

Inflammation and poor sleep quality among patients with treatment resistant depression

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Objective: Alterations in sleep are one the most common symptoms of major depressive disorder (MDD). Dysregulation in immune system and related inflammatory markers have been demonstrated to be implicated in the pathophysiology of depression; the bi-directional link between sleep and inflammation has been proposed. We aimed to investigated the association between inflammation and subjective sleep quality among patients with treatment resistant depression (TRD).

Methods: 34 MDD patients and 34 healthy subjects were recruited and MDD patients were separated to TRD group (n = 20) and non-TRD (n = 14) group. Depressive symptoms were assessed using the Hamilton depression rating scale (HAMD-17). Levels of serum proinflammatory markers, including soluble interleukin-6 receptor, soluble interleukin-2 receptor, monocyte chemoattractant protein-1, soluble tumor necrosis factor- α receptor type 1 (sTNF- α R1), C-reactive protein, were measured. Subjective sleep quality was assessed using the Pittsburgh sleep quality index (PSQI).

Results: General linear models for comparison of proinflammatory markers with the adjustment of confounding factors (age, sex, body mass index, HAMD-17 total scores, duration of illness) revealed that TRD group had higher serum concentration of sTNF- α R1 compared to healthy control or non-TRD group. Linear regression analyses showed that the serum level of sTNF- α R1 was positively associated with scores on sleep latency (p=0.001) after controlling for covariates and disease group.

Conclusion: Increased serum sTNF- α R1 level was associated with subjective difficulty falling asleep. Longitudinal study design is needed to explore the prospective relationship between sleep problems and inflammation among patient with depression and healthy individuals.

中文題目：難治型憂鬱症患者的睡眠品質不佳與發炎

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