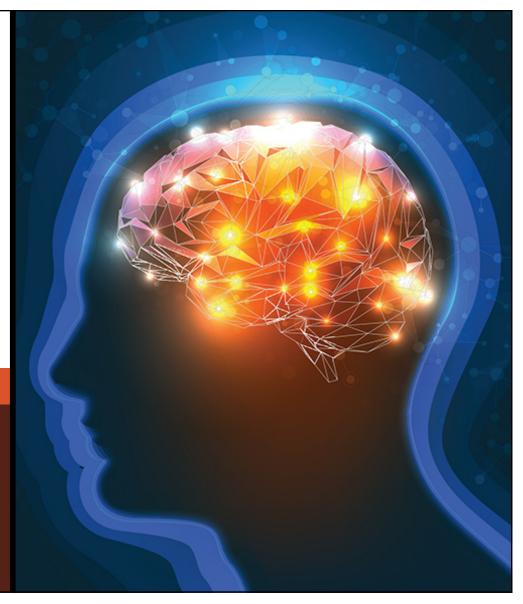
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## 11TH ANNUAL COME OUTFITIES OUTFITIES

Master Class for Neuroscience Professional Development

February 7-9, 2019 | The Westin Fort Lauderdale | Florida

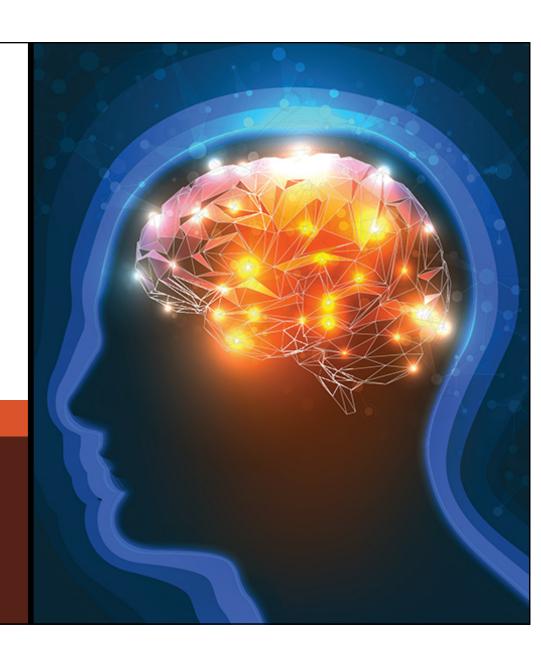
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# Integrating State-of-the-Art Interventions into Clinical Practice

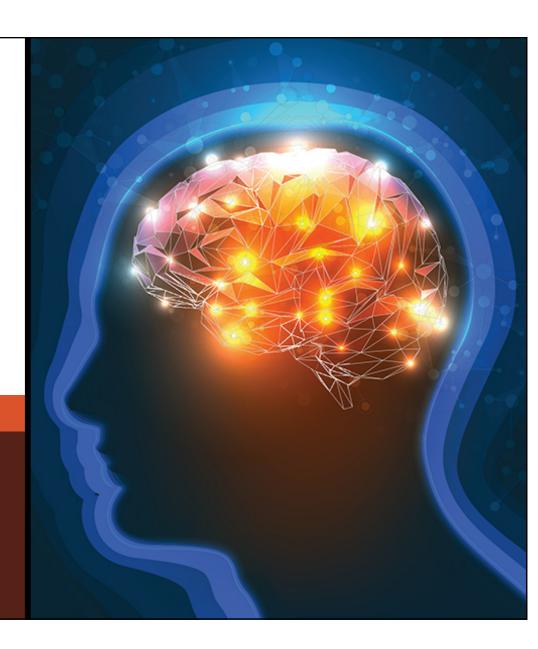
#### Barbara J. Coffey, MD, MS

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# **Learning Objective**

Integrate evidence-based, state-of-the-art treatment into clinical practice.



#### **Case Presentation**

**CHIEF COMPLAINT AND PRESENTING PROBLEM:** C. was an 8-year-old girl referred by her parents for increasing behavioral problems and meltdowns.

