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Pediatric Obsessive-Compulsive Disorder (OCD)

Developed by Angela Hu and Dr. Kerry Boyd for PedsCases.com.
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Introduction:

Hello everyone, and welcome to this PedsCases podcast episode on pediatric obsessive-compulsive disorder, or OCD. My name is Angela Hu, and I am a second-year medical student at McMaster University. This podcast was made in collaboration with Dr. Kerry Boyd, a child and adolescent psychiatrist, and associate clinical professor in psychiatry and behavioural neurosciences at McMaster University.

Learning Objectives:

By the end of this podcast, the learner should be able to:

1. Discuss the prevalence, onset, course, and etiological considerations for OCD in children and adolescents.
2. List the clinical manifestations of OCD including different symptom clusters.
3. Contrast the differences in OCD presentations between children and adults.
4. Review the DSM-5 diagnostic criteria for OCD.
5. Review screening tools and questionnaires for OCD in children.
6. Describe an approach to the management for OCD in children and adolescents.

Clinical Case:

You are on your psychiatry rotation working in a child and adolescent psychiatry outpatient clinic. Samantha is an 8-year-old female who is brought to the appointment by her mother, who expresses concern over Samantha's recent sudden onset of repetitive behaviors. Her mother describes a 6-week history of ritualistic behavior. She was always good at washing her hands before eating, but her mother reports that she began to spend more time washing her hands repeatedly throughout the day. She thinks Samantha may be spending >2 hours per day in hand-washing rituals. She has also recently developed a very rigid bedtime routine, that goes beyond the washing, to lining up and counting her toys, and adjusting bedding before sleeping. Samantha seems anxious and distressed during these rituals, and cries if interrupted. Samantha has been late for school, going in and out of the bathroom repeatedly and adjusting her socks until they feel exactly even. When her mom prompts her out the door, she begs to stay home from school, and has cancelled previously enjoyed playdates with her friends.

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During the appointment, Samantha appears apprehensive and avoidant of eye contact, deferring to her mom to respond to questions. Samantha tearfully nods when her mom comments that she suspects her daughter is washing her hands excessively out of fear of getting sick. Samantha cries and leans into mom whenever questions are asked of her. On examination, you also note that Samantha exhibits mild features of motor tics, with forceful, repetitive, eye-blinking, and presumed vocal tics, with occasional grunting and sniffing. By history and on examination, she is otherwise well.

Background and Epidemiology:

Obsessive-compulsive disorder, or OCD is characterized by obsessions, which are recurrent and persistent thoughts, urges, or images that cause marked anxiety or distress, and compulsions, which are repetitive, ritualistic behaviors that are generally performed in order to relieve the anxiety and distress caused by the obsessions. OCD can be severe, chronic, distressing and even debilitating if left untreated. Despite availability of effective treatment of symptoms, OCD may not come to clinical attention, causing marked functional impairment across a patient's life, including at home, at school, and in social interactions[1]. OCD has a lifetime prevalence of 1-4% in the pediatric population, and it is estimated that 50-80% of OCD cases have an onset in childhood[2]. OCD is less common in younger children, and dramatically increases during adolescence[2]. There is also a 3:2 male predominance, and an earlier age of onset in males[2].

The course of OCD is often chronic, with OCD that onsets in childhood frequently persisting into adulthood with a waxing and waning course[3]. These symptoms characteristically worsen with stress and major life transitions. Pediatric OCD can result in impairments in long-term functioning, including difficulties with occupational achievement and maintaining employment[3].

OCD also has a high prevalence of co-morbidities with other psychiatric disorders. Studies have identified that 64% of children with OCD have at least one concurrent disorder[4]. The most common comorbidities include anxiety disorders, such as generalized anxiety disorder and social anxiety disorder, with a 31% co-occurrence with OCD[4]. There is also a 17% co-occurrence of mood disorders, with a higher prevalence in adults and older adolescents[4]. OCD is also commonly co-occurrent with neurodevelopmental disorders in children, such as tic disorders and ADHD[4]. It is especially important in pediatrics and child psychiatry to distinguish between ASD-related repetitive behaviours and OCD-related compulsions. Typically, ASD repetitive behaviours start in earlier childhood and are typically not associated with distress, though a thorough history is required as OCD can become a co-occurring condition.

