Aaron Walker Post to week 5 discussion 1

Benefits of correctly diagnosing a child disorder is incredibly important.  In the instance of Ritalin for ADHD, the benefits include coping tools and mechanisms to assist in social environments, scholastic capabilities, and having the ability to self-regulate and control impulsive tendencies.  Unfortunately, Ritalin is mis-diagnosed at times due to the fact teachers and parents feel compelled to treat a behavior.  In a recent study called, “A child on Drugs” (Sultan, et al 2019), children whom were prescribed ADHD drugs recall the diagnosis shortly after teachers had complained to parents or social workers about their non-conforming behaviors.  Children most often misdiagnosed have been described as living in precarious situations, of which include peer bullying or victimization, lower socio-economic status, and abusive family environments. (Sultan, et al 2019).  Treating ADHD with psychoactive drugs such as Ritalin becomes dangerous when misdiagnosis occurs and psychological prescribed without a proper evaluation or other underlying conditions are evident.

Ritalin, otherwise known as Methylphenidate, work towards increasing both striatal and cortical dopamine levels.  The mechanics of Ritalin is to regulate the neurobiological aspects (dopamine and norepinephrine) and processes to allow those diagnosed with ADD or ADHD to be less forgetful, more organized, more easily concentrate and improve the decision-making processes.

Ritalin is most often taken orally through pill form approximately 81% of the time and via the nose 14% when administering the drug. (Moore, 2017) Ritalin prescribed in oral form can be formulated as short and intermediate-acting, along delayed formulations.  Peak concentration can occur after a few hours, therefore depending on the prescription, immediate-release dosages are required three times daily.  Empirical data for adults is limited, yet recommendations don’t exceed 1mg/kg for methylphenidate.   According to research by Brown University (Ritalin Dosage, 1994) addressing the appropriate dosage for a patient is dependent on which symptoms are being treated, behavior or learning.  Dosage recommendations can be vague; however, the average recommended dosage is 20 to 30 mg daily, and sometimes as little as 10-15 mg and rarely more than 40-60 mg are given, with 60 being the maximum dosage.  Physicians generally start with lower recommendations and gradually increase depending on parental and patient feedback.  The half-life average is approximately 3.5 hours and the ranges are relatively wide, ranging from 1.5 to 8 hours. According to the Journal of Medical Case Reports (Liebrenz, et al 2012), Ritalin is metabolized in the body by hepatic cytochrome P450 and converted to inactive ritualistic acid by carboxylesterase.  The liver is then responsible for the hydrolysis of d- and i-isomers of the drug within the first pass of metabolism.

The most common side effects experienced by Ritalin is nervousness and insomnia.  Additional side effects include a loss of appetite, weight loss, depression, mild irritability, and headaches. (Moore, 2017) Adverse effects of Ritalin include cardiovascular problems that include hypertension, increased heart rate, and irregular heartbeat.  Risks of not properly diagnosing and treating individuals with psychoactive drugs such as Ritalin run the risk of social learnings, scholastic short-falls, mismanagement of time, keeping a relationship, and increased likelihood of having children early in life due to being careless and more risk taking.

Ritalin remains controversial, mostly due to misinformation in both the public and mental/medical health field based on the appropriate efficacy, dosage, risk/benefit and usage. (Owens-Stively, 1994) Studies indicate brain abnormalities through blood-flow imagining within individuals with ADHD, and psychostimulants can alter the chemicals within the neurotransmitters and balance of dopamine and norepinephrine.  Ritalin effects these same brain regions.  Many argue a more strigent evaluation prior to administering dosage or Ritalin.  A review of a persons medical history, physical exam, hearing and neuropsychological testing should be considered in efforts not to misdiagnose.  Regular check-ups, and more conservative dosages after a trial basis are recommended.

References:

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