

ADHD Treatment: AACAP's Practice Parameters with Observations on Treatment Considerations in Asian Families

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Brief History

- ◆ First noted to reduce disruptive behavior in 1937
- ◆ Short-term use to treat ADHD symptoms is the single largest body of literature on any childhood psychiatric syndrome
- ◆ Of the 161 RCT's, 65-75% of all patients improve Vs. only 5-30% of placebo
- ◆ Steady increase in diagnosis and stimulant use in the United States

Psychopharmacological Effects of Stimulants

- ◆ Short-term duration drugs (methylphenidate, dextroamphetamine) last 3-5 hours after oral dose
- ◆ Long-duration or long-term release formulations (pemoline, Concerta, Metadate, etc) last between 6-12 hours

Psychopharmacological Effects of Stimulants

- ◆ Decrease classroom reports of:
 - ◆ Fidgeting
 - ◆ Interrupting
 - ◆ Finger-tapping
 - ◆ Off-task behaviors (increase on-task behaviors)

Psychopharmacological Effects of Stimulants

- ◆ At home, reported improvements in:
 - ◆ Parent-child interactions
 - ◆ On-task behaviors
 - ◆ Compliance

Psychopharmacological Effects of Stimulants

- ◆ In social settings:
 - ◆ Higher rankings of social standings
 - ◆ Increased attention in sports activities

Psychopharmacological Effects of Stimulants

- ◆ In the laboratory:
 - ◆ Decrease response variability and impulsive responding
 - ◆ Increase accuracy, short-term memory, reaction time, math computation, problem solving in games and sustained attention

Psychopharmacological Effects of Stimulants

- ◆ Long-term studies:
 - ◆ Most recently, the NIMH Collaborative Multisite Multimodal Treatment Study of Children with ADHD (MTA Study)
 - ◆ 12-24 month follow-up showed stable improvements as long as drug is taken

Indications (When do you use it?)

- ◆ Psychiatric Evaluation
 - ◆ Detailed history
 - ◆ Collateral information from parents and school
 - ◆ Documentation of target symptoms
 - ◆ Mental Status Exam

Indications (When do you use it?)

- ◆ Multiple conditions
 - ◆ ADHD
 - ◆ ADHD with comorbid conduct disorder
 - ◆ Narcolepsy
 - ◆ Apathy due to a General Medical Condition
 - ◆ Adjuvant Medical Uses of Stimulants
 - ◆ Treatment-Refractory Depression

Indications (When do you use it?)

- ◆ ADHD
 - ◆ Document DSM-IV/ICD-10 diagnosis
 - ◆ No empirically proven threshold of ADHD symptoms that can be used to predict response
 - ◆ Only patients with moderate to severe impairment in two or more areas
 - ◆ Teacher ratings before and after

Indications (When do you use it?)

◆ADHD

- ◆Child should be living with responsible adult(s) who can administer the medication
- ◆If short-duration medications are used, then school personnel should be available to monitor dosing
- ◆Other effective modalities (parent training, psychoeducation et al.) should be considered

Indications (When do you use it?)

- ◆ Narcolepsy
 - ◆ Intermittent excessive sleepiness with recurrent sleep attacks and cataplexy
 - ◆ Effective treatment (alongside of modafinil)

Indications (When do you use it?)

- ◆ Apathy due to a General Medical Condition
 - ◆ Individuals who have suffered brain injury may exhibit apathy and symptoms similar to ADHD
 - ◆ Stimulants may reduce such behaviors
 - ◆ Doses are typically lower than those used in ADHD patients

Indications (When do you use it?)

- ◆ Adjuvant Medical Uses of Stimulants
 - ◆ Severely medically ill
 - ◆ Those sedated with pain medications
 - ◆ Toxic effects of medications (cancer drugs)
 - ◆ Again, lower doses than ADHD

Indications (When do you use it?)

