movement disorder experts examined all patients and administered the structured NMSS interview. Disease severity was graded according to Hoehn and Yahr stage and UPDRS was used to evaluate motor disability. There were 465 men (44.1%) and mean age was 69.8 years with mean age at disease onset of 62.9 years. Mean duration of PD was 6.9 years. Sleep/fatigue domain was the most frequent complaint (86.9%), followed by Urinary disturbance (85.8%), and Gastrointestinal symptoms (79.4%)
Men more frequently related urinary and sexual dysfunctions than women. Most items on NMS scale correlated positively with HY stage. We found a high prevalence of NMS in Japanese PD patients and the prevalence was mostly identical to that in European studies, however, the severity of NMS was less than those of European studies. The impact on QOL is undoubted and supports their important role in clinical manifestations of PD and the need to improve diagnostic accuracy and treatment.

Curriculum Vitae:
Yoshio Tsuboi, MD, PhD. is a Professor and Chairman in Department of Neurology, School of Medicine, Fukuoka University, Fukuoka, Japan since 2011. Dr. Tsuboi graduated from the School of Medicine, Chiba University in 1986 and received his medical training in clinical Neurology at the Chiba University Hospital. In 2000, he became a clinical research fellow at the Department of Movement Disorder, Mayo Clinic Jacksonville until 2003.
Dr. Tsuboi's research interest includes clinical, pathological and molecular genetic researches in Parkinson's disease and other Movement Disorders. Dr. Tsuboi is member of several Japanese and international neurological societies. He is the member of Japanese Society of Neurology, Movement Disorders Society Japan, Movement Disorders Society, and American Academy of Neurology.
Dr. Tsuboi has published more than 200 peer-reviewed articles in Japanese and International Scientific journals.

(Parallel session) Small Conference for Young Neurologist

Room A：Update on Treatment for Motor and Non-Motor Symptoms of Parkinson's Disease

Lecturer:

Roongroj Bhidayasiri, MD, FRCP, FRCPI
Neurology, Chulalongkorn Comprehensive Movement Disorders Center, Chulalongkorn University Hospital, Bangkok, Thailand

Werner Poewe, MD, PhD
Department of Neurology, Medical University of Innsbruck, Austria

Eduardo Tolosa, MD, PhD
Neurology Service, Hospital Clinic de Barcelona, IDIBAPS, CIBERNED, Barcelona, Spain

Case Presenter and Facilitator:

Taku Hatano, MD, PhD
Department of Neurology, Juntendo University School of Medicine

Keisuke Suzuki, MD, PhD
Department of Neurology, Dokkyo University School of Medicine

Room B：Update on Treatments for Neuropsychiatric Symptoms of Parkinson's Disease

Lecturer:

Olivier Rascol, MD, PhD
Clinical Pharmacology at Toulouse University Hospital, Toulouse, France

Heinz Reichmann, MD, PhD
Department of Neurology, University Hospital Carl Gustav Carus, Dresden University of Technology, Dresden, Germany

Case Presenter and Facilitator:

Hidetomo Murakami, MD, PhD
Department of Neurology, Showa University

Katsuo Kimura, MD, PhD
Department of Neurology, Yokohama City University

Room C：Update on NeuroImaging in Neurodegenerative Disorders

Lecturer:

Joaquim Ferreira, MD, PhD
University of Lisbon and Head of CNS -Campus Neurológico, Portugal

Beomseok Jeon, MD, PhD
Seoul National University Hospital, Seoul, South Korea

Case Presenter and Facilitator:

Shigeki Hirano, MD, PhD
Department of Neurology, Chiba University

Hitoshi Shimada, MD, PhD
Department of Functional BrainImaging Research, NIRS Chiba

Room D：How to diagnose and treat atypical parkinsonism

Lecturer:

Eng King Tan, MD, PhD
Singapore General Hospital, National Neuroscience Institute, Singapore

Louis Tan, MBBS, MRCP, FAMS, FRCP
National Neuroscience Institute, Singapore

Yi-Ru Wu, MD
Chang-Gung Memorial Hospital, Taipei, Taiwan

Case Presenter and Facilitator:

Jun Tashiro, MD, PhD
Sapporo Parkinson MS Neurological Clinic

Osamu Kano, MD, PhD
Department of Neurology, Toho University School of Medicine

Room E：How to diagnose and treat dystonia and hyperkinetic movement disorders.

