

The Medicine Cabinet: Ritalin

This column addresses the use of medications in children and adolescents with an intellectual disability. It will attempt to cover the type of information helpful for non-medical people working with these children.

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Ritalin

Generic Name: methylphenidate (METH il FEN i date)
Brand Names: Concerta, Ritalin, Ritalin LA

Ritalin belongs to the stimulant class of medication. The other medication in this class is dexamphetamine. The stimulants are the first-line medications for the treatment of Attention-Deficit/Hyperactivity Disorder (ADHD). Attention Deficit Disorder (ADD) is a subtype of ADHD, formally known as 'ADHD, inattentive type'. ADHD can be a very disabling illness because affected children find it much harder to be settled and focused, and this problem affects their ability to progress at school. It also affects other aspects of their lives as they grow up, such as following instructions at home, participating in sports, learning to drive, and focusing on their tasks when they get a job. In many cases, children with ADHD will 'grow out of it' as they progress through adolescence and early adulthood, but often by that stage, they are affected by 'second order changes' that are more enduring, such as self-esteem, scholastic abilities, and the quality of the relationships at home, school and the wider community.

ADHD is found in up to 7% of children in the general population, but in 15-30% of children with intellectual disability. One reason for why these two disorders coexist so commonly is that they both, along with the autistic spectrum disorders, are believed to be derived from problems in the brain's development.

Ritalin and related medications help to target the core symptoms of ADHD; namely inattention, hyperactivity and impulsivity. In other words, the medications help these children to be more focused and settled. They literally are performance enhancing in terms of learning capacities and emotional regulation. However long term effects are mediated by the second order changes mentioned above.

Unlike most other medication, the effect of Ritalin is immediate; i.e. on the same day of administration. These effects are especially noticeable in the classroom, and hence it is often helpful for teachers to note these parameters before and after the medication is started, and feed this back to the parents, carers and/or clinicians.

In saying this, many children's behaviour problems are more complex than simply attributable to ADHD. Thus, often a comprehensive management plan including behavioural interventions and is usually also required to manage behavioural problems.

The stimulants are generally safe medications; perhaps the safest psychotropic medications for children. Much more is known about the effects of stimulants in children compared to other psychotropics for this age group. The main side-effects include loss of appetite and poor sleep. Prescribing Ritalin earlier in the day is a common way to manage the potential sleep problems. If there are decreases in appetite, there tends to be a rebound increase in appetite when the medication wears off in the afternoon or evening. Other potential side effects include nervousness, irritability, drowsiness and dizziness. For those suffering from tic disorders, stimulant medication can make them worse, and just as likely to make them better. Sometimes, these side effects can be tolerated, but if they cannot, the medication would need to be ceased or changed. Sometimes, one child may not tolerate one stimulant but may tolerate another. When no stimulant medication can be tolerated, a non-stimulant medication for ADHD may be considered. These medications include Strattera (atomoxetine), Catapres (clonidine) and Endep (amitriptyline), and will be covered in this column in the future. Sometimes combinations of these medications may be needed.

Stimulants work in approximately 80% of children with ADHD. However, in children with intellectual disability the rates of success in lower and rates of side effects are higher. This is a truism of psychotropic usage in children and adolescents with intellectual disability. Unfortunately their need for medication is often greater, as other psychological approaches used in the mainstream population are often unsuitable or ineffective.

The effect of Ritalin is very short, generally lasting 3-4 hours. Hence, they are often given 2 or 3 times per day. Ritalin LA and Concerta have been formulated to be released slowly once inside the body and hence have a longer-lasting effect, requiring once-daily dosing. Typically the initial dose is determined using the shorter-acting form, and then there may be a switch to the longer-acting forms.

Stimulant medications can be misused by those who abuse substances. For this reason stimulants are regulated by the NSW Pharmaceutical Board. This is not a problem for the children that really need them for symptom management, and research has shown that responsible medical management of ADHD reduces the risk of a young person becoming a substance abuser. Potential for substance misuse is even less of a problem for children and adolescents with intellectual disability. However, there have been cases where people have taken these



medications from the children to whom they have been prescribed, and taken by others inappropriately. In those cases, the prescriber and the authorities need to be informed.

By and large, however, the stimulants are very beneficial medications that can help manage a potentially very impairing condition. The teachers' role in the prescription of Ritalin is important as they are in an ideal position to monitor the effects of these medications in the classroom.

References

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