Pediatrics for Medical Students

PedsCases Podcast Scripts

This is a text version of a podcast from Pedscases.com on "**Major Depressive Disorder.**" These podcasts are designed to give medical students an overview of key topics in pediatrics. The audio versions are accessible on iTunes or at www.pedcases.com/podcasts.

Approach to Major Depressive Disorder

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Introduction

Hi, my name is Jeff Bennett, and I am a medical student at the University of Alberta. This podcast was developed under the supervision of Dr. Heidi Wilkes, a consultant psychiatrist at the Stollery Children's Hospital in Edmonton.

The purpose of this podcast is to review a general approach to pediatric major depressive disorder, more commonly referred to as depression.

Case Overview

We'll begin with a case. On the first day of your rural family medicine rotation, you are asked to see a 16-year-old female who reports difficulty sleeping over the last six months. She explains that it often takes two to three hours to fall asleep at night, and she also has difficulty staying asleep. Her parents suspected sleep apnea, and she recently performed a level 3 sleep study. Results are still pending, however, the patient is unable to concentrate at school and she has a hard time getting work completed. Family history is unremarkable for sleep disorders, and the patient is unaware of any medical problems in her family, although she recalls seeing her mom take medications some evenings before bed.

As you move into the social history, you discover that more is going on in her life than she first described. She mentions being bullied at school, she has recently quit her school basketball team, and she doesn't hang out with her friends as much as she used to. She has also lost 15 pounds over the last four months, putting her at a BMI of 14. She says that often she just isn't hungry, or doesn't feel like eating. Her marks have recently been slipping as well, although she attributes this to her sleep disturbances. Overall, she reports that her life isn't as fun as it used to be, and she feels like it is her fault for not taking better control of her life. You empathize with her and reassure her that you have some suggestions that will likely help. You provide support and then report to your preceptor. What do you suspect your patient might have, and how can you confirm it?

Objectives

After listening to this podcast, the listener should be able to:

1. Discuss risk factors and protective factors for pediatric depressive disorders.
2. Recognize common symptoms of depressive disorders, including a helpful mnemonic to remember, and the diagnostic criteria based on the DSM 5.
3. Summarize best practice in treatment options as well as long-term prognosis of depressive disorders.

Background and Diagnosis

Major depressive disorder, or MDD, is a psychiatric disorder affecting both sexes and all ages, including the pediatric population. The prevalence is estimated at 2% in children and 4-8% in adolescents, with approximately a 20% cumulative incidence by age 18. The female to male ratio is 1:1 during childhood, but rises to 2:1 during adolescence. Risk factors for depression include family history of major depressive disorder, environmental factors, and adverse life events, particularly when there are multiple or diverse adverse events. Furthermore, a child's temperament can be a risk factor or a protective factor, depending on temperamental traits. Temperament is defined by the innate character of an individual's personality in response to physical, mental, or emotional stimuli. In other words, it refers to how individuals naturally respond to change. Negative affectivity increases risk of Major Depressive Disorder, particularly in the face of stressful life events. Some other protective factors include strong social support, personal competence, and spirituality.

Depression may be diagnosed in association with various symptomatic specifiers, such as depression with anxious distress, melancholic depression, or depression with psychotic features. Additionally, there are various onset subtypes, including seasonal affective disorder, depression in context of bereavement, or postpartum depression. In order to receive a diagnosis of depression, the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders, or DSM 5, requires at least one of two core symptoms, plus at least four additional symptoms.

The core symptoms include:

1. Depressed mood for most of the day, or irritability in children
2. Anhedonia in almost all activities

Additional symptoms include:

1. Significant change in weight or appetite
2. Insomnia or hypersomnia
3. Psychomotor agitation or retardation nearly every day (observable by others)
4. Fatigue or loss of energy
5. Feelings of worthlessness or excessive or inappropriate guilt
6. Indecisiveness or decreased ability to concentrate
7. Recurrent thoughts of death or suicide

A helpful way to remember these symptoms is using the mnemonic SIGE CAPS.