**HISTORY OF PRESENT ILLNESS:** Parents report that C. developed onset of difficulties at around age 2 1/2; C. had always been "hyper," "like a pinball running around." She was impulsive and "needed to touch everything in the room." When she was in preschool, her teacher reported that she was not listening, and at times was aggressive, hitting other children. C. was hyperactive and had difficulty following directions. Primary school teachers reported that she was fidgety and restless in the classroom.

Mother reports that problems with oppositional behavior were much more than might be expected for children her age. The parents report that C. had always been "strong-willed," but it became increasingly difficult for her to do what was requested unless it was "done her way." Everything had to be "just right." They report that she had great difficulty with transitions, and would often have meltdowns when asked to shift from one activity to another, at times lasting hours. She often seemed anxious, crawling underneath the desk or table at times, for example, even if she was doing something she enjoyed. Parents report that she seemed anxious going to school, saying that she would "miss them too much."

C. was not irritable in between explosive outbursts. She had never been depressed or suicidal. She did seem to worry excessively, particularly about bad things happening.



Everything had to be arranged a certain way before bedtime.

C. experienced rapid eye blinking starting a year ago, followed by rubbing her nose frequently, chewing her shirt, picking her skin, and biting her nails. She sniffed and cleared her throat excessively. C. had never experienced trauma, physical, or sexual abuse.

**PSYCHIATRIC TREATMENT HISTORY:** Psychometric testing: At age 4 years, 6 months: WPPSI IV FS IQ was superior. Behavior and personality rating scales: significant risk for ADHD and oppositional defiant disorder.

At age 6, an oral reading index of 70 was at the second percentile. She struggled with "continuous text, and paragraph reading," scoring between the 2nd and 5th percentile.

**DEVELOPMENTAL AND PERSONAL HISTORY:** Full term, uncomplicated pregnancy. Following SNVD, birth weight was 6 pounds, 8 ounces. C. had a difficult temperament, in that she was fussy and did not sleep through the night for more than 3 or 4 hours until she was age 18 months.

Developmental milestones were within normal limits for motor milestones and early for language acquisition.

Parents separated and divorced when C. was age 3. She was now living with her mother and stepfather who had been together since C. was age 4.

**EDUCATIONAL HISTORY:** Currently in grade 2 in private school in a classroom of 18 children and one teacher. She was doing well in all subjects but more challenged by reading and spelling.

**SOCIAL HISTORY:** C. sought other children and had a best friend. She was invited to play dates and birthday parties. She enjoyed Legos and sports.

**PERTINENT FAMILY HISTORY:** Mother, age 40, was healthy. A maternal aunt had anxiety symptoms. Father, age 42, was reported to have a diagnosis of ADHD, and had been treated with lisdexamfetamine, which was reported to be helpful. (He was not interviewed during this consultation.) A male half sibling, age 3, is healthy.

There was no known family history of other neurodevelopmental, medical or psychiatric disorders.

**MEDICAL HISTORY/RECENT PHYSICAL EXAMINATION:** C. had not been hospitalized, had a head injury with loss of consciousness, or seizures. There had been no significant medical problems.

Sleep was notable for initial insomnia, and past history of night terrors.

Nutrition was generally healthy; height and weight were at approximately the 50th percentile.

No known allergies to medication, food, or environmental agents.

**MEDICATION HISTORY:** C. had received a several different methylphenidate delivery systems starting with short-acting methylphenidate up to approximately 10 mg daily, with a second dose given at noon.

An extended-release methylphenidate (QuilliChew) was not helpful because it was difficult for her to take it. She reportedly did relatively well on a liquid extended-release methylphenidate formulation (Quillivant 4 mg), but the clinical effect lasted only 4 to 5 hours, and she became moody on it. She was not currently on a stimulant.

She had been receiving guanfacine 2 mg h.s. for the past year, which was thought to help with sleep, but she was often "groggy in the morning." Her parents reduced the melatonin recently from 1 mg to 0.5 mg at bedtime because of the grogginess.