Lecturer:

Christine Klein, MD, FEAN
Institute of Neurogenetics, University of Lübeck, Lübeck, Germany

TBA

Case Presenter and Facilitator:

Masashi Hamada, MD, PhD
Department of Neurology, The University of Tokyo

Takashi Osada, MD, PhD
Department of Neurology, Keio University Hospital

Hot Topics (Sumitomo Dainippon Pharma Co., Ltd.)

Monogenic Movement Disorders

Chair:
Tatsushi Toda, MD, PhD
Department of Neurology, The University of Tokyo

Speaker:
Christine Klein, MD, FEAN
Institute of Neurogenetics, University of Lübeck, 23538 Lübeck, Germany

Abstract:
Monogenic movement disorders comprise a broad spectrum of inherited conditions sharing common features of impaired or uncontrolled movement that can be hyperkinetic, hypokinetic or mixed. According to the recommendations of the International Parkinson and Movement Disorder Society Task Force for Nomenclature Genetic Movement Disorders, the following subgroups can be distinguished: genetically determined parkinsonism, dystonia, cerebellar ataxia, chorea, myoclonus, paroxysmal movement disorders, hereditary spastic paraplegia, primary familial brain calcification, and neurodegeneration with brain iron accumulation. The present lecture will focus on monogenic forms of parkinsonism. Although genetic forms cause only a minority of Parkinson disease (PD), the disease mechanisms they elucidate advance the understanding of idiopathic cases. Moreover, recently identified susceptibility variants contribute to complex-etiology PD and broaden the contribution of genetics beyond familial and early-onset cases. Dominantly inherited monogenic forms mimic idiopathic PD and are caused by mutations of SNCA, LRRK2, and VPS35. On the other hand, early-onset forms are associated with PARKIN, PINK1 and DJ1 mutations, nominating mitochondrial dysfunction and oxidative stress as another important molecular pathway in the causation of the disease, in addition to alpha-synuclein accumulation. Common variants in GBA are a major risk gene for PD and select variants may even be viewed to act in a dominant fashion with highly reduced penetrance. Current guidelines recommend testing for LRRK2 variants in familial PD or in specific populations (ancestry), and for the recessive genes in early-onset PD. However, gene panels have made testing for multiple forms of genetic PD a viable approach. First gene-specific clinical trials targeting GBA mutations are currently underway.

Curriculum Vitae:
Dr. Christine Klein is a Professor of Neurology and Neurogenetics. She studied medicine in Hamburg, Heidelberg, Luebeck, London, and Oxford. She moved to Boston from 1997-1999 for a fellowship in Molecular Neurogenetics with Dr. X.O. Breakefield and completed her neurology training at Luebeck University in 2004, followed by a series of summer sabbaticals in movement disorders with Dr. A.E. Lang in Toronto, Canada in 2004-2015. She was appointed Lichtenberg Professor at the Department of Neurology of Luebeck University in 2005, where her research has focused on the clinical and molecular genetics of movement disorders and its functional consequences. In 2009, Dr. Klein been appointed Schilling Professor of Clinical and Molecular Neurogenetics at the University of Luebeck and became Director of the newly founded Institute of Neurogenetics in 2013.
Dr. Klein has published over 400 scientific papers. She is an Associate Editor of 'Annals of Neurology' and of 'Movement Disorders', served as chair of the Congress Scientific Program Committee of the 2016/2017 Annual Congresses of the International Parkinson and Movement Disorder Society, and is President-Elect of the German Neurological Society.

Symposium VI
Social cares for Parkinson's Disease

Chair:
Tadashi Ichikawa, MD, PhD
Saitama Rehabilitation Center
Miho Murata, MD, PhD
National Center Hospital of Neurology & Psychiatry

1. Neurorehabilitation for Parkinson's Disease and related movement disorders

Speaker:
Toshiyuki Fujiwara, MD, PhD
Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine.

Abstract:
Parkinson's disease is a neurodegenerative disorder characterized by progressive bradykinesia, rigidity, tremor, and gait disturbances.
In most patients, gait disturbance start in early stages of the disease. As the disease progresses, gait becomes slower and the typical Parkinson gait. Freezing and postural instability develop later and are less dopamine responsive. In this lecture, I will discuss about the effect of neurorehabilitation on gait disturbance and postural instability.

Curriculum Vitae:
Toshiyuki Fujiwara, MD, PhD
Professor and Chairman
Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine.