S. Sleep
I. Interest
G. Guilt
E. Energy
C. Cognition
A. Appetite
P. Psychomotor
S. Suicide

Individuals who present with some or most of these symptoms may have depression, however, other illnesses must be kept in mind during your investigations. Similar symptoms may be found in various other psychiatric disorders and medical disorders, such as anxiety, ADHD, pervasive developmental disorder, and substance abuse, or hypothyroidism, anemia, certain cancers, and autoimmune disorders, respectively. These disorders may exist simultaneously with or mimic the symptoms of major depressive disorder. Lastly, be sure to obtain a thorough medication history, as some medications can induce symptoms similar to those experienced by individuals with MDD.

Depending on how many symptoms are present and how impairing these symptoms are, depression may be diagnosed as mild, moderate or severe. Mild depression is defined as meeting the minimum number of symptoms for a diagnosis and the symptoms are distressing but manageable. Severe depression is the presence of substantial excess of required symptoms, with these symptoms being unmanageable for the patient, creating an obvious impairment in daily responsibilities. Believe it or not, moderate depression is categorized as having symptoms that are found to be in between mild and severe depression.

Measuring depressive symptoms in the pediatric population may be difficult. It will be helpful, barring parent-child conflict or other extreme circumstances, to first speak with the child alone and then to speak with the parent. When communicating with the child, it may be helpful to ask simple questions, such as: Could you do your best to describe your mood on a scale from 0-10, where 0 is the worst mood you've ever had, or a sense of hopelessness, and 10 is just right? On a good day, how high does it get? On a bad day, how low does it get? How long does it stay there? When your mood is low, do you ever have thoughts about hurting yourself, killing yourself, etc? If the patient does not understand in terms of a 0-10 scale, try using a sliding scale with your hands to describe how good or bad they feel.

There are many tools available for physicians to help screen for depressive disorders. The Canadian Pediatric Society website, found at www.cps.ca, lists many screening tools, some that are free to use and others that cost money. For example, the PHQ-9 is a nine-question, 5-minute screening questionnaire to help physicians quickly screen for

depression. The use of these scales can assist in clinical judgement to make a diagnosis of pediatric depression and help determine the severity.

There are many other symptoms to watch out for when considering a diagnosis of depression. For example, many patients with depression have difficulty falling asleep or staying asleep, and some patients who have difficulties sleeping will go on to develop depression. It is important to ask about sleep, as it may be a symptom that, when addressed, could have lasting benefits for the patient. Psychotic symptoms are sometimes seen in severe mood disorders as well, and when children are experiencing psychotic symptoms, mood disorders such as depression should be high on your differential diagnosis. Always ensure that the patient is not a danger to themselves or others by asking about potential suicidal and homicidal thoughts or intentions. Being direct about suicide will not increase the patient's likelihood of attempting, but it will help you to know if they need to be more closely monitored to ensure their safety.

Lastly, like other psychiatric disorders in children, depression may present with somatic complains, such as headaches or stomachaches. These should be recognized by the physician as real symptoms resulting from a physical manifestation from mental stressors. Clinicians should respond by appropriately investigating somatic symptoms and by treating the psychiatric disorder. As always, be sure to rule out any possible co-morbid illnesses that may be causing the somatic symptoms, as somatic symptoms may be present in the presence or absence of another illness.

Treatment

Although depression can be extremely difficult for patients to cope with, there are many treatment options that have been clinically proven to help decrease symptoms and increase mood. Before discussing which treatments to use, however, it is important to review how a treatment plan for a patient with MDD should be modeled.

First, every treatment plan should include an acute, continuation, and maintenance phase in order to help the child achieve both short- and long-term relief from their symptoms. Additionally, each phase of treatment should include the following: psychoeducation, supportive management, and family and school involvement. Both the patient and their family should understand that depression is an illness, not a weakness, and patients and families should be involved in treatment and decision-making. Supportive management helps the patient to resolve problems, restore hope, and learn how to cope with stressors during the treatment. Family (and school) involvement is crucial to ensure the patient is supported during treatment, and to help the caregivers understand how to monitor and support their child during treatment.

