Obsessive-compulsive disorder, serotonin and oxytocin
Treatment response and side effects

av

Mats B. Humble

Akademisk avhandling

Avhandling för medicine doktorsexamen i medicinsk vetenskap
med inriktning mot medicin,
som kommer att försvaras offentligt
måndag den 26 september 2016 kl. 13.00,
Hörsal HSC3, Campus USÖ, X-huset

Opponent: Professor emerita Lil Träskman Bendz
Institutionen för kliniska vetenskaper, Lunds Universitet
Lund

Örebro universitet
Institutionen för Medicinska vetenskaper

701 82 ÖREBRO
Abstract


Obsessive-compulsive disorder (OCD), with a prevalence of 1-2 %, frequently leads a chronic course. Persons with OCD are often reluctant to seek help and, if they do, their OCD is often missed. This is unfortunate, since active treatment may substantially improve social function and quality of life. Serotonin reuptake inhibitors (SRIs) have well-documented efficacy in OCD, but delayed response may be problematic. Methods to predict response have been lacking. Because SRIs are effective, pathophysiological research on OCD has focussed on serotonin. However, no clear aberrations of serotonin have been found, thus other mechanisms ought to be involved.

Our aims were to facilitate clinical detection and assessment of OCD, to search for biochemical correlates of response and side-effects in SRI treatment of OCD and to identify any possible involvement of oxytocin in the pathophysiology of OCD.

In study I, we tested in 402 psychiatric out-patients the psychometric properties of a concise rating scale, “Brief Obsessive Compulsive Scale” (BOCS). BOCS was shown to be easy to use and have excellent discriminant validity in relation to other common psychiatric diagnoses.

Studies II-V were based on 36 OCD patients from a randomised controlled trial of paroxetine, clomipramine or placebo. In study II, contrary to expectation, we found that the change (decrease) of serotonin in whole blood was most pronounced in non-responders to SRI. This is likely to reflect inflammatory influence on platelet turnover rather than serotonergic processes within the central nervous system.

In studies IV-V, we found relations between changes of oxytocin in plasma and the anti-obsessive response, and between oxytocin and the SRI related delay of orgasm, respectively. In both cases, the relation to central oxytocinergic mechanisms is unclear. In males, delayed orgasm predicted anti-obsessive response.

Keywords: Adverse effects, Obsessive-compulsive disorder, Orgasm, Oxytocin, Randomised controlled trial, Rating scale, Response prediction, Serotonin, Serotonin uptake inhibitors, Sexual function.

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