Poster

Fri. Sep 26, 2025 10:00 AM - 11:00 AM JST | Fri. Sep 26, 2025 1:00 AM - 2:00 AM UTC Poster Session (Foyer 1)

Poster 9

[P-9-02] Interplay between serum IL-1β and BDNF in modulating antidepressant response: Insights from a prospective clinical study

*Jae-Min KIM[1] (1. Chonnam National University Hospital (Korea))

Keywords：depression、interleukin-1β、brain-derived neurotrophic factor、remission

Objective: To explore how interactions between serum interleukin-1 beta (sIL-1β) and brain-derived neurotrophic factor (sBDNF) influence outcomes of antidepressant treatment over a 12-week period in patients diagnosed with depressive disorders.
Methods: In a cohort of 1,086 patients undergoing naturalistic antidepressant treatment, we measured baseline sIL-1β and sBDNF levels. Treatment response was quantified by achieving a score of 7 or lower on the Hamilton Depression Rating Scale at 12 weeks. We applied logistic regression models, adjusted for relevant demographic and clinical variables, to analyze the influence of these biomarkers on the likelihood of remission.
Results: Our analysis revealed that high sIL-1β levels significantly predicted non-remission in patients with lower sBDNF levels. However, in the subset of patients with elevated sBDNF levels, sIL-1β had no significant effect on remission rates. The predictive power of the interaction between sIL-1β and sBDNF was robust, maintaining significance after controlling for potential confounders.
Conclusion: This investigation underscores the critical interaction between neuroinflammatory and neuroplastic biomarkers in determining the efficacy of antidepressant treatments. Integrating such biomarker data can potentially personalize and optimize treatment strategies for depression. Ongoing studies should aim to uncover the specific biological pathways involved in these interactions to better tailor antidepressant therapy to individual patient profiles.