- ◆ Treatment Refractory Depression
 - ◆ History of being used alongside of tricyclic antidepressants with good effect
 - ◆ Doses are typically lower than those used to treat ADHD

Contraindications

- ◆ When are we more cautious with stimulants?
 - ◆ Medical conditions: glaucoma, symptomatic cardiovascular disease, hyper-hypothyroidism
 - ◆ Substance abuse: use of illicit stimulants unless in treatment program

Contraindications

- ◆ Concomitant use of a monoamine oxidase inhibitor (MAOI)
- ◆ Active Psychotic Disorders

Contraindications

- ◆ Less Absolute Contraindications
 - ◆ Presence of motor tics
 - ◆ History of marked anxiety
 - ◆ Family history or diagnosis of Tourette's disorder
 - ◆ Seizure disorder (once controlled)
 - ◆ Methylphenidate: under age 6 years
 - ◆ PEM, DEX & AMP (mixed salts) down to age 3 years old

Use of Stimulants: Steps to Treatment

- ◆ Documentation of Prior Treatment
 - ◆ Document adequate prior assessment
 - ◆ Previous psychosocial treatments
 - ◆ Previous psychotropic medication treatments
 - ◆ Name of medication, dosage, duration of trial, response and side effects, and estimation of compliance
 - ◆ Previous school placements, behavioral medications, parent training, daily report card

Use of Stimulants: Steps to Treatment

- ◆ Obtain Baseline Measures
 - ◆ Blood pressure, pulse, height, weight
 - ◆ Vital signs checked annually

Use of Stimulants: Steps to Treatment

- ◆ Selecting the Order of Stimulants to Try
 - ◆ MPH (Ritalin, Concerta), AMP(mixed salts-Adderall), DEX are all acceptable
 - ◆ Most clinicians will try to minimize side-effects by trying MPH first
 - ◆ PEM should go last, because of the low but significant risk of liver failure

Use of Stimulants: Steps to Treatment

- ◆ Using the Recommended Starting Dose of Each Stimulant
 - ◆ MPH: 5 mg equivalent, given after breakfast
 - ◆ DEX/AMP: 2.5 mg equivalent, given after breakfast
 - ◆ Start with the minimum intermediate-release (IR) two to three times a day, after meals

Use of Stimulants: Steps to Treatment

- ◆ Deciding on Both a Minimum and Maximum Dose
 - ◆ Maximum daily dose (by PDR) is 60 mg for MPH and 40 mg for DEX
 - ◆ Children <25 kgs (55 lbs, 5.5--8 years old) should not receive single doses > 15 mg MPH or 10 mg DEX/AMP
 - ◆ Larger children can receive up to 25 mg MPH at a time

Use of Stimulants: Steps to Treatment

- ◆ Using a consistent titration schedule
 - ◆ After trying the lowest recommended starting doses, doses should be increased
 - ◆ Generally, increase MPH 5-10 mg per dose and DEX/AMP 2.5-5 mg per dose
 - ◆ Alternatively, can used a fixed dose titration schedule (MTA study) and decided afterwards (clinical advantages)

Use of Stimulants: Following Treatment

- ◆ Deciding on a Method of Assessing Drug Response
 - ◆ Target symptoms should be regularly followed with parents and teachers
 - ◆ This may include the use of clinical rating scales
 - ◆ In adolescents and adults, self-ratings should be followed

Use of Stimulants: Following Treatment

- ◆ Managing Treatment-Related Side Effects
 - ◆ Patients and parents should be asked
 - ◆ Insomnia, anorexia, headaches, social withdrawal, tics and weight loss
 - ◆ Weighing the patient at each visit gives an objective measure of appetite suppression
 - ◆ Side effect sheets (before, after and during)

Use of Stimulants: Following Treatment

- ◆ Providing a Schedule for Initial Titration and Monitoring
 - ◆ Weekly telephone contact can be sufficient for following titration results with reliable parents
 - ◆ Titration may take 2-4 weeks