Diagnosis and Clinical Presentation:

The diagnostic criteria for OCD in the DSM-5 specifies criteria A through D. Criterion A are core features of OCD, and requires the presence of obsessions, compulsions, or both. Obsessions are defined by recurrent and persistent thoughts, urges, or images that are intrusive and unwanted, and cause marked anxiety or distress. Compulsions are defined by repetitive

behaviors (eg. hand washing, ordering, checking) or mental acts (eg. praying, counting, repeating words silently) that the individual feels driven to perform in response to an obsession. These compulsions are aimed at preventing or reducing anxiety or distress or preventing some dreaded event or situation. However, it is important to note that these behaviors or mental acts are not connected to what they are trying to prevent in a realistic way and are excessive. Criterion B states that obsessions and compulsions must be time-consuming (eg. take more than 1 hour per day) or cause clinically significant distress or impairment in functioning. Criterion C states that symptoms are not attributable to substances or another medical condition, and Criterion D states that symptoms are not better explained by another psychiatric condition, such as generalized anxiety disorder, body dysmorphic disorder, trichotillomania, etc.[5]

In children and adults, studies have identified several consistent core symptom dimensions. These include 1) Hoarding. 2) Symmetry; involving ordering, straightening, repeating, counting, and checking. 3) Forbidden thoughts, which can be aggressive, sexual, or religious in nature, and 4) Cleaning, which include contamination and somatic obsessions, with excessive cleaning compulsions[6]. Common obsessions and compulsions in children include: worry about harm to self or others, fear of contamination, the need for exactness and order, and religious-moralistic concerns. Common compulsion-rituals in children include: washing-decontamination rituals (eg. excessive hand washing, showering, or bathing), confessing, checking-reassurance-seeking, ordering-arranging, praying, and avoidance behaviors[2]. Notably, in young children it may be difficult to have them articulate their obsessions, and why they are performing these acts[7]. Some children may also experience associated physical and emotional symptoms, such as stomachaches, dizziness, headaches, muscle tension, or feelings of anxiety, worry, and guilt[7].

OCD is a clinical diagnosis and requires fulfillment of the DSM-5 criteria. If there is clinical suspicion for OCD, there are valid and reliable rating scales which are used by clinicians to both screen for OCD symptoms, and to monitor the severity of symptoms over time[3]. A commonly used scale is the Children's Yale-Brown-Obsessive-Compulsive Scale (CY-BOCS), which rates the severity of obsessions and compulsions as subclinical, mild, moderate, severe, or extreme. Other brief screening questionnaires include the Obsessive-Compulsive Inventory - Child Version, the OCD subscales of the Child Behavior Checklist (CBCL-OCS), and the Revised Children's Anxiety and Depression Scale (RCADS)[3].

Etiology:

The etiology of OCD is complex with multiple theories and multifactorial contributions. It is currently thought that there is a disruption to the system that filters information (such as intrusive thoughts), and the system that mediates stereotyped-automated behaviors[8]. Studies investigating twins and families strongly support a genetic and heritable component of OCD. Twin studies have found that genetic factors can explain 45-65% of the variance of OCD in children, which is higher than the heritability of adult-onset OCD[9]. Genome wide association studies and meta-analyses of genetic studies suggest a polygenic model, with multiple genes contributing to the risk of developing OCD[9]. Environmental factors also contribute to the

development of OCD, however very few studies have been done, and there is inconclusive evidence on environmental stressors and OCD[10].

One unique theory which is being further investigated is PANDAS, which stands for Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcus. Briefly, this may be an autoimmune subtype of OCD, which develops following group A beta-hemolytic streptococcal (or GABHS) infections[2]. This etiology is currently being explored, though this remains somewhat controversial. It has been suggested that there may be an autoimmune cross-reaction between Group A Strep (GAS) and neural epitopes, which could result in motor and behavioral disturbances[2].

Management:

Currently, the first-line treatment options for the management of pediatric OCD include psychoeducation together with psychotherapy and pharmacotherapy such as SSRIs. Treatment regimens are initiated based on the patient profile including age, severity of symptoms, presence of active comorbid disorders, and a patient's past medical history. It is also important to prioritize the patient and caregiver's preference.

For patients with mild or moderate symptoms, the first-line therapy is cognitive behavioral therapy (CBT) without pharmacotherapy. Pharmacotherapy is then initiated if there is lack of clinical response to CBT. For patients with moderate to severe symptoms or an active comorbid disorder (eg. depression, anxiety disorder), a combined treatment modality is initiated with CBT and pharmacotherapy. In some severe cases, OCD symptoms or the comorbid disorder can make it difficult for the patient to participate in CBT. In these cases, the pharmacotherapy can be initiated first until the individual can effectively participate in CBT[11].

