

Symposium | OCD : [Symposium 100] Obsessive and Compulsive Disorder: Recent progress through the collaboration of neurobiological research and the development of new clinical treatment modalities.

 Sun. Sep 28, 2025 2:50 PM - 4:20 PM JST | Sun. Sep 28, 2025 5:50 AM - 7:20 AM UTC  Session Room 1 (Main Hall A)

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Moderator: Hisato Matsunaga (Hyogo Medical University), M Sai Spoorthy (All India Institute of Medical Sciences)

[SY-100]

Obsessive and Compulsive Disorder: Recent progress through the collaboration of neurobiological research and the development of new clinical treatment modalities.
(Provisional Symposium title: Please edit.)

Joselito C. Pascual², Tomohiro Nakano³, Jhin Chang⁴, Hisato Matsunaga⁵, Tsuyoshi Akiyama¹ (1. Rokubanchō Mental Clinic (Japan), 2. University of the Philippines (Philippines), 3. Kyushu University (Japan), 4. Yonsei Forest Mental Health Clinic (Korea), 5. Hyogo Medical University (Japan))

[SY-100-01]

Obsessive Compulsive Disorder and Addiction

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[SY-100-02]

Treatment strategy for OCD/Hoarding Disorder based on recent neuroimaging findings

*TOMOHIRO NAKAO¹ (1. Department of Neuropsychiatry, Graduate School of Medical Sciences, Kyushu University (Japan))

[SY-100-03]

Targeting the Anterior Cingulate cortex in Obsessive-Compulsive Disorder: From Capsulotomy to Deep TMS

*Jhingoo Chang¹, Su Young Lee¹, Chan-Hyung Kim² (1. Department of Psychiatry, Yonsei Forest Mental Health Clinic, Seoul, Korea (Korea), 2. Department of Psychiatry, Yonsei University College of Medicine (Korea))

[SY-100-04]

A prospective investigation of impacts of comorbid attention deficit hyperactivity disorder (ADHD) on clinical features and long-term treatment response in adult patients with obsessive-compulsive disorder (OCD)

*Hisato Matsunaga¹, Keiichiro Mukai¹ (1. Dept' of Neuropsychiatry, Hyogo Medical University (Japan))

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Keywords : OCD、 neurobiological research、 new clinical treatment modalities

Obsessive-compulsive disorder (OCD) is a prevalent and debilitating mental health condition. This symposium reports recent progress through the collaboration of neurobiological research and the development of new clinical treatment modalities. Joselito C. Pascual points out that like many anxiety and depressive disorders, addiction often co-occurs with OCD. He provides an outline of the possible links and relationships between addiction and OCD, including the symptoms and effects of OCD in individuals with addictive disorders. He aims to present different explanatory models to facilitate early diagnosis, prevention, and treatment. Based on recent neurobiological studies, Tomohiro Nakano reports on the close relationship between clinical symptoms and brain function. While some inconsistencies remain, findings suggest that extending large-scale brain systems beyond the orbitofrontal-striatal circuit may be involved in the pathophysiology of OCD. He proposes a treatment strategy for OCD based on these neuroimaging findings. Jhin Goo Chang reviews the latest clinical findings on neuromodulation treatments for OCD. He discusses the association between abnormalities in brain circuits and various neuromodulation treatment methods that have been explored. He aims to provide insights into the indications, target areas, and methodologies of neuromodulation therapy in OCD. Finally, Hisato Matsunaga presents the impact of comorbid ADHD on clinical features and treatment response of OCD. He aims to discuss the treatment strategy for such OCD patients often assessed as treatment-refractory.

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Keywords : OCD、Addiction、Neurobiological link treatment implications

OBSESSIVE-COMPULSIVE DISORDER AND ADDICTION

Joselito C. Pascual, MD, MSc

Obsessive-compulsive (OCD) and addiction, while traditionally categorized as distinct psychiatric conditions, share overlapping neurobiological mechanisms, such as dysfunction in the cortico-striato-thalamo-cortical (CSTC) circuits and abnormalities in dopamine, serotonin and glutamate signaling. This convergence has prompted a growing body of research exploring the co morbidity and shared vulnerability between these disorders. Individuals with OCD may engage in compulsive behaviors similar to addictive patterns, while those with substance use disorders often exhibit obsessive thoughts and ritualistic use. The co-occurrence of OCD and addiction presents diagnostics and therapeutic challenges, often requiring integrated and individualized treatment strategies.

Recent advances in treatment have expanded beyond conventional pharmacotherapy, cognitive behavioral therapy (CBT), and exposure response prevention (ERP). Novel approaches such as deep brain stimulation (DBS), transcranial magnetic stimulation (TMS) are showing promise for treatment resistant cases as well as emerging evidence such as the use of glutamate receptors, Ketamine and psychedelic assisted therapies (e.g., psilocybin) for their potential to reduce both compulsive behaviors and addictive cravings.

Understanding the intersection between OCD and addiction can lead to more effective and comprehensive treatment models, ultimately improving patient outcomes. Future research should continue to investigate the shared neural

pathways and develop integrated interventions that address both conditions simultaneously.

