S68-03

NEW INSIGHT INTO ROLE OF BDNF IN ANXIETY

E. Maron

Psychiatry, University of Tartu, Tartu, Estonia

Recent investigations have implicated brain-derived neurotrophic factor (BDNF) in pathogenesis and treatment of psychiatric disorders. Studies in patients with major depression have demonstrated significant decline of serum BDNF concentration that correlated to the severity of depressive symptoms and restored to normal values after chronic treatment with antidepressants (Gervasoni *et al*., 2005). The involvement of BDNF in anxiety disorders has been less clear. Preliminary studies in patients with panic disorder did not find any changes in serum BDNF levels (Kobayashi *et al*., 2005) or associations with its gene polymorphisms (Lam *et al*., 2005). These findings are at odds with data from animal studies consistently confirming the involvement of BDNF in the regulation of anxiety-like behaviours. For example, decreased BDNF levels in the amygdala had provoked anxiety-like behaviors in rats (Pandey *et al*., 2006), whereas BDNF mRNA levels in this region significantly increased in response to higher stress (Aguilar-Valles *et al*., 2005). Moreover, Govindarajan *et al*. (2006) have shown that transgenic over-expression of BDNF may facilitate anxiety-like behavior, magnitude of which was positively related to BDNF levels in the dorsal hippocampus in another study using the elevated plus maze (Yee *et al*., 2007). Considering these conflicting data between animal and human studies we assumed that using experimental challenge in healthy subjects could shed more light on the role of BDNF in anxio- and panicogenesis. Our recent findings suggested a general involvement of BDNF in the regulation of anxiety rather than a specific role of BDNF in disposition to panic attacks.

https://doi.org/10.1016/S0924-9338(09)70556-5 Published online by Cambridge University Press