Sertraline efficacy on intradialytic hypotension: Results of a randomized double-blinded, placebo-controlled, cross-over, clinical trial

Running Head: Sertraline effect on IDH

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Abstract:
Intradialytic hypotension (IDH) has been reported in 15-50% of hemodialysis patients and increases patients morbidity and mortality. Some small non-controlled studies evaluated the effect of sertraline on IDH with conflicting results. This randomized, double-blind, cross-over, placebo-controlled clinical trial aimed to assess the effect of sertraline on IDH. Patients on maintenance hemodialysis who suffered IDH in at least 50% of their dialysis sessions were enrolled. Each patient passed four 4-week periods of the study including pre-sertraline, sertraline, pre-placebo, and placebo periods. Pre-sertraline/pre-placebo periods were defined as the 4 weeks immediately before sertraline/placebo initiation. The sertraline/placebo periods were considered as week 4 to week 8 of sertraline/placebo treatment. All patients started sertraline/placebo at daily dose of 50mg that increased to 100mg after one week. Twelve patients completed all phases of the study. Sertraline therapy increased nadir intra-dialysis diastolic blood pressure (DBP) and systolic blood pressure (SBP) by 3.8 and 4.9 mmHg at the end of week 8 of the intervention. Sertraline therapy also significantly increased post-dialysis SBP and DBP by 8.7 and 6 mmHg. Sertraline therapy significantly reduced the risk of hypotension episodes by 43%. The improvement of intra-dialysis and post-dialysis SBP and DBP were only significant in non-diabetic patients. Sertraline therapy significantly increases intra-dialysis and post-dialysis SBP and DBP. These effects of sertraline resulted in significant decrease in hypotension episodes during dialysis treatment and decline in number of interventions required to manage IDH. Beneficial effects of sertraline in managing IDH were only seen in non-diabetic hemodialysis patients.

Keyword: Diabetes mellitus, Hemodialysis, Intradialytic hypotension, Sertraline, Selective serotonine reuptake inhibitors