

S06-04

RELATIONSHIP BETWEEN FAST-ACTING ANTIDEPRESSANT PROPERTIES OF TOTAL SLEEP DEPRIVATION AND SERUM BDNF LEVELS

O. Caliyurt

Psychiatry Department, Trakya University, Edirne, Turkey

Sleep deprivation therapy is a treatment option for major depressive disorder. Total sleep deprivation for one night improves depressive symptoms in 40-60% of treatments. Recent reports have suggested that brain-derived neurotrophic factor (BDNF) levels are reduced in individuals suffering major depressive disorder and these levels normalize following antidepressant treatment.

In a recent study we have shown that the effects of total sleep deprivation therapy on BDNF levels in major depression. Results were compared between depressive patients that were treated with sertraline and healthy volunteers who experienced single total sleep deprivation. The baseline BDNF levels were significantly lower in both patient groups than the controls. Single sleep deprivation therapy was shown to decrease HAM-D scores and increase BDNF levels significantly in depressive patients. Effects of single sleep deprivation therapy on HAM-D scores was correlated with changes in BDNF levels. A series of three sleep deprivation therapies in a week accelerated the treatment response and increased the BDNF levels rapidly compared to the patients treated with sertraline alone. Better treatment response in the TSD group was also correlated with the statistically significant increase of BDNF levels in the 7th day compared to the sertraline group.

In conclusion, our results support the BDNF reduction in major depression. Rapid

antidepressant effects of sleep deprivation therapy appear to relate to the rapid BDNF increase in major depressive patients. These results give an opportunity to explore the relationship between fast antidepressant response and BDNF changes in major depression.