

中區失智症季會

時間：104 年 09 月 19 日 PM14:00-17:00

地點：永豐棧酒店 本館 3F 交誼廳

| Time | Topic | Speaker | Moderator |
|-------------|--|------------------|----------------|
| 14:10-14:30 | Reception | | |
| 14:30-14:40 | Opening | | 孫明輝醫師 光田神經科 |
| 14:50-15:20 | Is poor dental health linked with Dementia? | 柯麗櫻醫師 光田神經科 | 孫明輝醫師 光田神經科 |
| 15:20-15:50 | A neuropsychological approach on differential diagnosis of the varied Dementia | 陳威嘉心理師 光田神經科 | 孫明輝醫師 光田神經科 |
| Break | | | |
| 16:0-16:40 | The impact of FDG-PET in degenerative Dementia diagnosis | 徐榮隆醫師 林口長庚神經科 | 孫明輝醫師 光田神經科 |
| 16:40-17:00 | Closing remark | | 孫明輝醫師 光田神經科 |

主辦單位：光田綜合醫院神經科

協辦單位：台灣神經學學會,台灣諾華股份有限公司

教育學分：台灣神經學學會,台灣臨床失智症學會, 老人精神醫學會,

台灣精神醫學會、台灣心理學會

Introduction

The Impact of FDG-PET in Degenerative Dementia Diagnosis

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The introduction of positron emission tomography (PET) and magnetic resonance imaging (MRI) in diagnostic clinical imaging is a major step in the evolution of evermore sophisticated imaging systems combining two state-of-art imaging technique in a dementia diagnosis. PET and MRI opened up many new avenues in clinical and research environments, mainly by providing multi-modality images obtained during the examination. In primary neurodegenerative dementia, both PET and MRI provides detail anatomical and molecular images which help clinician to disclose the spatial correlated, time-dependent pathological process in the brain. Recently, several tracers have been developed to explore the maps of neuronal metabolism, neurotransmitter activity and pathological protein deposition in the brain. The most common molecular image used in neurodegenerative disease is the fluorodeoxyglucose PET (FDG-PET), which assess the resting state cerebral metabolism. This signal intensity is a proxy for neuronal activity and a direct index of synaptic function and density. Various events can contribute to synaptic dysfunction and consequent neurodegeneration, such as altered intracellular signalling cascades and mitochondria bioenergetics, impaired neurotransmitter release, and long-distance disconnection effects that are captured by FDG-PET. Currently, decreased uptake in temporo-parietal region is a neuronal injury biomarker for diagnosis of Alzheimer's disease dementia (AD). In dementia with lewy body (DLB), both the cingulate island sign (CIS) and decreased uptake in occipital region are typical presentation. The frontal-temporal lobar degeneration (FTLD) which contains both behavior variant of fronto-temporal dementia (bv-FTD) and primary progressive aphasia(PPA). Decrease frontal and anterior temporal metabolism is characteristic for bv-FTD and the left lateral temporal hypometabolism is typical for semantic dementia. Finally, various new PET tracers had been developed to explore the different pathological biomarker in neurodegenerative disease such as amyloid marker (e.g Pittsburgh compound-B (PiB), florbetapir(AV-45) and florbetaben), tau marker (e.g FDDNP, THK523, THK5105 and THK5117) and monoamine marker (AV-133). These agents, combine with high resolution anatomical image could improve our knowledge related to the pathophysiological process of the different degenerative dementia.

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台灣神經學會會員

台灣失智學會會員

Topic: Is poor dental health linked with dementia?

Abstract:

The animal model has shown that the dental health is associated with the cognitive functions. Two relationships between poor dental health and dementia were reported : the chemical domain and the physical domain which focus on the mastication and the inflammation respectively.

According to fMRI, the chewing movement results in bilateral enhancements of the BOLD signals in the sensorimotor cortex, cerebellum, thalamus, supplementary motor area, and insula, and a

unilateral enhancement of signals in the right prefrontal area, some of which are age-dependent. Does the results of animal and human experimental studies suggest a causal relationship between the mastication and cognitive functions?

Gum disease bacteria (*Porphyromonas gingivalis*) was found in the brain which is another issue of this linkage: inflammation.

The sequelae or complication of poor dental health- nutritional problem- also has impacts on the mentality.

Discuss about the dental health is very practical for the prevention and care of dementia population.