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[SY-100-02] Treatment strategy for OCD/Hoarding Disorder based on recent neuroimaging findings

*TOMOHIRO NAKAO¹ (1. Department of Neuropsychiatry, Graduate School of Medical Sciences, Kyushu University (Japan))

Keywords : OCD、 Hoarding Disorder、 neuroimaging、 treatment

Obsessive-compulsive disorder (OCD) was previously considered refractory to most types of therapeutic intervention. There is now, however, ample evidence that selective serotonin reuptake inhibitors (SSRIs) and cognitive behavior therapy (CBT) are highly effective for treatment of OCD. Furthermore, recent neurobiological studies of OCD have found close relationship between clinical symptom and brain function. From neurobiological findings, orbitofronto-striatal circuit has been postulated as a neural circuit that mediates symptomatic expression of OCD. Findings from recent studies, however, have been inconsistent, suggesting that extending large-scale brain systems not limited within orbitofronto-striatal circuit may involve in pathophysiology of OCD. One of the reasons for this inconsistency could be attributed to heterogeneity in OCD. Several studies have conducted correlative analyses to clarify distinct neural correlates associated with specific symptoms dimensions. Other researchers have attempted to reveal the relationship among differential brain activities of OCD and comorbid disorders such as major depression and tic disorders. Hoarding disorder (HD) is a new condition defined in the DSM-5, published in 2013. Like OCD, it is categorised within the obsessive-compulsive related disorders, but it possesses distinct characteristics in its clinical symptoms and brain imaging findings. This presentation gives an outline of recent neuroimaging studies of OCD/HD. We, furthermore, will show a treatment strategy for OCD/HD, based on these neuroimaging findings. neurobiological model that has been developed recently. Advanced findings in these fields will modernize the biological model of OCD/HD and give us helpful hints to work out a novel treatment strategy.

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Keywords : OCD、TMS、ACC、H7

Obsessive-Compulsive Disorder is now viewed as a dysfunction of the cortico-striato-thalamo-cortical (CSTC) loop. Neuroimaging studies have consistently shown that the anterior cingulate cortex, a key node in this loop, exhibits heightened activity in affected individuals. A variety of neuromodulatory approaches—including lesional, electrical, and magnetic techniques—have been developed to target dysfunctional activity within the CSTC circuit, particularly focusing on the anterior cingulate cortex (ACC). These interventions have demonstrated clinical benefits in reducing obsessive-compulsive symptoms by modulating hyperactive nodes and associated pathways in this neural network. In particular, the H7 coil used in Deep TMS is designed to target the medial prefrontal cortex and the ACC, enabling noninvasive modulation of this critical circuit. According to findings from randomized controlled trials (RCTs) and naturalistic studies, Deep TMS yields response rates of approximately 38–45% in patients with treatment-resistant obsessive-compulsive disorder. Moreover, over 85% of responders maintained their clinical gains at one-year follow-up, demonstrating both efficacy and long-term durability. In January 2025, our clinic introduced the H7 coil for Deep TMS treatment in Korea, initiating a protocol specifically targeting the anterior cingulate cortex. Since then, we have treated 10 patients with treatment-resistant obsessive-compulsive disorder and observed pre- and post-treatment changes in both clinical symptoms and neurophysiological markers.

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Keywords : obsessive-compulsive disorder、 attention-deficit/hyperactivity disorder、 comorbidity

A close association between obsessive-compulsive disorder (OCD) and attention-deficit/hyperactivity disorder (ADHD) in children and adolescents has been investigated. However, few studies examined the relationship between lifetime comorbidity of ADHD and OCD in adults. Therefore, we sought to investigate the clinical and psychopathological features related to comorbid ADHD in Japanese adult patients with OCD. We assessed lifetime comorbidity of ADHD in 93 adult Japanese patients with OCD. Additionally, we used the Japanese version of Conners' Adult ADHD Rating Scales to assess the characteristics and severity of ADHD in each participant. We compared OCD patients with ADHD (ADHD+ group) and those without ADHD or its trait (ADHD- group) in terms of background profiles and clinical features, such as OCD symptomatology and psychometric test results. Additionally, the 6-month treatment outcome was compared prospectively between groups. Of the 93 OCD participants, the prevalence of lifetime comorbidity of ADHD was estimated as 16.1%. Compared with the ADHD- group, participants in the ADHD+ group had an earlier age of onset of OCD, higher frequencies of hoarding symptoms, higher levels of depressive and anxiety symptoms and lower QOL, more elevated impulsivity, and higher rates of substance or behavioral addiction and major depression. Finally, the mean improvement rate on the Yale-Brown Obsessive Compulsive Scale after 6 months of standardized OCD treatment in the ADHD+ group (16.1%) was significantly lower than that in the ADHD- group (44.6%). The lifetime comorbidity of ADHD is likely to exert a significant effect on clinical features and treatment outcome in adult patients with OCD. It is important to consider that underlying ADHD pathology may function as a facilitator for increased severity of global clinical features and treatment refractory conditions in OCD patients.