1993-1996	Resident, Department of Rehabilitation Medicine, Keio University School of Medicine, Tokyo, Japan
1996-1997	Department of Rehabilitation Medicine, National Murayama Hospital, Tokyo, Japan
1997-1999	Department of Rehabilitation Medicine, Keio University Tsukigase Rehabilitation Center, Shizuoka, Japan
2000-2002	Department of Rehabilitation Medicine, Saitama General Rehabilitation Center, Saitama, Japan
2002-2003	Research Fellow Sobell Department of Motor Neuroscience and Movement Disorders, Institute of Neurology (Prof. John Rothwell), UK
2003-2004	Department of Rehabilitation Medicine, Keio University School of Medicine
2005-2014	Assistant Professor, Department of Rehabilitation Medicine, Keio University School of Medicine
2014-2016	Associate Professor, Department of Rehabilitation Medicine, Tokai University School of Medicine, Isehara, Japan
2017-Present	Professor and Chairman, Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine, Tokyo, Japan

CERTIFICATION :
Board Certification of Japanese Society of Rehabilitation Medicine
Board Certification of Clinical Neurophysiology (EMG & Nerve conduction study)

Symposium VI
Social cares for Parkinson's Disease

2. Not-so-big data analysis: What Korean Health Insurance Data tells us.

Speaker:
Woong-Woo Lee, MD
Department of Neurology, Nowon Eulji Medical Center, Eulji University, Seoul, South Korea

Abstract:
We are living in the digital era. Most of the information can be digitized, and the converted information can simply be stored in the huge storage. We can easily access and analyze these big data. Korea has been in the era of national health insurance since 1989. In 2000, all medical insurance services were integrated into one system. Especially since 2007, 99% of the whole claim data were registered through the computer-based program. Therefore, the Korean Health Insurance Data (KHID) can show us something about almost the whole population, not about the part of them.
In this session, I want to introduce the various analysis data for the Korean patients with Parkinson's disease (PD) based on KHID. I analyzed the epidemiologic data of the Korean PD patients and discussed the differences from the previous studies. And I also analyzed how the PD patients in the early stage choose hospitals. To know the patterns of selecting hospitals would be helpful in understanding the results of single-center studies as well as in setting up the health care policies. Lastly, I studied the prognosis of the Korean PD patients according to whether the neurologists treat them or not.
The current medical big-data have several limitations including the problem of diagnostic accuracy, the absence of laboratory and imaging data, and the difficulty in assessing the outcomes of medical interventions. At the same time, however, those data can help us guess the overall outline and get the insight of a picture of PD. Further efforts are necessary to improve the accuracy of medical big-data and to apply the analyzed results to the healthcare system.

Curriculum Vitae:

Present Position :
2015/03 – present Assistant professor, Department of Neurology, Nowon Eulji Medical Center, Eulji University, Seoul, Korea

Educational Background :
1999/03 - 2005/02 College of Medicine, Seoul National University, Seoul, Korea
2008/03 - 2013/02 The Graduate School of Medicine, Seoul National University, Seoul, Korea (Master in Neuroscience)
2013/09 - present The Graduate School of Medicine, Seoul National University, Seoul, Korea (Ph.D. course in Neuroscience)

Post-graduate Professional Training :
2006/03 - 2010/02 Residency, Seoul National University Hospital, Seoul, Korea
2013/05 - 2015/02 Fellowship, Department of Neurology, Seoul National University Hospital, Seoul, Korea

Achievements and Awards :
2010/01 Scientific paper award, Seoul National University Hospital
2010/11 Best Paper Award, 29th Annual Meeting of the Korean Neurological Association
2014/04 Fellow Award, The Korean Movement Disorders Society
2017/06 Travel grant award, 21th International Congress of Parkinson's disease and Movement disorders

Abstracts

3rd Day
25 Feb 2018 (Sunday)

