Pharmacotherapy of emotional dysregulation in adults with ADHD: a systematic review and meta-analysis.

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Abstract

Emotional dysregulation (ED) is a dysfunction in modifying an emotional state in an adaptive and goal oriented way, with excitability, ease anger, and mood lability. It is present in up to 70% of adults with ADHD, regardless of other comorbidities, and substantially worsens the psychosocial outcomes of the disorder. Besides fronto-parietal circuits mediating top-down control, brain regions involved in bottom-up processes (e.g., amygdala, orbitofrontal cortex, and ventral striatum) are implicated in ED. We performed a systematic review/meta-analysis of double-blind randomized controlled trials of ADHD medications to assess their effects on ED in adults with ADHD. We searched an extensive set of databases, international trials registries, and contacted study authors/drug companies for unpublished data. We retained 21 trials. We found small-to-moderate effects (methylphenidate: SMD=0.34, 95%CI=0.23-0.45; atomoxetine: SMD=0.24, 95%CI=0.15-0.34; lisdexamfetamine: SMD=0.50, 95%CI=0.21-0.8). We suggest that, whilst ADHD medications are effective on ADHD core symptoms, they may be less effective on bottom-up mechanisms underlying ED. Further research on novel pharmacological and non-pharmacological strategies for ED in adults with ADHD is warranted.