**Attention Deficit Hyperactivity Disorder (ADHD)**

Stimulants such as Dextroamphetamine sulfate (Dexedrine) have been used over the years for the treatment of ADHD in both children and adults. Dexedrine was introduced in the market in 1976 just after approval by the U.S. Food and Drug Administration (FDA, 2018). Dexedrine is mostly indicated for the treatment of attention deficit problems such as ADHD and even narcolepsy for both children and adults.

**Pharmacokinetics:** Dextroamphetamine is well absorbed from the GIT with an oral bioavailability of more than 75% (Minder et al., 2018). However, its bioavailability varies with the pH of the gut. It has a half-life of 9-11 hours depending on the urine pH.

**Pharmacodynamics:** Dextroamphetamine is a potent agonist at the trace amine-associated receptor 1 (TAAR1) which is a GPCR essential for the regulation of the brains monoaminergic system (Minder et al., 2018).

**Dose:** The typical dose for children of age 6 years or older is 5 mg once or twice daily based on the medical condition. The daily maximum recommended dose is 40 mg (FDA, 2018).

**Monitoring/safety:** The following parameters are observed: baseline cardiac eval. in both patients with and without the risk factors; BP and HR at baseline especially after dose increment; periodic height and weight of pediatric patients (Minder et al., 2018).

**Side effects:** headache, insomnia, stomach upset, weight loss, anorexia, dry mouth, dizziness and tremors (FDA, 2018).

**Cost:** The prices of Dexedrine vary, ranging from $34.52 per 60 5mg tablets to $92.90 (at Walmart) (Kemper et al., 2018).

**Clinical practice guideline:** U.S Food and Drug Administration approved and provided a guideline on the use of Dexedrine. FDA is a federal agency in the department of health and human services in the United States (FDA, 2018). The agency conducts a number of research and clinical trials on drugs before they are approved and released to the market.   
**Controversy:** There has been a lot of controversy in medical use, about whether the benefits of amphetamine and its derivatives, prescribed for ADHD and weight loss outweigh the harmful side effects of the drug. ADHD is a controversial mental disorder on its own (Brady, 2014). One of the main side effects of amphetamine is an addiction. According to most literature reviews, amphetamine is becoming the number one drug of abuse in the US by the young generation. Prescribing the drug will increase its circulation and even cause more harm to the youths (Kemper et al., 2018). Most psychologists have discouraged the use of amphetamine and other drugs in the management of ADHD and instead recommend psychotherapy. In as much as FDA approved the use of the drug, most health practitioners are advised to view their website for proper guidelines on the indications and side effects of using Dexedrine.

**Alternatives:** Psychotherapy or use of non-stimulant medication such as Atomoxetine, Clonidine, and Guanfacine (Li et al., 2018). Atomoxetine (Rx) can be used by children, teens, and adults. The adult dose is 40 mg PO once daily, initially and may be increased to less than or equal to 100mg incase optimal response is not achieved (In Procyshyn, 2017). Pediatric dosing; children more than 6 years old and with a weight less than 70 kg: 0.5 mg/kg PO once daily. Children of body weight more than 70 kg: 40mg PO once daily initial dose with a maximum dose of 100 mg PO once daily (Clavenna, & Bonati, 2016). Some of the side effects of Atomoxetine include upset stomach, dry mouth, weight loss, dizziness, insomnia, and a decrease in libido. Atomoxetine 40mg capsules cost between $ 88.40 to 239.86 per 30 capsules (Walmart $124.75 per 30 capsules). The drug is monitored by observing its side effects (Kemper et al., 2018).

**My own clinic:** I will prefer the use of psychotherapy. In case the condition is severe, I will use Dexedrine.

**References**

Kemper, A. R., Duke University Evidence-based Practice Center,, United States., & Effective Health Care Program (U.S.). (2018). *Attention deficit hyperactivity disorder: Diagnosis and treatment in children and adolescents*.

FDA-Approved Drugs to Treat ADHD. (March 01, 2018). *Journal of Psychosocial Nursing and Mental Health Services, 56,* 3, 13-14.

In Procyshyn, R. M. (2017). *Clinical handbook of psychotropic drugs*. Boston, MA: Hogrefe.

Brady, G. (May 01, 2014). Children and ADHD: seeking control within the constraints of diagnosis. *Children & Society, 28,* 3, 218-230.

Minder, F., Zuberer, A., Brandeis, D., & Drechsler, R. (August 01, 2018). A Review of the Clinical Utility of Systematic Behavioral Observations in Attention Deficit Hyperactivity Disorder (ADHD). *Child Psychiatry & Human Development, 49,* 4, 572-606.

Clavenna, A., & Bonati, M. (January 01, 2016). Safety and Tolerability of Medications for ADHD.

Li, A., Yeo, K., Welty, D., & Rong, H. (April 02, 2018). Development of Guanfacine Extended-Release Dosing Strategies in Children and Adolescents with ADHD Using a Physiologically Based Pharmacokinetic Model to Predict Drug-Drug Interactions with Moderate CYP3A4 Inhibitors or Inducers. *Pediatric Drugs, 20,* 2, 181-194.