MCG PEDIATRIC PODCAST

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Childhood Obesity
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Learning Objectives

- Review the key history and physical exam findings associated with obesity.
- Discuss the initial diagnostic approach to obesity
- Identify associated co-morbidities of patients with obesity
- Guide pediatricians on how to initiate appropriate therapy for children who are overweight or obese
- Advise on strategies to counsel patients and their families

Background Information

Obesity has been declared an epidemic in the United States by several major health groups including the Centers for Disease Control and Prevention and World Health Organization. Unfortunately, children and adolescents are a part of that epidemic. Childhood obesity is a public health priority given it's impact on acute and chronic diseases, in addition to general physical, emotional and mental health. As pediatricians, prevention is the backbone of all that we do. Obesity, therefore, needs to be a part of our preventive care discussion with our patients and their family. According to date from the National Health and Nutrition Examination Survey from the CDC, 1 out of 5 children in the US aged 6 to 19 are overweight or obese.

Diagnosis and Further Workup

The Body Mass Index (BMI) is an objective way to determine if a child is overweight starting at age 2 years old. BMI is calculated by dividing a person's weight in kilograms by the square of height in meters. In general, a healthy BMI is between the 5th and 85th percentile for age and gender.

Overweight is defined as a BMI between the 85th and 95th percentile. Obesity is defied as a BMI at or above the 95th percentile. There are also growth charts that have been developed for a child that has a BMI greater than the 95th percentile that goes up to the 190th percentile.

Clinical evaluation of the child with elevated BMI includes a focused review of systems due to the risk of related co-morbidities. The diagnostic workup of a child with higher BMI includes a careful family history, feeding history, sleep duration and issues around sleep. The history should also focus on exercise, family and cultural expectations, screen time (both recreational and educational), location and timing of meals, and history of bullying or social isolation.

Acanthosis nigricans is a cutaneous marker associated with hyperinsulinemia. A parent may say the child has a "dirty rash" to the neck or creases of skin. Tanner staging can help determine growth potential or premature endocrine changes that may be associated with excess adiposity. Clinicians should also do a good musculoskeletal exam to rule out conditions like Blount's Disease or slipped capital femoral epiphysis.

The diagnostic workup includes labs and studies that are specific to age and BMI. The workup can include fasting blood glucose level, HgA1C, lipid panels, liver panel, and Vitamin D level. Pending lab results, it might be important to obtain other studies such as liver ultrasound or sleep study.

Interventions

Diagnosis and having a really detailed family and social history with a detailed review of systems is going to be key in intervening for each patient. Learning how to address social determinants of health with help providers create a tailored plan for health for their patients. It is important to educate parents that obesity is a medical diagnosis with major health complications. It is very important for patients and families to understand the severity of the disease and talk with patients in a compassionate and non judgmental manner. Engage in open dialogue with the parent and child and remove words and phrases such as fat, extremely or morbidly obese, and weight problems from the conversation. An easy way to counsel all families and patients on implementing healthy lifestyle is using the 5-2-1-almost none method. Five is to remember to have have five or more servings of fruits and vegetables a day, two is for two hours or less of recreational screen time, one is for one hour of physical activity per day, and almost none is meant to discourage sugary drinks with the goal of all liquid intake being water.

As pediatricians it is important to remember that obesity is a complex, multifactorial condition. It is affected by genetic and non genetic factors, socioeconomic factors, and the environment that a patient grows up in. Primary care providers can utilize the BMI to monitor their patients as early 2 years of age and help use the growth curves to intervene with weight management as soon as possible.