The main method of CBT used in OCD patients is cognitive-behavioral therapy with exposure and response prevention (CBT-ERP)[11]. In CBT-ERP, patients are exposed to their feared situations in a controlled manner and face their obsessive thoughts without performing their compulsions[12]. For example, in a patient with contamination OCD, they may start by touching a doorknob or their wallet, experience the fear and distress, and not engage in their compulsion. Gradually, they can begin increasing the intensity of exposures, such as going to a public space to face larger fears. This allows patients to learn to adapt and respond differently to their triggers, which leads to a decrease in the frequency of compulsions and the intensity of obsessions[13].

The first-line pharmacotherapy for OCD symptoms are selective-serotonin-reuptake-inhibitors (SSRIs), which have been shown to decrease the prevalence and severity of OCD symptoms. The most well-studied SSRIs in this population are fluoxetine, fluvoxamine, and sertraline. Selection of a pharmacological agent must be individualized to each patient, based on the side-effect profile of the medication, drug-drug interactions, past medical history, family history, and prior treatment response. If a patient has had favorable responses to a drug in the past, or if

there is a family history of response to a drug, this drug may have higher consideration as the first pharmacologic choice[11].

Psychoeducation is also crucial when presenting the treatment plan to the patient and caregivers, and it is important to involve both the family and the patient as a team. Involvement of family and caregivers is key, and helps to provide support for participation in the treatment plan, as well as provide reinforcement of behaviors to decrease OCD-related distress. Especially in the pediatric population, it is important to build rapport to ensure treatment adherence and positive outcomes. Approaches to build rapport and connection includes using age-appropriate language (eg. referring to obsessions as “sticky thoughts”),and normalizing or externalizing the presence of OCD symptoms. It can be a relief and therapeutic in of itself to provide normalization and education around the disorder to patients and families, such as informing patients that OCD is common, that there is a neurological and genetic basis, and that there are treatment options to lessen symptoms. It is also important to provide realistic treatment goals and expectations, such as setting short-term goals and normalizing setbacks. It can also be beneficial to provide child-friendly resources for patients and caregivers to better understand their diagnosis, a great Canadian mental health resource is Anxiety Canada for OCD and other mental health disorders [7](https://www.anxietycanada.com/).

Back to Clinical Case:

After discussing this case with your preceptor, you return to the room to explain the diagnosis of OCD to Samantha and her mother. You provided some education and resources about OCD. They were relieved to learn that there are many other children that struggle with similar symptoms and have an explanation for Samantha’s recent change in behaviour. Interestingly, while discussing with Samantha’s mother, she revealed that since adolescence, she has also engaged in similar ritualistic behaviors. She describes episodes of having worries that drove her to get out of bed at night 20-30 times to check that doors were locked, or repeatedly counting socks and underwear. She says that she hasn’t experienced any of these worries or behaviours recently, and that she last experienced a brief episode in her late 20s after Samantha was born. She denies any mood or psychotic symptoms.

You counselled them on general therapeutic principles such as resisting the compulsions, and how redirecting those thoughts can also help to get Samantha back on track. They both seemed attentive as you shared specific therapies, including child/parent resources, CBT-ERP and pharmacological therapy. Samantha and her mother are agreeable to be referred for psychotherapy and initiate an SSRI trial. You arrange a follow-up appointment in 4-weeks to reassess her progress.

Key Take-Home Messages:

In summary, some of the key take-home messages of this podcast are:

1. OCD is defined by the presence of obsessions, which are defined by recurrent and persistent thoughts, urges, or images that are intrusive and unwanted, and compulsions,

which are defined by repetitive behaviors (eg. hand washing, ordering, checking) that are performed in response to an obsession to relieve distress.
2. OCD is a common psychiatric disorder, which most often presents in childhood or young adulthood, and has a chronic relapsing and remitting course.
3. Pediatric OCD has a high co-occurrence with other psychiatric disorders, with the most common being anxiety disorders, mood disorders, and neurodevelopmental disorders such as ADHD, ASD, and tic disorders.
4. First-line management options for OCD include psychotherapy, most notably cognitive behavioral therapy with exposure and response prevention (CBT-ERP), and pharmacotherapy, with the first-line options being SSRIs.

Conclusion:

Thank you for listening to our podcast episode on pediatric OCD! We hope that this episode was helpful for your learning, and you now have a better understanding of OCD in children and adolescents. Stay tuned for more exciting and educational PedsCases podcasts!

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