

Movement disorders and use of risperidone and methylphenidate: a review of case reports and an analysis of the WHO database in pharmacovigilance

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Abstract

Background: For patients with attention deficit hyperactivity disorder and comorbid conduct-disorder, a combination therapy of the psychostimulant methylphenidate and the antipsychotic risperidone may be prescribed. Case reports describe the occurrence of movement disorders under this combination therapy, but clinical trials had limited power to detect these events.

Objectives: This study aimed (1) to summarise published case reports and (2) to analyse pharmacovigilance data consisting of adverse drug event reports to elucidate these reactions.

Methods: PubMed, Embase, and APA PsycInfo were used to retrieve case reports. For the pharmacovigilance data, aggregated information on individual case safety reports (ICSRs) within the database of suspected adverse drug events by the WHO were analysed. ICSRs were assessed for disproportionality in reporting.

Results: Thirteen published case reports (62% male) on movement disorders were identified, with ages between 5 and 15 years. Seven reports (54%) described incidents when risperidone was tapered down or switched to methylphenidate. From the WHO, we identified 25,556 ICSRs (16,118 for methylphenidate, 8,614 for risperidone, and 824 for both). Of these, 953 (5.9%), 1356 (15.7%), and 159 (19.3%) ICSRs reported movement disorders in association with methylphenidate, risperidone or both, respectively. The analyses on disproportionality showed an increased number of ICSR with movement disorders when the two drugs were coded in combination.

Conclusion: The potential of movement disorders as adverse effects might be amplified when methylphenidate and risperidone are used in combination. The results from the literature underline the necessity of caution and patient monitoring when risperidone dosing is modified during methylphenidate therapy.