Japanese Symposium 1　（日本ベーリンガーインゲルハイム株式会社）

レボドパ併用療法におけるドパミンアゴニストの役割

Chair:
長谷川 一子　Kazuko Hasegawa, MD, PhD
独立行政法人国立病院機構相模原病院 神経内科

Speaker:
前田 哲也　Tetsuya Maeda, MD, PhD
岩手医科大学医学部内科学講座 神経内科・老年科分野

Abstract:
ドパミンアゴニストはその運動症状改善作用とジスキネジア抑止効果から、永く早期パーキンソン病の第一選択薬の地位にあった。レボドパに比して血中半減期が長いため、持続的ドパミン受容体刺激の概念に合致し、さらに徐放製剤や貼付剤の開発によりパーキンソン病治療には欠かせない薬剤となった。一方、近年、ドパミンアゴニストには負の側面もまた明らかとなり、症例の背景を考慮して使用する必要がある。まず麦角系アゴニストは心臓弁膜症や胸腹膜線維症などが問題となるため、特に高齢者では第一選択薬としては使用されなくなった。そのため非麦角系アゴニストが普及したが、突発的睡眠や衝動制御障害に代表される特殊な精神症状などを生じうることが明らかとなった。レボドパはその運動症状改善作用でドパミンアゴニストに勝り、運動合併症の問題はあるものの忍容性は極めて高いことから標準的治療薬とされる。パーキンソン病の長い臨床経過には欠かすことができないことは自明であるが、レボドパとその関連薬剤のみでは治療を乗り切ることはできない。ドパミンアゴニストとレボドパの併用療法に関して実臨床に則して考えてみたい。

略歴:
1993年、弘前大学医学部卒業、弘前大学医学部第三内科入局
1997年、弘前大学医学部附属脳神経疾患研究施設臨床神経部門、松永宗雄教授の指導のもと弘前大学大学院医学研究科にて博士(医学)修得(パーキンソン病モデルラット線条体のシナプス前D2受容体によるドーパミン放出調節機構―マイクロダイアリーシス法による検討―)
2001年、滋賀医科大学解剖学第一講座、新井良八教授のもとでドパミンニューロンおよびセロトニンニューロンの形態学的基礎研究
2002年、弘前大学医学部附属病院第三内科助手
2003年から秋田県立脳血管研究センター神経内科、研究員、2009年神経内科診療部部長、2014年難治性脳疾患研究部部長に就任
2016年より現職の岩手医科大学医学部内科学講座神経内科・老年科分野、特任准教授に就任。

Japanese Symposium 2　（エフピー株式会社）

運動障害疾患における情報通信技術(ICT)の応用

Chair:
永山　寛　Hiroshi Nagayama, MD, PhD
日本医科大学 神経内科

Speaker:
大山 彦光　Genko Oyama, MD, PhD
順天堂大学医学部 脳神経内科

Abstract:
情報通信技術(Information communication technology; ICT)の進歩は目覚ましく、医療においても徐々に利用が加速されてきている。医療におけるICTの利用は大きく3つの軸があると考えられる。1つ目の軸として、「医療情報・電子カルテ/レセプトシステム」があげられる。電子カルテ/レセプトシステムによるデータベース化が進むと、ビッグデータとして活用、さらには人工知能(AI)を用いた解析に応用することができ、新しい知見に結び付くことが期待される。2つ目の軸としては、「遠隔医療(Telemedicine)」があげる。これは遠隔地にいる患者や、離れた場所にいる診療所と専門家が、テレビ会議システム、タブレット端末、スマートフォンなどを用いて、医療を行うという概念であり、診断、治療、教育、医療連携、治験などへの応用が期待されている。3つ目の軸としては、情報入力システムとしての「モニタリングデバイス」があげられる。検査機器データのデジタル化のみならず、モーションキャプチャーや、ウェアラブルデバイスなどによるモニタリングがある。これらの軸は相互に補完しあい発展しており、様々な新しい試みが行われている。本シンポジウムでは、運動障害疾患におけるICTの応用について概略を紹介する。

略歴:
2002年(平成14年)3月　埼玉医科大学医学部医学科卒業
2002年(平成14年)5月　順天堂大学 脳神経内科 レジデント/チーフレジデント
2006年(平成18年)4月　順天堂大学 大学院医学研究科 神経学講座 大学院生
2009年(平成20年)7月　フロリダ大学 Movement Disorder Center リサーチフェロー
2011年(平成23年)7月　順天堂大学 脳神経内科 助教
2014年(平成26年)4月～　順天堂大学 脳神経内科 准教授
2015年(平成27年)3月～現在に至る　フロリダ大学 神経内科 客員准教授

Japanese Symposium 3　（大塚製薬株式会社）

パーキンソン病における歩行障害

Role of dopamine agonists in combination therapy with levodopa

Chair:

服部 信孝　Nobutaka Hattori, MD, PhD
順天堂大学 神経学講座

Speaker:

大熊 泰之　Yasuyuki Okuma, MD, PhD
順天堂静岡病院 脳神経内科

Abstract:

