Symposium

Thu. Sep 25, 2025 2:45 PM - 4:15 PM JST | Thu. Sep 25, 2025 5:45 AM - 7:15 AM UTC Session Room 2 (Main Hall B)

[Symposium 8] Recent advancements in schizophrenia research; Asian perspectives

Moderator: Tao Li (Zhejiang University), Toshiya Murai (Kyoto University)

[SY-8]

Recent advancements in schizophrenia research; Asian perspectives

Tsuyoshi Akiyama[1], Yi-Chun Liu[2], Tomiki Sumiyoshi[3], Tao Li[4], Toshiyia Murai[5] (1.Rokubancho Mental Clinic(Japan), 2.Changhua Christian Children's Hospital(Taiwan), 3.National Center of Neurology and Psychiatry(Japan), 4.Zhejiang University(China), 5.Kyoto University(Japan))

[SY-8-01]

Schizophrenia and Type 1 Diabetes Mellitus: Insight into the Possible Associations and Shared Common Immunopathology

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[SY-8-02]

Cognitive impairment in schizophrenia; How can we facilitate its awareness and management in clinical practice?

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Keywords：Schizophrenia、Asia、Psychiatry

Schizophrenia remains a most enigmatic and challenging mental illness. However, there have been gradual advancements in research and practices. In this symposium, there will be progress reports from Taiwan, China and Japan. Vincent Chin-Hung Chen presents insight into the possible associations and shared common pathology between schizophrenia and type 1 Diabetes Mellitus. He concludes potential shared immunopathology, such as Th17 dysfunction, may explain the observed associations. Longitudinal, population-based studies are essential to deepen the understanding of these conditions and inform improved prevention and treatment strategies. Tomiki Sumiyoshi reports on cognitive impairment associated with schizophrenia (CIAS). CIAS is present in most patients and may determine functional outcomes. However, assessments of cognitive function using appropriate instruments are not always conducted in routine clinical practice. He will address the current state of recognition of CIAS among patients and physicians and discuss how the prospective establishment of cognition-enhancing interventions will facilitate efforts to support the personal recovery of patients with schizophrenia. Tao Li’s presentation will focus on the exploration of the biological mechanisms underlying schizophrenia and related disorders. She will adopt a cross-disorder perspective to examine this topic, which is essential for understanding the common and unique biological factors that contribute to these conditions. This approach will facilitate a comprehensive understanding of the shared and distinct biological aspects across different disorders. Finally, Toshiya Murai's talk will focus on psychosis, which is the core symptom of schizophrenia. Although psychosis is inherently a subjective symptom, he will propose a way to conceptualize it in an objective way. He will also propose a novel computational model of psychosis that we can test in future empirical investigations including neuroimaging studies.

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[SY-8-01] Schizophrenia and Type 1 Diabetes Mellitus: Insight into the Possible Associations and Shared Common Immunopathology

*Yi-Chun Liu[1,2], Vincent Chin-Hung Chen[3] (1.Changhua Christian Children's Hospital(Taiwan), 2.Changhua Christian Hospital(Taiwan), 3.Chang Gung University(Taiwan))
Keywords：Schizophrenia、Type 1 diabetes mellitus、IL-17/Th17-mediated immunity

Schizophrenia and type 1 diabetes mellitus (T1D) are chronic, disabling conditions that may share overlapping immunopathological mechanisms. This symposium explores their potential association through a scoping review of observational studies, a population-based cohort study using Taiwan's National Health Insurance Research Database (2004–2018), and a review of immunological research, particularly IL-17/Th17 involvement. While IL-17 is variably elevated in schizophrenia—especially in drug-naïve or acute-phase patients and those with severe symptoms—it is consistently implicated in autoimmune β-cell destruction in T1D. Antipsychotic effects on IL-17 remain inconsistent, and its role in clinical improvement is unclear. Maternal immune changes during pregnancy may influence fetal immune programming and offspring T1D risk. However, no studies in our review examined this link. The cohort study of over 2.5 million mother–child pairs found no significant association between maternal psychiatric disorders and offspring T1D. Subgroup analysis suggested a trend for maternal bipolar disorder (aHR: 1.81; 95% CI: 0.83–3.82), though schizophrenia cases were too few for reliable estimates. These findings highlight the need for longitudinal, mechanistic studies to clarify shared immune pathways and contribute to treatment or prevention strategies.

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Moderator: Tao Li (Zhejiang University), Toshiya Murai (Kyoto University)

[SY-8-02] Cognitive impairment in schizophrenia; How can we facilitate its awareness and management in clinical practice?

*Tomiki Sumiyoshi[1], Ayumu Wada[1], Chika Sumiyoshi[2], Naoki Yoshimura[3], Risa Yamada[1], Kazuyuki Nakagome[4] (1.Department of Preventive Intervention for Psychiatric Disorders, National Center of Neurology and Psychiatry (Japan), 2.Faculty of Human Development and Culture, Fukushima University(Japan), 3.Department of Psychiatric Rehabilitation, National Center Hospital of Neurology and Psychiatry(Japan), 4.President Office, National Center of Neurology and Psychiatry(Japan))

Keywords：Schizophrenia、Cognitive function、Cognition、Assessment、Intervention

Cognitive impairment in schizophrenia (CIS) is present in most patients with schizophrenia and predicts poor functional outcomes. However, little information has been available on whether psychiatrists' awareness of CIS affects their style of disease management, or whether patients' awareness of CIS has an impact on related burdens. Therefore, we conducted a large-scale online survey to investigate the awareness and management of CIS among psychiatrists and patients in Japan (Sumiyoshi et al. *Schizophr Res Cogn* 2025). In that study, approximately two-thirds of patients experienced disturbances of cognitive domains, including attention/processing speed and working memory. Accordingly, psychiatrists regarded that addressing CIS can most effectively facilitate reintegration of patients into society. However, only a small proportion of these patients were assessed with appropriate instruments or received interventions for CIS.

As the assessment of CIS in routine clinical practice is likely to be hindered by time constraints, we tried to develop cognitive measures that effectively reflect functionality of patients but only require a shorter time than existing assessment tools. We focused on language-related symptoms stemming from semantic memory disorganization in patients with schizophrenia. Specifically, we utilized advanced automated scoring techniques to quantify individual-specific semantic memory parameters from the category fluency test, a conventional test of verbal fluency that only requires one minute to administer. The results suggest higher semantic memory parameters were associated with better social functioning scores (Wada et al. *Schizophrenia* 2025).

A struggle to develop cognitive enhances is represented by a meta-analysis of the effect of augmentation therapy with serotonin$_{1A}$ receptor partial agonists, e.g. buspirone, on CIS (Yamada et al. *IJNP* 2023). Based on data from randomized, controlled trials in Asian and/or Pacific Rim countries, the add-on therapy was found to significantly improve attention/processing speed. Overall, these efforts will facilitate the management of CIS and promote social inclusion of patients with schizophrenia.