Update on the Treatment of ADHD 2019

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The Rights of ADHD

- The **right** diagnosis of ADHD and co morbidities
- The **right** treatment and accommodations
- The **right** medication at the **right** dosage
- The **right** expectations set

ADHD is a group of neurobehavioral disorders resulting in developmentally inappropriate ability to self-regulate **attention**, **impulsivity**, and **hyperactivity**.

DSM 5 Criteria for Inattention

- Careless
- Difficulty sustaining attention
- Seems not listen
- Fails to finish things
- Avoids/dislikes tasks requiring sustained mental effort
- Difficulty organizing
- Loses things
- Easily distracted
- Forgetful in daily activities

6 or more often manifested

DSM 5 Criteria for Impulsivity/Hyperactivity

- Hyperactivity
  - Squirms and fidgets
  - Unable to stay seated
  - Runs/climbs excessively
  - Can’t play/work quietly
  - On the go/”driven by a motor”
  - Talks excessively
- Impulsivity
  - Blurts out answers
  - Difficulty waiting turn
  - Interrupts or intrudes on others

6 or more often manifested

Attention Deficit / Hyperactivity Disorder

- Interest Driven, Not Task Driven. Avoids boredom
- Immature Executive Function
- Easily Distracted
- Excitable / Impulsive
- Poor Frustration Tolerance

Executive Function

The ability to plan, organize, initiate, maintain and complete tasks, with the ability to monitor and shift priorities, as needed

Executive Skills

- **Initiation** – Getting started
- **Working Memory** – Holding and using information actively
- **Inhibition** – Not react to impulse, stop activity
- **Flexibility/ Shifting** – Move from one task to another
- **Planning** – Anticipation of future events and developing strategies
- **Organizing** – Establish and maintain order
- **Self-Monitoring** – Attention to behavior and output with ability to revise
- **Emotional/Behavioral Control** – Regulate emotional response

Comorbidity in Children

- ODD 50%
- Conduct Disorder 10%
- Language Based LD 30%
- Specific Learning Disorder 25%
- Anxiety/OCD 25%
- Depressive Disorders 35%
- Smoking 3 Xs
- SUD 3 Xs

Young Child with ADHD

- In 2011 the AAP recommended evaluating children 4 years and up if they presented with ADHD symptoms
- Cognitive-Behavioral Counseling for the parents

  recommended prior to starting medication:

  - positive communication
  - positive reinforcement
  - consistent structure and discipline
- Methylphenidate is recommended as the initial medication, despite lack of FDA indications, due to better safety and efficacy data.

Adolescent Issues with ADHD

- ADHD teens have 3-4 times the number of auto accidents, 4-6 times the speeding tickets, and 3 times the ER visits than control group
- Inattention and distraction as the cause
- Dr Daniel Cox (U Va) has shown protection if stimulant taken properly
- Parents of teens are often distracted by crisis with their own parents, leaving supervision of ADHD to the adolescent
- Unplanned pregnancy 4 times as likely
- Smoking and SUD

Clinical Course

- Hyperactivity and impulsivity diminish over time.
- Diminished executive skills persist.
- Accommodations and strategies develop.
- 80% of patients maintain some Sx into adulthood.
- 55-65% maintain clinically significant Sx.
- Heavy burden of losses (career, family, marriage, social)

Treatment of ADHD

ADHD medications are effective, but only temporarily ameliorate (not eliminate) symptoms, so treatment of ADHD is much more than just medication!

Treatment Plan

- Proper evaluation
- Demystification
- Behavioral modification
- Environmental modification
- Psychopharmacology

Evaluation for ADHD

- **Vanderbilt Parent Rating Scales & Vanderbilt Teacher Rating Scales** as Screeners (free online)
- Multiple sources for information
- Proper physical examination including vision, hearing and vital signs
- Expanded differential diagnosis
- Evaluate for the presence of co morbid conditions

Environment: Home

- Organized and not distracting
- Study Aides / Tutoring/ ADHD Coach
- Routine / Time Management
- Encouragement / Challenge
- Involved / Supportive Parents
- Efficient environment
- Consistent medication usage
- Sleep (www.sleepfoundation.org)

Environment: School

- Efficient and Organized
- Inclusive, Not Exclusive
- Preferential Seating
- Psycho-educational testing (if indicated)
- 504 / IEP / BIP (www.Wrightslaw.com)
- Silent Signal for anxious child
- No Loss of Recess
- Peer mentor/tutor
- Teacher/student match

Treatment: Medications

- Non-stimulants
  - Atomoxetine
  - Extended release alpha-2 agonists
- Stimulants
  - Methylphenidate-based medications
  - Amphetamine-based medications

Treatment Medications:

- **Stimulants:**
- Methylphenidate and Amphetamine:
- 1 to 2 mg/kg/d for MPD and 0.5 to 1mg/kg/d for MAS as the expected dose.
  - Immediate release:
    - 4 hour duration of effect
    - > Diversion potential
  - Intermediate release:
    - 8 to 9 hour duration of effect
  - Extended Release:
    - 10 to 12 hour duration of effect

Treatment Medications:

- **Stimulants:**
  - Side Effects: decreased appetite, weight loss, headache, stomachache (give after food), emotion/mood changes, rebound hyperactivity, sleep difficulties, emergence of tics
  - Rare Side Effects: psychotic episode, sudden cardiac death?
  - “Risks/benefits” discussed, including psychiatric and cardiac risks

Treatment: Medications

- General Principles:
  - Some patients need dose of immediate release medication in the afternoon to help with evening focus, rebound hyperactivity, and/or evening dysphoria
  - Do not use Rx as a test for ADHD; do full evaluation on all patents
  - Treat mood disorder first, intrinsic anxiety second, and then ADHD
  - Treat ADHD first when dealing with mild anxiety

Pearls for Managing ADHD

- Use specific target symptoms and monitor efficacy
- Start low and titrate dose until maximum improvement or side effect(SE)
- Change to different class of stimulant if SE persist
- Middle school onward should be treated 365 days per year to protect from substance use/abuse, auto injuries, unplanned pregnancy, etc

Pearls for Managing ADHD

- Monitor growth and vital signs with each visit
- Re-evaluate diagnosis and continued need for therapy
- Watch for emergence of co-morbid disabilities
- Re-examine patient q 3 months
- Discourage drug holidays
- Monitor flow of Rx (freq of use) and be aware of risks for diversion.
  - Immediate release>>delayed release

ADHD Treatment Guide

Dr. Andrew Adesman offers a free ADHD medication guide at:

www.ADHDMedicationGuide.com

Also laminated copies can be purchased at:

www.ADDWarehouse.com

Suggested Reading

- Adler, L. (2006). **Scattered Minds**. GP Putnams, NY
- Barkley, R. **ADHD Report**. Guilford Press
- Dawson, P et al. (2009). **Smart but Scattered**. Guildford Press
- Dulcan, M. (2003). **Concise Guide to Child and Adolescent Psychiatry**. 3rd ed. American Psychiatric Press. DC
- Kelly, D et al. **Pediatric Annals**, 34(4), 259-329
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- Stahl, S. (2005). Essential **Psychopharmacology, the Prescriber's Guide**. Cambridge U. Press. NY
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