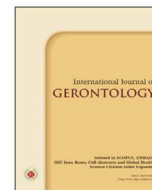




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Editorial Comment

Neurobiological Mechanisms of Senile Depression: Implicating for the New Therapeutic Opportunity

Senile depression indicates a heterogeneous group of depressive disorders happening in the elderly. The symptom profile of senile depression is less clear-cut than that in the mental health setting or among the younger adults. Therefore, the correspondence of diagnosed depression in the elderly and major depressive disorder based on the DSM system seems not high.¹ This phenomenon makes confusing the treatment goals with antidepressants etc.. At the real-world practice, we need more evidence on the neurobiological mechanisms to provide treatment targets. The major mechanisms of senile depression involve aging-related processes or disease-related pathogenesis. For example, vascular depression may have executive dysfunction and frontostriatal abnormalities in the neuroimaging study. The dopaminergic system is associated with depressive disorder due to Parkinson's disease.²

In this issue, we would like to appreciate the article from Dr. Lin's team on "The role of N-methyl-D-aspartate receptor on late-life depression".³ The N-methyl-D-aspartate (NMDA) receptor and glutamate play an important role on depressive disorders at the elderly. Several neurological and psychiatric disorders with high comorbidity of depression, such as Alzheimer's disease and Parkinson diseases, are found to correlate with abnormal functioning on the glutamatergic system. Medications, like ketamine, associated with NMDA receptor are considered to have great potential in treating depressive disorders. Another study in this issue from Honda S et al. "The relationship between mindfulness and depression in community-dwelling frail elderly" provides a feasible therapy for the senile depression.⁴ The mindfulness-based stress reduction targets behavior and brain network implicated in the senile depression, such

as the glutamate system⁵ and can be easy to learn.

In the issue, we select a few studies relevant to depression among the elderly or their care givers. We hope to inspire the investigations for new mechanisms of senile depression and also to provide new opportunities for efficacious therapies in the future.

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