CURRICULUM VITAE

1. Personal information

| | | | | | |
|-----------------|---|--------|---|--|-----------------------------------|
| Name in Chinese | 徐榮隆 | | Name in English | Hsu, Jung-Lung (Last Name)(First Name)(Middle Name) | |
| Nationality | Taiwan | Sex | <input checked="" type="checkbox"/> male <input type="checkbox"/> female | Birth Date | 12/ 13/1967 Day / Month / Year |
| Address | Section of Dementia and Cognitive Impairment, Department of Neurology, Chang Gung Dementia Center, Chang Gung Memorial Hospital, Linkou, Taipei, Taiwan. 199, TUNG-HWA NORTH ROAD, TAIPEI 10591, TAIWAN | | | | |
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2. Education

| School | Country | Department/Major | Degree | Dates |
|----------------------------|-------------|---|--------|---------------------|
| Taipei Medical University | Taiwan | Department of Medicine | M.D. | 1987/July-1994/June |
| Taipei Medical University | Taiwan | Graduate Institute of Medical Informatics | M.S. | 2003/July-2006/June |
| National Taiwan University | Taiwan | Institute of BioMedical Engineering | Ph.D. | 2007/July-2014/Jan |
| Utrecht University | Netherlands | Image science institute | Ph.D. | 2008-2013 /Nov |

3. Current position and relevant experience.

| Affiliation | Units/Departments | Post | Dates |
|------------------------------------|---|--------------------------|---------------------|
| Chang Gung Memorial Hospital | Department of Neurology | Attending | 2014/March |
| Shin Kong WHS Memorial Hospital | Department of Neurology | Attending | 1996/July-2014/Feb |
| University of California San Diego | Swartz Center of Computational Neuroscience | Clinical research fellow | 2004/July-2005/June |
| Taipei Medical University | Institute of Medical Informatics | Assistant Professor | 2009/July-now |

4. Fields of specialty (limit to fields related to research).

Clinical Neurology, Neuroimage, Dementia

5. Membership

台灣神經學會會員
台灣失智症學會理事兼教育學組召集人
台灣失智症協會會員
台灣動作障礙學會會員
台灣腦中風學會會員

6. Journal paper

1. Keller JJ, **Hsu JL**, Lin SM, Chou CC, Wang LH, Wang J, Bai CH*, Chiou HY. Increased risk of stroke among patients with ankylosing spondylitis: a population-based matched-cohort study. *Rheumatol Int.* 2014;34:255-263. (IF = 2.214, *Rheumatology* 16/29)
2. Lau CI, Wang HC*, **Hsu JL**, Liu ME. Does the dopamine hypothesis explain schizophrenia? *Rev Neurosci.* 2013 Jul 11:1-12. doi: 10.1515/revneuro-2013-0011. (IF = 3.26, *Neurosciences* 104/251)
3. Chung KH, Huang SH, Wu JY, Chen PH, **Hsu JL**, Tsai SY*. The Link between High-Sensitivity C-Reactive Protein and Orbitofrontal Cortex in Euthymic Bipolar Disorder. *Neuropsychobiology.* 2013;68(3):168-73. (IF = 2.371, *Psychology* 31/75)
4. Wang HC, **Hsu JL***, Leemans A. Diffusion Tensor Imaging of Vascular Parkinsonism: Structural Changes in Cerebral White Matter and the Association With Clinical Severity. *Arch Neurol.* 2012 Jul 23:1-9. (IF = 7.685, *Clinical Neurology* 9/193)
5. Huang SH, Chung KH, **Hsu JL**, Wu JY, Huang YL, Tsai SY*. The risk factors for elderly patients with bipolar disorder having cerebral infarction. *J Geriatr Psychiatry Neurol.* 2012 Mar;25(1):15-9. (IF = 3.525, *Clinical Neurology* 39/191)
6. **Hsu JL**, Chen YL, Leu JG, Jaw FS, Lee CH, Tsai YF, Hsu CY, Bai CH*, Leemans A. Microstructural white matter abnormalities in type 2 diabetes mellitus: a diffusion tensor imaging study. *Neuroimage.* 2012 Jan 16;59(2):1098-105. (IF = 6.252, *RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING* 3/120)
7. Wu YY, Cheng IH, Lee CC, Chiu MJ, Lee MJ, Chen TF, **Hsu JL***. Clinical Phenotype of G206D Mutation in the Presenilin 1 Gene in Pathologically Confirmed Familial Alzheimer's Disease. *J Alzheimers Dis.* 2011 Jan;25(1):145-50. (IF = 4.174, *Neurosciences* 64/251)
8. Huang SH, Tsai SY*, **Hsu JL**, Huang YL. Volumetric reduction in various cortical regions of elderly patients with early-onset and late-onset mania. *Int Psychogeriatr.* 2011 Feb;23(1):149-54. (IF = 2.188, *Psychology* 32/75)
9. **Jung-Lung Hsu**, Ming H. Hsieh, Yi-Li Tseng, Ming-Jang Chiu, Chih-Min Liu, Fu-Shan Jaw*, Hai-Gwo Hwu. TIME-FREQUENCY ANALYSIS OF MISMATCH NEGATIVITY IN SCHIZOPHRENIA PATIENTS IN TAIWAN. *Biomedical Engineering: Applications, Basis and Communications*, Vol. 23, No. 4 (2011) 287_293. (IF = 0.233, *ENGINEERING, BIOMEDICAL* 75/79)
10. **Hsu JL**, Van Hecke W, Bai CH, Lee CH, Tsai YF, Chiu HC, Jaw FS, Hsu CY, Leu JG, Chen WH*, Leemans A. Microstructural white matter changes in normal aging: a diffusion tensor imaging study with higher-order polynomial regression models. *Neuroimage.* 2010 Jan 1;49(1):32-43. (IF = 6.252, *RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING* 3/120)
11. **Jung-Lung Hsu**, Alexander Leemans, Chyi-Huey Bai, Cheng-Hui Lee, Yuh-Feng Tsai, Hou-Chang Chiu, Wei-Hung Chen*. Gender differences and age-related white matter changes of the human brain: a diffusion tensor imaging study. *NeuroImage* 2008;39:566-577. (IF = 6.252, *RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING* 3/120)
12. **Jung Lung Hsu**, Tayy-Ping, Jung, Chien-Yeh Hsu, Wei-Chih Hsu, Yen-Kong Chen, Jen-Ren Duann, Han-Cheng Wang*, Scott Makeig. Regional CBF changes in Parkinson's disease: A correlation with motor dysfunction. *European Journal of Nuclear Medicine and Molecular*

