#3095 Title: Rapid Anti-Obsessive Treatments of Obsessive-Compulsive Disorder: ReviewingEffects of Ketamine in OCD

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OBJECTIVES/AIMS

Obsessive-Compulsive Disorder (OCD) is a common neuropsychiatric condition characterised by persistent endogenous repetitive and intrusive anxiogenic thoughts, feelings, or images often followed by anxiolytic mental or physical actions.Serotonin reuptake inhibitors (SRIs) are the mainstay of OCD treatment, used both asfirst line (SSRIs) and second line (Clomipramine) approaches. Despite their effectiveness in treatment of OCD, their anti-obsessive effects only start at eight to 12 weeks into treatment (Pittenger & Bloch, 2014), leaving an effectiveness time gap between diagnosis and treatment. Various treatment strategies have been tried but there is no consensus on the most effective approach. A single pharmacological agent with rapid anti-obsessive action would be an ideal candidate to manage this treatment gap. One such agent may be ketamine with its novel mechanism of action.

Ketamine is assumed to increase neuroplasticity by synthesising neurotrophins in the cortex and has demonstrated to have rapid-onset anti-depressant effects (Björkholm & Monteggia, 2016). We reviewed the state of evidence for similar rapidly emerging anti-obsessive effects and report our findings here.

METHODS

Embase, MEDLINE(R), and PsycINFO were searched to identify studies investigating rapid anti-obsessive effects of ketamine in humans, available in English. ClinicalTrials.org was further searched for grey literature. Other reviews were excluded.

RESULTS

181 studies were identified after deduplication of which nine studies met inclusion criteria. Eight studies revealed rapid anti-obsessive effects, five of which display statistical significance. Combined, OCD scores decline by approximately 49.7% during the first hour following intravenous ketamine administration. Furthermore, a significant reduction of depressive symptoms and suicidality were reported in studies further investigating comorbiddepression. Contrary to depression scores, anti-obsessive effects were not sustained. OCD scores increased within three hours post-administration and reversed back to baseline within seven days. One trial reported an extended length and margin of effect when combined with cognitive behavioural therapy.

All studies were of small scale as the literature search primarily yielded pilot trialsand case reports, suggesting statistical imprecision and reflecting the topic’s novelty.

CONCLUSIONS

Our review points out the presence of preliminary research evidence to support the presence of anti-obsessive effects of ketamine and a potential for its usefulness as a rapidlyacting intervention for OCD, thereby plugging an important gap in clinical

management of OCD. However, as such effects are unsustained, their potential to complement existing pharmacological strategies may be limited.

Greater awareness and randomised controlled trials are required beforerecommending the use of ketamine in OCD treatment.

References

Björkholm, C., Monteggia, L. M. (2016). BDNF – a key transducer of antidepressant effects. Neuropharmacology, 102. doi:10.1016/j.neuropharm.2015.10.034

Pittenger, C., & Bloch, M. H. (2014). Pharmacological treatment of obsessive-compulsive disorder. The Psychiatric clinics of North America, 37(3), 375–391. doi:10.1016/j.psc.2014.05.006