For individuals with uncomplicated, mild depression, the above treatment plan might be sufficient to help patients recover. However, many patients will require further treatment, including psychotherapy with or without an antidepressant. Psychotherapy could include any combination of cognitive behavioral therapy (CBT), interpersonal therapy (IPT), social skills training, or family therapy. Various resources are available online, including

CBT apps such as Mindshift and Stop Breathe Think. It is important to discuss these options with families, as some families may prefer non-pharmacological treatments for varying reasons. Keep in mind that psychotherapy may be a financial burden for the family, depending on the family's financial circumstances and insurance coverage, and availability of community resources. If psychotherapy alone is not effective in treating the patient's symptoms, the use of a selective serotonin reuptake inhibitor (SSRI) is likely warranted.

The use of SSRIs in the treatment of pediatric mental health disorders is supported by the Canadian Pediatric Society. However, antidepressants (including SSRIs) have not been approved by Health Canada for the treatment of depression in children and adolescents. Therefore, it is essential that physicians document any relevant side effects when using SSRIs in this population. It is important to note that fluoxetine has been approved for the treatment of depression in children and adolescents by the Food and Drug Administration in the United States. Additionally, the FDA has approved escitalopram for treatment of depression in adolescents. As with all SSRIs, it is recommended that the physician take the "start low, titrate slow" approach, meaning that the patient is started at a low dose and titrated slowly up to the target dose, taking at least four weeks between each titration.

One common concern when using SSRIs is a documented increased risk of suicidal ideation or behavior for pediatric patients using SSRIs. However, in most cases, the use of SSRIs to treat depression outweighs the risk of suicidality. The CPS argues that untreated depression is more likely to be harmful to a child or adolescent than appropriate SSRI use. Therefore, they recommend the use of SSRIs to treat pediatric depression as long as the physician follows close initial monitoring and careful documentation of any adverse effects and symptoms. The family of the patient should also be advised of these risks and monitor any potential signs or symptoms closely.

Additionally, SSRIs have other side effects that should be explained to the family, including mood or behavioral shifts, gastrointestinal issues, and diminished sex drive. A more in-depth analysis of common SSRI side effects can be found in our pediatric anxiety podcast.

Alternative treatments are, for the most part, unproven. However, if the family prefers to try an alternative treatment, the physician should do their part to ensure that it is not harmful to the patient, and should encourage the family to try a proven treatment at the same time.

Lastly, it is important for patients and families to know the long-term prognosis for depression. The recurrence rate after 1-2 years is about 20-60%, and approximately 70% of patients who are treated for childhood depression will have a recurrence within five years. Although this number may seem daunting, it will help the patient and their family make a long-term plan to prepare for the future, which may help avoid caregiver burnout. It also allows for implementation of lifestyle modifications, including regular exercise, sleep hygiene, and stress management. Although it is impossible to predict

how each patient will experience and deal with MDD, certain factors are associated with poorer outcomes. Some of these factors include greater severity or number of episodes, comorbid medical or psychiatric disease, feelings of hopelessness, family problems, low socioeconomic status, and exposure to negative life events. However, it may be that early treatment to full remission of symptoms may reduce the likelihood or relapse. Recognizing that depression may be a life-long battle can help families manage bio-psycho-social risk factors.

Conclusion

Let's go back to our case. After reviewing the patient's symptoms, you and your preceptor are convinced that she has moderate depression. You provide psycho-education around this diagnosis. You clarify safety issues and discuss the need to facilitate access to a therapist with experience working with children and adolescents. You suggest a prescription for fluoxetine and then book a follow-up appointment to return in one week to monitor side effects and progress. You also ask her to bring her parents to discuss the long-term implications of depression and to engage them in the treatment plan. Lastly, you provide your patient with sleep hygiene tips to facilitate sleep. You reassure the patient that as her mood improves, her sleep likely will as well; however, you will continue to monitor in follow up. She thanks you for listening and says you are the coolest doctor ever. Sweet!

Now let's review the major points discussed in this podcast:

1. Depression can affect children at any age, although it is most common in post-pubertal females, and has a cumulative incidence of 20% by age 18.
2. There are many symptoms that may manifest in depression, and it is important to review the DSM 5 diagnostic criteria to determine the severity.
3. Treatment of pediatric depression should include psychotherapy, such as CBT, social skills training, or family therapy, and may include an SSRI, especially in moderate to severe depression.
4. The long-term prognosis of depression includes a 70% recurrence over 5 years, meaning patients and care-givers should receive psychoeducation to implement lifestyle factors to prevent and manage potential future episodes.

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