Use of Stimulants: Following Treatment

- ◆ Providing a Schedule for Monitoring the Drug Maintenance Phase
 - ◆ Patients on the same dose are in maintenance phase
 - ◆ Follow-up appointments should be at least qmonth until stable

Use of Stimulants: Following Treatment

- ◆ Factors in Scheduling Follow up Frequency
 - ◆ Robustness of drug response (Severity and Symptoms)
 - ◆ Adherence to drug regimen
 - ◆ Concern about side effects
 - ◆ Need for psychoeducation and/or psychosocial intervention
 - ◆ Higher frequency for: side effects, significant impairment from comorbidity, problems with adherence

Use of Stimulants: Following Treatment

- ◆ Optional Treatment Components
 - ◆ Collection of teacher reports prior to or at each visit
 - ◆ Provision of reading materials
 - ◆ Discontinuation trials

Use of Stimulants: Complications and Side Effects

- ◆ Most are short-lived, rare and response to dose adjustment
- ◆ Mild side effects are more common
- ◆ Serious side effects are short lived/rare if the medication is decreased in dose or discontinued

Use of Stimulants: Complications and Side Effects

- ◆ Among severe side effects are: movement disorder, obsessive compulsive ruminations, psychotic symptoms, hepatic failure (Pemoline only)

Use of Stimulants: Complications and Side Effects

- ◆ Only seven side effects routinely occur more often than placebo
 - ◆ Delay of sleep onset
 - ◆ Reduced appetite
 - ◆ Weight loss
 - ◆ Tics
 - ◆ Stomach ache
 - ◆ Headache
 - ◆ Jitteriness

Use of Stimulants: Complications and Side Effects

- ◆ Lowering dose or changing its timing may alleviate the side effects
- ◆ When insomnia or appetite loss occurs but stimulant is otherwise highly effective, then adjunctive treatment may be helpful
- ◆ Staring, daydreaming, irritability, anxiety, and nail-biting typically decrease with dose, representing preexisting symptoms rather than side effects

Use of Stimulants: Complications and Side Effects

- ◆ For insomnia, adding Diphenhydramine (Benadryl 25-100 mg qhs) or Cyproheptadine (Periactin 2-8 mg qhs)
- ◆ Sometimes, adding Trazodone (Desyrel 50-100 mg qhs) can also be quite helpful
- ◆ Evening rebound: switch to a longer acting stimulant, give a small “booster” dose late in the day, add Clonidine or Guanfacine

Use of Stimulants: Complications and Side Effects

- ◆ Headache: decrease the dose of stimulant, switch stimulants or try a non-stimulant medication
- ◆ “Jitters”: eliminate soda (caffeine) or may add a beta blocker at low doses
- ◆ Irritability: determine if it is the underlying disorder or the medication. If it is the medication, decrease dose, change medication, change to non-stimulant
- ◆ Increased blood pressure/Pulse: monitor and decrease dose.
- ◆ Tics: currently, low dose stimulants are NOT thought to make these worse.

Use of Stimulants: References

- ◆ Summary of the Practice Parameter for the Use of Stimulant Medications in the Treatment of Children, Adolescents and Adults, *J. Am Acad Child Adolesc Psychiatry*, 40:11, November 2001
- ◆ AACAP (in press), Practice parameter for the use of stimulant medications in the treatment of children, adolescents, and adults *J. Am Acad Child Adolesc Psychiatry*
- ◆ AACAP (1997) Practice parameters for the assessment and treatment of children, adolescents, and adults with attention-deficit/hyperactivity disorder. *J. Am Acad Child Adolesc Psychiatry* 36(suppl):85S-121S

Observations on the Treatment of Asian Children for ADHD

- ◆ Working alongside of Traditional Medicine
- ◆ Using Cultural Norms and Beliefs to Support Treatment

