

Lower sertraline plasma concentration in patients co-medicated with clozapine – Implications for pharmacological augmentation strategies in schizophrenia

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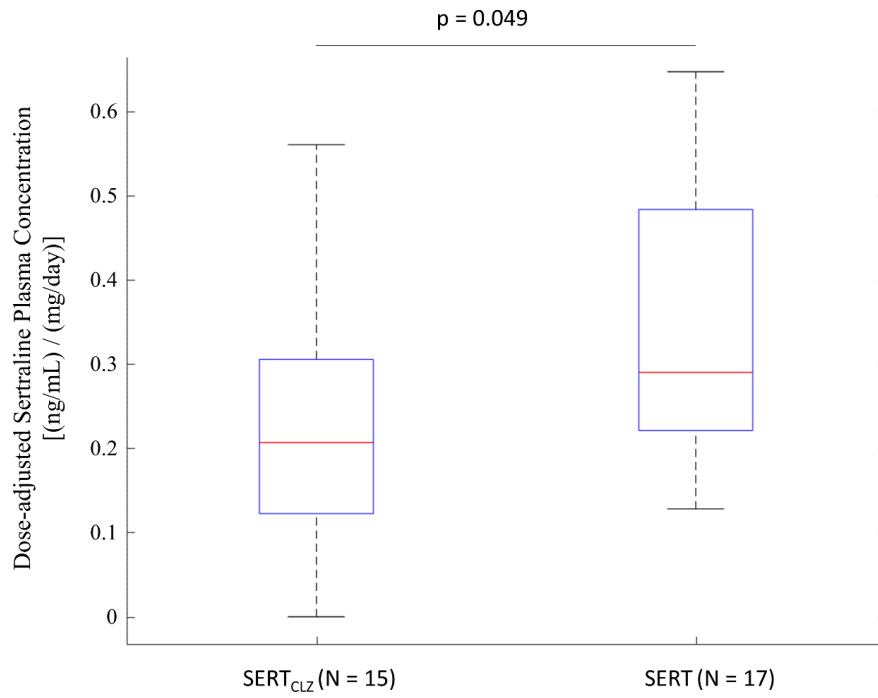
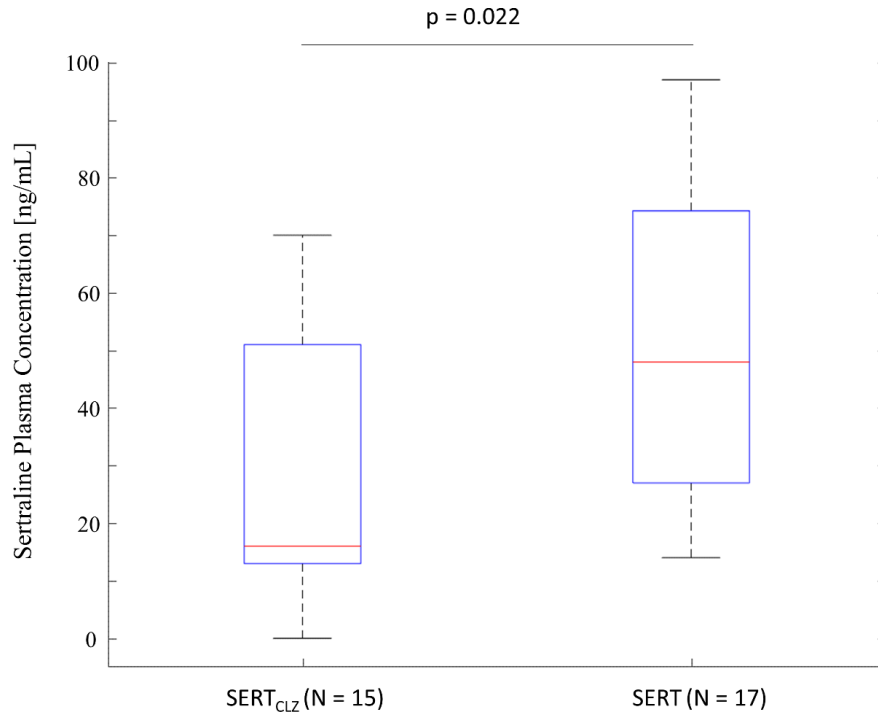
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Abstract

Aim: Augmentation of antipsychotic treatment with antidepressants represents a common and beneficial treatment strategy in patients suffering from schizophrenia. Combining clozapine and the selective serotonin reuptake inhibitor (SSRI) sertraline represents a clinically important strategy, but there is limited knowledge about mutual pharmacokinetic interactions. In the present study, we assessed the impact of clozapine on sertraline plasma concentrations. **Methods:** Based on a therapeutic drug monitoring (TDM) database, sertraline plasma concentrations were compared between two groups: patients receiving a combined treatment with sertraline and clozapine (SERTCLZ; N=15) and a matched control group receiving sertraline but no clozapine (SERT; N=17). Group differences with respect to raw and dose-adjusted plasma concentrations were assessed using non-parametric tests. **Results:** No significant differences were found between the groups regarding daily dosage of sertraline, age, weight, sex distribution, and caffeine or nicotine consumption (all p-values >0.05). Co-medication with clozapine was associated with 67% lower median sertraline plasma concentrations (16 vs. 48 ng/mL; p=0.022) and 28% lower median dose-adjusted plasma concentrations (C/D; 0.21 vs. 0.29 (ng/mL) / (mg/day); p=0.049) as compared to the control group. **Conclusion:** When applying a combined treatment with clozapine and sertraline, clinicians should consider therapeutic drug monitoring to confirm therapeutically effective plasma concentrations of sertraline.

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