Choi K et al (2013): Adjunctive pharmacotherapy for cognitive deficits in schizophrenia: meta-analytical investigation of efficacy. BJP September 2013 203:172-178

Background

A growing number of studies have investigated the efficacy of novel, adjunctive pharmacotherapies for treatment of cognitive deficits in schizophrenia with conflicting results.

Aims

To investigate the comparative efficacy of these agents on cognition and symptoms in schizophrenia, and to identify promising cognitive domains and candidate medications that can be incorporated in treatment trials combined with cognitive remediation to maximise treatment effects.

Method

A total of 26 double-blind, placebo-controlled studies investigating medications targeted at cholinergic, glutamatergic or serotonergic receptor classes and with participants with schizophrenia or schizoaffective disorder were identified.

Results

Medications targeted at the cholinergic receptor class produced marginal improvements in verbal learning and memory (d = 0.23, P = 0.06), and donepezil, a specific type of cholinergic agonist, produced a moderate effect (d = 0.58) on spatial learning and memory. Cholinergic and glutamatergic agents produced moderate effect-size improvements on negative symptoms (d = 0.54 and d = 0.62 respectively), and small effect-size improvements on general symptoms (d = 0.46 and d = 0.41 respectively). Serotonergic agents produced small effect-size improvements in positive symptoms (d = 0.33).

Conclusions

Cholinergic medications produced marginal improvement in verbal learning and memory and moderate improvements on spatial learning and memory, although there was no evidence to support the use of glutamatergic or serotonergic medications as a stand-alone treatment for improving cognitive function. Cholinergic and glutamatergic agents improved negative and general symptoms, whereas serotonergic medications improved positive symptoms.