Observations on the Treatment of Asian Children for ADHD

- ◆ Patient characteristics at Chinatown Child Development Center
 - ◆ City's largest child clinic
 - ◆ 290-350 child cases a year
 - ◆ 100+ turnover
 - ◆ Largest PDD/Autism center
 - ◆ Largest medication caseload

Traditional Medicine

- ◆ Presentation: Success
 - ◆ 9 year old boy, with ADHD, whose mother is resistant to medication suggestions
 - ◆ Finally, agree to review her use of traditional medicine and share a trial with ADHD meds
 - ◆ Consultation with Drug Information Services and the California DHS handbook
 - ◆ Psychoeducation, cessation of herbal medicine & start of stimulants

Traditional Medicine

- ◆ Presentation: Failure
 - ◆ 11 year old boy with ADHD, whose parents are resistant to accepting the diagnosis
 - ◆ Engaged in some in-home behavioral treatments, and medication trials, only to disappear from treatment
 - ◆ When they reappear, the parents relate their ongoing treatment with an acupuncturist

Traditional Medicine

- ◆ Underlying Landscape
 - ◆ High frequency
 - ◆ Can usually assume, whether told or not, that the family is giving child an herbal medication or other traditional medicine
 - ◆ Must “share the stage” with the traditional medicines while starting Western meds and researching traditionals (Reference to Compendium at end of talk)

Traditional Medicine

- ◆ Intervention
 - ◆ Almost impossible to dissuade use
 - ◆ Attempt to use adjunctively, or displace in time
 - ◆ Psychoeducation
 - ◆ Medication education
 - ◆ Avoidance of side effects

Traditional Medicine

- ◆ Outcome
 - ◆ Sometimes, successful in harm reduction

Traditional Medicine

- ◆ Potential Reasons
 - ◆ Culturally congruent
 - ◆ Herbal medicines have long tradition
 - ◆ Mirrors the beliefs of non-medical medical staff
 - ◆ Western medications are often viewed as a last resort or only as additive
 - ◆ Somehow, viewed as being less harmful

Supporting Treatment by Aligning with Cultural Norms and Beliefs

- ◆ Overall
 - ◆ Parallels with adult work; epidemiology, presentation, intervention and outcomes
 - ◆ Present in treatment with a different focus than other populations
 - ◆ Interventions are often community-based
 - ◆ Culture and language continue to be important considerations
 - ◆ Strongly stigmatize any association to mental illness

Supporting Treatment by Aligning with Cultural Norms and Beliefs

- ◆ Overcoming medication resistance by
 - ◆ Teaming/tolerating traditional medicines
 - ◆ Focus on problems that present at home & school
 - ◆ Emphasizing school “lag” as a way to build consensus towards treatment
 - ◆ Counting on individual therapists to build trust (culturally and linguistically competent) which they can lend to you

Supporting Treatment by Aligning with Cultural Norms and Beliefs

- ◆ Overcoming medication resistance by
 - ◆ Checking for side effects BEFORE you start the medication, to establish trust and baseline
 - ◆ Reframing side effects as evidence that the medication is working
 - ◆ Focusing on culturally congruent effects (and side effects) that are viewed as desirable (more obedient) and structuring drug “holidays” to reassure parents

Supporting Treatment by Aligning with Cultural Norms and Beliefs

- ◆ Overcoming medication resistance by
 - ◆ Finally, tolerating parents moving in and out of treatment
 - ◆ Working with community resources (teachers and social workers) who can outreach to patient
 - ◆ Liaison to pediatricians

Additional References:

- ◆ **Compendium of Asian Patent Medicines:** California Department of Health Services, Food and Drug Branch, Drug & Cosmetic Team, 601 North 7th Street, MS-357, P.O. Box 942732, Sacramento, CA 94234-7320 (916)-445-2263
- ◆ Medication Side Effects-Stimulants (translation by Dr. Clyde Wu, 2003)