**STANDARDIZED RATING SCALES:** Teacher and parent ADHD Rating Scales were elevated. The Multidimensional Anxiety Scale for Children (MASC) was elevated for separation anxiety, generalized anxiety, and obsessive-compulsive anxiety.

**MENTAL STATUS EXAMINATION:** C. was a pretty, petite girl with dark brown hair in a ponytail, neatly dressed and groomed. She was initially quite anxious in the waiting room, clinging to her mother. She needed mother to escort her into the examination room, but was able to separate without distress. C. was restless during the interview but was easily engaged in drawing her family.

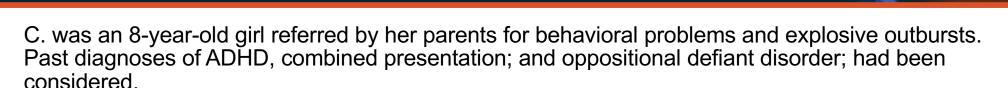
When asked directly about worries, C. acknowledged that she is "very worried at night." She has "bad dreams every night" and sometimes it makes it hard for her to go to sleep.

There was no evidence of thought disorder or suicidal or homicidal ideation, and judgment and insight appeared appropriate for age.

#### **Questions for Discussion**

- How would you put together a biopsychosocial formulation? What are the important elements?
- What is the differential diagnosis?
- What additional workup is indicated?
- What treatment recommendations would you make?

#### Formulation and Diagnosis



C. had undergone several previous trials of methylphenidate stimulants with mixed results and little to no impact on her behavioral symptoms. Given a history of multiple motor and at least one vocal tic present for greater than one year, C. would also meet diagnostic criteria for mild Tourette's Disorder. Anxiety symptoms were problematic, probably consistent with mild OCD.

From a **biopsychosocia**l perspective, biological factors were contributory. There was a reported history of ADHD on the paternal pedigree, and possible anxiety on the maternal pedigree, which would render C. vulnerable. Fortunately, there was no history of major medical problems, such as thyroid dysfunction, that could be contributing to her current picture.

From a psychosocial perspective, C. was on a healthy developmental trajectory. She was succeeding in school, developing relationships with peers, and had warm relationships with her reconstituted family members. However, her level of self control was inconsistent with ageappropriate norms. It appeared that her explosive outbursts were driven by both her anxiety, and the "just right" phenomenon consistent with OCD symptoms in the context of Tourette's Disorder.

#### Formulation and Diagnosis



#### **DIAGNOSES:**

Attention-deficit hyperactivity disorder (ADHD), combined presentation

Obsessive-compulsive disorder, sub-threshold

Tourette's disorder (mild)

Intermittent explosive disorder, sub-clinical

Rule out specific learning disorder in reading

# Workup and Treatment Recommendations



Given the history of tics, **neurological consultation** might be considered.

It appeared that C.'s explosive outbursts were driven by anxiety and obsessive-compulsive symptoms. She is a candidate for **cognitive behavioral therapy** for her OCD symptoms, and possibly tics, should they become more problematic in the future.

**Assistance with reading**, such as a tutor or additional help in school is recommended. Retesting within the year to rule out a specific learning disorder would be helpful.

**Re-challenge with a stimulant** is recommended, as these are the most effective treatments for ADHD. It does appear that stimulants have been helpful to C. in the past, although she may not have been getting full coverage throughout the day, and withdrawal symptoms and/or adverse effects could be problematic. Given father's response to amphetamine, an option would be monotherapy with extended-release amphetamine salts.

Given sedation on extended release guanfacine, consideration of a switch to **shorter-acting guanfacine** in divided doses is recommended. If tics become more problematic, the dose could be increased.

If cognitive behavioral therapy is only partially successful in treatment of her OCD symptoms, consideration could be made for a **low-dose selective serotonin reuptake inhibitor**.

#### **SMART Goals**

Specific, Measurable, Attainable, Relevant, Timely

 Utilize evidence-based pharmacological and nonpharmacological treatments to provide personalized patient-centered care

## Questions Answers