Imaging. 2007; Sep; 34(9):1458-1466 (IF = 5.114, RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING 8/120)

13. Fang SC, **Hsu JL**, Chen WH*. EEG coherence for a patient with Marchiafava-Bignami disease. Clin EEG Neurosci. 2007;38(4):207-12. (IF = 1.818, Neuroimaging 7/14)
14. Light GA*, **Jung Lung Hsu**, Hsieh MH, Meyer-Gomes K, Sprock J, Swerdlow NR, Braff DL. Gamma Band Oscillations Reveal Neural Network Cortical Coherence Dysfunction in Schizophrenia Patients. Biol Psychiatry 2006;60:1234-1240. (IF = 9.247, Psychiatry 4/135)
15. **Jung Lung Hsu**, Chien Yeh Hsu, Han Cheng Wang. Developing an automatic classifier for Parkinson's Disease Diagnosis base on statistical analysis of SPECT Data. Journal of Taiwan Association for Medical Informatics. 2006;15:1-4.
16. **Jung Lung Hsu**, Wei-Chih Hsu, Han-Cheng Wang*. Hyperglycemia-induced unilateral basal ganglion lesions with and without hemichorea—A PET study. Journal of Neurology. 2004;251:1486-1490. (IF = 3.578, Clinical Neurology 36/191)
17. Wang, Han-Cheng, **Hsu, Jung Lung***, Shen, Yeh-You. Acute Bilateral Basal Ganglia Lesions in Patients With Diabetic Uremia: An FDG-PET Study. Clinical Nuclear Medicine. 2004; 29(8):475-478. (IF = 2.955, RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING 26/120)
18. **Jung Lung Hsu**, Wei-Hung Chen*, Hou-Chang Chiu. Cortical Sensory Loss in a Patient with Posterior Cortical Atrophy: A case report. Neurocase 2004,10:48-51. (IF = 1.05, Psychiatry 99/135)
19. **Jung Lung Hsu**, Hou Chang Chiu. Fronto-temporal dementia. Formosan J Med. 2001;5:101-4.
20. **Jung Lung Hsu**, Hou Chang Chiu. Neuropsychological tests in Dementia. Formosan J Med. 2000;4:720-24

. B Conference paper

1. **Jung Lung Hsu**, Wei Hung Chen, Hou Chang Chiu. Acute sensory predominant polyneuropathy of Sjogren syndrome-report of a case. Bulletin of the Neurological Society 1994;20
2. **Jung Lung Hsu**, Li-Ming Lian, Hou-Chang Chiu. A Case of Kennedy disease with CAG triplet expansion in androgen-receptor gene. Bulletin of the Neurological Society 1996;6:84
3. **Jung Lung Hsu**, Jiunn Rong Chen, Hou Chang, Chiu, Bai Chyi-Huey. The normal data of extracranial carotid color duplex sonography in normal Chinese people. Bulletin of the Neurological Society 1997;23:57
4. **Jung Lung Hsu**, Hou Chang Chiu. Posterior cortical atrophy syndrome. Bulletin of the Neurological Society 2001
5. **Jung Lung Hsu**. Memory impairment in Alzheimer disease and Parkinson's disease. Symposium on behavioral neuroscience 2001;Oct. Tai-chung
6. **Jung Lung Hsu**, Hou Chang Chiu. Posterior cortical atrophy syndrome. Taiwan neurosurgical society. 2001;Dec. Taipei.

2015 年 9 月中區失智症季會

Topic

A neuropsychological approach on differential diagnosis of the varied dementias

失智症是一種神經心理症候群(syndrome)，可將其簡單視為人類心智能力與生活功能的崩解，而心智功能的崩壞更精確的定義為：兩個以上認知功能領域(domain)在神經心理測驗中表現出缺損的狀況。根據認知心理學，人類有著許多不同的認知功能領域，包括：記憶力、注意力、執行功能、語言功能、視空間能力及抽象思考能力等，因此這意味著失智症在認知功能領域的缺損上會有不同樣式的呈現，而這在不同神經疾病類型所產生的失智症也提供了鑑別診斷的特徵，也就是說，不同的失智症將有不同的神經心理功能的缺損特徵，而這將協助提供神經科醫師去鑑別診斷不同的失智症類型。

CV

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