パーキンソン病の歩行障害は患者のADLを著しく低下させる。歩行障害の結果生じる転倒は骨折など外傷の原因となり、寝たきりや施設入所のきっかけになることでQOLの低下をもたらす。歩行障害のなかでも治療に難渋するのはすくみ足である。すくみ足の機序には諸説あるが、大事なのは大脳基底核から（SMAを中心とした）前頭葉のmalfunctionによる内的ドライブの低下、automaticityの障害といわれている。我が国の中村（隆一）らが世界に先駆けて注目したリズム形成障害hasteningも重要である。近年hasteningを加速度計で捉えて定量化する試みが世界中で行なわれている。治療としては、すくみ足はオフ時に見られることが多いので、wearing off対策が大事である。ただしドパミン過剰状態でもすくみ足が悪化するので注意が必要である。非ドパミン系治療薬では確固たるエビデンスを有するものは報告されていない。今後の研究成果が期待される。非薬物的interventionも研究されており、その一端を紹介する。

略歴:

1982年　順天堂大学医学部卒業、神経学教室（脳神経内科）入局
1992年10月から1994年12月まで、Department of Clinical Neurosciences, University of Calgary, Canada 留学、臨床神経生理学の研究に従事
1995年１月　順天堂大学脳神経内科助手
2000年６月　順天堂大学伊豆長岡病院（現・静岡病院）脳神経内科講師
2001年８月　同助教授
2009年４月　順天堂大学静岡病院 脳神経内科教授
2017年４月　順天堂大学理事、保健看護学部長併任　現在に至る。

Japanese Symposium 4　（日本メジフィジックス株式会社）

Neuroradiological diagnosis for Parkinson's disease and the related disorders by nuclear medicine

Chair:

下畑 享良　Takayoshi Shimohata, MD, PhD
岐阜大学 神経内科

Speaker:

高橋 牧郎　Makio Takahashi, MD, PhD
大阪赤十字病院 神経内科

Abstract:

Dopamine transporter scintigraphy (DAT-SPECT) and I^{123}-meta-iodobenzylguanidine (MIBG) scintigraphy play a major role in the diagnosis of Parkinson 's disease (PD) and the assessment of the pathological condition. Furthermore, with the combination of cerebral blood flow scintigraphy, the accuracy of differentiation in PD from parkinson related disorders including DLB, PSP, and CBD accompanying cognitive dysfunction could be increased. Reduction of MIBG uptake is thought to indirectly reflect peripheral postganglionic fiber density of the cardiac sympathetic nerve and has also been standardized as a diagnostic biomarker of α-synucleinopathy. In particular, the specificity in PD and DLB is high, and the H / M ratio decreases according to Hoehn-Yahr severity. On the other hand, diagnostic sensitivity by DAT-SPECT is high, since it indirectly reflects dopamine nerve terminal density in the striatum, and it is excellent in distinguishing PD, DLB, PSP, CBD, etc. that cause Parkinsonism from other diseases. However, its interpretation must be considered with the problem of Scans Without Evidence of Dopamine Deficits (SWEDDs) and with the fact that the signal binding ratio (SBR) decreases with age in normal cases. In our study of 433 patients under DAT-SPECT assessed with left and right average values of SBR, the decline of SBR in healthy volunteers including non-parkinson's disease was -0.055 / year, whereas PD was affected by - 0.094 / year, MSA and PSP by - 0.18 / Year, which implies that the speed of dopaminergic neurodegeneration accelerates in pathological conditions. Therefore, the chronological assessment with SBR of DAT-SPECT may be useful to evaluate the effect of drugs to inhibit neurodegeneration of dopaminergic neurons. Furthermore, asymmetry index (AI) of SBR is also important in the diagnosis of PD (versus MSA) with AI of 32% or more (sensitivity 44%, specificity 64%) and in the diagnosis CBS (versus PSP) with AI> 230% (sensitivity 32%, specificity 80%) . In addition, the signal reduction of DAT - SPECT in its form is also important. The uptake is generally lower in the dorsolateral putamen in PD, while the decrease in the caudate nucleus is seen from the early stage in DLB. In cerebral blood flow scintigraphy, it is characterized that CIS (cingulate island sign) in which the blood flow in the posterior cingulate gyrus is kept in the island shape is seen as a feature of DLB distinct from AD, and CIS is included as a supportive biomarker for DLB diagnostic criteria in 2017. However, the CIS evaluation has not been recapitulated in our small study of DLB cases. In a recent report, CIS disappears in the advanced stage of DLB (Iizuka T et al., Scientific reports, 2017) , and its interpretation requires careful attention.

