

SEXUAL DYSFUNCTION

Glutamatergic system mediates sexual side effects of SSRIs

Targeting the glutamatergic system could prove a winning strategy for the treatment of sexual dysfunction in patients taking selective serotonin reuptake inhibitors (SSRIs) for depression. Such is the hypothesis proposed by Roy Perlis and colleagues at Massachusetts General Hospital, Boston, USA, who set out to identify genetic predictors of the sexual side effects of SSRI medication. “While there was little evidence of association with sexual dysfunction for serotonergic genes, there was intriguing support for the involvement of a number of genes related to glutamatergic neurotransmission,” states Perlis.

The researchers analyzed data from 1,473 white patients who had been treated with the SSRI citalopram (up to 60 mg per day) for nonpsychotic major depressive disorder for up to 14 weeks. Of these, 36% experienced difficulty with orgasm, 54% reported decreased libido,

and of the 574 men, 37% suffered erectile dysfunction. The investigators analyzed the association of these symptoms with a selection of single nucleotide polymorphisms from a number of genes implicated in antidepressant mechanisms. They found that several components of the glutamatergic system met the threshold for further examination; *GRIN3A* was associated with erectile dysfunction, *GRIA3* and *GRIK2* with loss of libido, and *GRIA1* with difficulty achieving orgasm.

Perlis and his team are currently repeating their analyses in additional patient cohorts, hoping to replicate their findings.

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Original article Perlis, R. H. *et al.* Genetic and clinical predictors of sexual dysfunction in citalopram-treated depressed patients. *Neuropsychopharmacology* 34, 1819–1828 (2009).