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ADHD Newsletter 9
Psychosis and Stimulants

Stimulants, if abused or taken with illicit substances are known to be a risk factor for psychosis. Recent studies by Moran et al (2019) and Hollis et al (2019) have added considerably to our knowledge of the risks in young people.

Moran et al (2019) used data from commercial insurance claims databases to assess patient's 13-25 years of age who received a diagnosis of ADHD and started taking methylphenidate or amphetamine between January 1, 2004, and September 30, 2015. The outcome was a new diagnosis of psychosis for which an antipsychotic medication was prescribed during the first 60 days after the date of the onset of psychosis. Hazard ratios were calculated to compare relative risks between the two groups.

They studied nearly 222,000 patients. New-onset psychosis occurred in approximately 1 in 660 patients. Amphetamine use (0.21%) was associated with a greater risk of psychosis than methylphenidate (0.1%).

They pointed out the limitations of their study. There may have been under reported substance use disorders, stimulant misuse or abuse, or failure to comply with treatment because of diversion. The relevance of this latter is that diversion with amphetamines is known to be greater than with methylphenidate. Despite this one can be confident that the absolute rate of psychosis is low.

Dose-related episodes of psychosis are usually brief and dissipate within 1-2 days of medication discontinuation (Purkayastha et al 2019). Because the individual must then cope with the rapid re-emergence of hyperactive symptoms, the reintroduction of the same drug at lower dose or a drug from a different subset are possibilities. The National Institute of Health and Clinical Excellence in the UK recommend stimulant discontinuation and the use of a non-stimulant such as atomoxetine

Hollis et al (2019) sought to understand whether the risk of psychotic events increases after the initiation of methylphenidate treatment. They used the Swedish Prescribed Drug Register, the National Patient Register, and the Total Population Register to obtain the necessary data including medication use and psychotic events. They restricted their study to those aged 12-30 years at the start of treatment. Contrary to clinical concerns they found no evidence that initiation of methylphenidate treatment increased the risk of psychotic events in adolescents and young adults, including in those individuals with a history of psychosis. They pointed out that their results challenged the widely held view in clinical practice that methylphenidate should be avoided, or its use restricted, in individuals with a history of psychosis. Their results are consistent with others that suggest that methylphenidate initiation might be driven

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by factors related to the emergence of psychosis rather than methylphenidate triggering psychotic events.

Commenting on this study, Hechtman (2019) sounded a note of caution. She acknowledged that some reassurance was offered by these findings, although the doses of medication used were not clear. If low, that might be one reason for the findings. Irrespective of that she emphasised that patients with a history of psychotic symptoms and current ADHD require careful, slow titration of stimulant medication, preferably with methylphenidate than amphetamines and, if necessary, simultaneous treatment with antipsychotic medication. Even in those without a history of psychotic symptoms careful titration was advisable. She also thought that informing patients of this possible side effect or the dangers of rapidly increasing the dose could be useful.

Final Thought

These medications are, of course, subject to regulation in Western Australia. The presence of psychosis, and/or a diagnosis of drug-induced psychosis, would prevent an individual being registered for these drugs under the standard criteria. An individual application for the prospective patient would be required and there would be an insistence on the use of atomoxetine as an initial step. If this was not successful, then long-acting stimulants at low dose (most likely Vyvanse), might be agreed.

From a clinical and regulatory point of view control of the psychosis risk is paramount, requiring that the patient be regularly reviewed, the risks explained and (usually) an antipsychotic medication prescribed.

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