略歴:
1993年3月　京都大学医学部医学科 卒業
1994年4月　(財)天理よろず相談所病院神経内科 医員
1996年5月　(財)住友病院神経内科 医員
1999年4月　京都大学大学院医学研究科 臨床脳生理学講座 入学
1996年6月　米国ニューヨーク州Albert Einstein医科大学/Montefiore Medical Center神経病理部門　visiting research fellow_
2001年8月　東京大学大学院薬学研究科 臨床薬学教室 委託研究院生
2003年3月　京都大学大学院医学研究科 臨床脳生理学講座 修了、医学博士
2004年4月　米国ニューヨーク州 Mount Sinai医科大学 research fellow
2005年1月　米国フロリダ州 Mayo Clinic医科大学 senior research fellow
2007年9月　(財)田附興風会医学研究所北野病院神経内科 副部長
2010年4月　京都大学大学院医学研究科神経内科学講座 助教
2011年4月　大阪府済生会中津病院神経内科 部長
2013年4月　日本赤十字社 大阪赤十字病院神経内科 部長
2015年4月　京都大学医学部臨床教授、関西医科大学臨床教授
資格等
京都大学医学博士
日本神経学会専門医・指導医・代議員・近畿地方会評議員　日本内科学会認定医・総合内科専門医・指導医
日本老年学会専門医・指導医
日本認知症学会専門医・指導医
日本脳卒中学会専門医
日本頭痛学会指導医
日本神経学会 認知症ガイドライン作成委員

Japanese Symposium 5　（グラクソ・スミスクライン株式会社）

エビデンスに基づいたパーキンソン病治療

Chair:
宇川 義一　Yoshikazu Ugawa, MD, PhD
福島県立医科大学 神経内科

Speaker:
武田　篤　Atsushi Takeda, MD, PhD
独立行政法人国立病院機構 仙台西多賀病院

Abstract:
今年出版が予定されている新ガイドラインはこれまでの治療に限定したものから、検査や診断基準などを含む「診療ガイドライン」となった。また治療に関する記載は、豊富な文献データがある早期治療と進行期治療に関する部分については、Minds2014に沿ってGRADEシステムによる厳密な文献検証を行った上で記載された。その他の部分については、これまで通りの文献検索とレビューを行った上で記載された。早期治療については、ドパミン補充療法が不十分なままだとその後の運動機能障害が不可逆的に固定化してしまう可能性が示唆されていることから、前ガイドラインに引き続き、早期からレボドパを含めたドパミン補充療法を十分に行うことの重要性がさらに強調されている。進行期治療については、ウェアリングオフやジスキネジアと言った運動合併症への対応について、前回のガイドライン作成後に承認された薬剤を含むドパミン系・非ドパミン系薬剤の使用方法を示すとともに、通常の薬物療法で十分な効果が得られない場合には、適応を検討の上で、脳深部刺激や経小腸レボドパ・カルビドバゲル持続注入療法などのDevice-aided therapy（DAT）の導入を検討すべきであることが記載された。多様な非運動症状への対処法については前ガイドラインに引き続いて重点が置かれ、さらに医療経済の観点からパーキンソン病治療を論じる項や終末期治療を論じる項も新たに付け加えられた。治療ガイドライン作成の目標は治療の標準化である。しかしながら標準的な治療は必ずしも個々の症例に於いてベストチョイスではないことに常に注意する必要がある。新ガイドラインでも幾つかの治療アルゴリズムが提案されているが、これはあくまで個々の治療法の位置付けを示す概念図の様なものである。その実践にあたっては症例毎の多様な情報を、総合的に考慮した上でなされる主治医の判断が最優先されることを前ガイドラインに引き続き強調したい。

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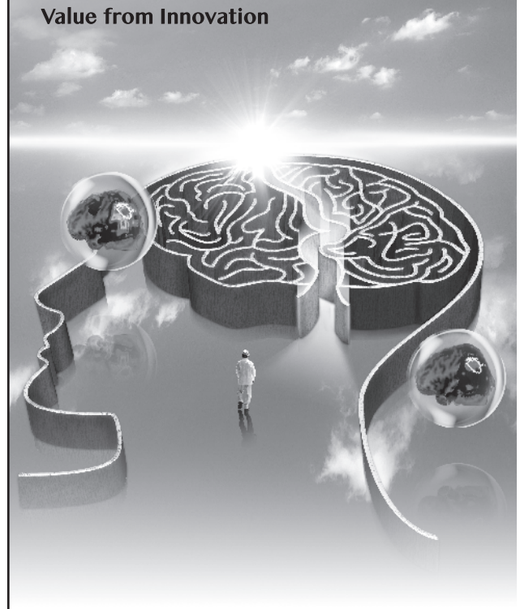

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