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Review Article

Management of Eating Disorders in Primary Care

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Abstract

Introduction: Eating disorders are very common among young adolescents and children these days. It is often associated with adverse morbidities, negative psychological issues, and a decrease in quality of life. Hence its early diagnosis and treatment are important. In a primary care setup, a pediatrician plays an important role in early detection, initial assessment, and evaluation and management pertaining to eating disorders, thereby preventing it from progressing into a chronic stage. This setup mostly includes treatment of medical complications associated with eating disorders, nutritional rehabilitation with diet counseling, and psychosocial and psychiatric help to adolescents with eating disorders. For preventing these eating disorders, the primary care physician needs to involve from local to national levels. They may find it difficult to detect such disorders at early stages before the symptoms appear and in the presence of subtle psychological behavior. The most common eating disorders are anorexia nervosa, night eating syndrome, bulimia nervosa, and eating disorder NOS, binge eating.

Aim of the Study: The review aims to understand the role of primary care physician/pediatrician in the management of various eating disorders as well as a complication associated with eating disorders.

Methodology: The review is a comprehensive research of PUBMED since the year 1992 to 2010.

Conclusion: Eating disorder is one severe psychological problem among young children, which is associated with significant morbidities, negative psychological behavior. Therefore, it is essential for the pediatrician to adequately assess and manage these disorders as early as possible. The eating disorders vary widely in demographic data in the presentation of symptoms, but most of the patients benefitted by a multidisciplinary approach, including a physician, pediatrician, psychologist for management of various medical complications, and deep-rooted psychological issues associated with these disorders. It is often seen that young adults with eating syndrome feel embarrassing about their inability to control constant eating, body weight, and the fear of judgment by others. Therefore, a non-judgmental health care providers are proven to be beneficial in managing these patients and give a better treatment outcome.

Keywords: *Eating disorder; young adults; primary healthcare management*

The increasing trend of eating disorder among young adults

Young adults very commonly seek health services for eating disorders. These eating disorders are mostly first diagnosed by primary health care person. Even though the primary health care physician plays an important role in diagnosing eating disorders, it is often seen as a lack of appropriate training in the identification of disorders and treatment. It is often seen that primary health care personnel are able to detect these disorders only after the advent of medical and psychological symptoms associated with them [1-3].

With an abrupt increase in cases of eating disorders such as bulimia nervosa and anorexia in children and adolescents, it has become a pediatrician to become familiar with early signs and symptoms, detection, and management of this disorder. Earlier the eating disorders were prevalent at a constant pace, but in the past one decade, the prevalence of obesity has increased in children, which in turn giving rise to unhealthy diet habits to lose weight [4].

There are a lot of milder cases reported who do not fit in the criteria of DSM (diagnostic and statistical manual of mental disorders- 4th edition) for bulimia nervosa or anorexia but yet experience the medical, psychological, and physical symptoms of eating disorders. These patients require a long- term follow to decrease the sequelae of these disorders [5].

Eating disorders are ranked third common chronic diseases in adolescents, especially in females. Incidence of 5% in population and dramatically increased over the past three decades. Eating disorders are usually seen in two forms, the restrictive and bulimic form. Food intake is seriously restricted in restrictive form, and in the bulimic form a binge eating is followed by vomiting, exercise, or fasting to minimize the effects of overeating. Both adolescents are associated with a serious psychological, social, biological issue with a significant rate of morbidity and mortality [6].

Methodology

A comprehensive and systematic search was conducted regarding various types of eating disorders, the updated method of classification, molecular varieties, and advancement in their management. PubMed search engine (http://www.ncbi.nlm.nih.gov/) and Google Scholar search engine (https://scholar.google.com) were the mainly used database. All relevant available and accessible articles were reviewed and included.

The terms used in search were: Eating disorder, young adults, primary healthcare management.

Types of eating disorders

The main eating disorders in primary healthcare setup are as follow:

- Anorexia nervosa
- Bulimia nervosa
- Binge eating disorder
- Night eating syndrome
- Eating disorder not otherwise specified (EDNOS).

A guide to the identification and treatment of patients has been established to eating disorders in a primary care setting (Listed in the table below) based on demographic characteristics, diagnostic symptoms, screening tool options, physical system to monitor, pharmacological as well as psychological treatment [7].

Role of primary care pediatrician in identification, evaluation, and treatment of eating disorders

The primary health care pediatrician plays an important role in detecting the onset of an eating disorder and stops it from progressing to later stages. Usually, the primary and secondary prevention is done by screening of eating disorders and is a part of routine health check-up. This requires careful observation of signs and symptoms appear early in eating disorders, monitoring weight, height should be plotted on the pediatric growth chart, calculation of body mass index (BMI), which compared the weight with height. BMI is calculated as weight (kg)/height (m^2). Screening questions should be compulsory in all preteens and adolescents regarding their eating patterns and

Eating Disorder	Demographic characteristics and diagnostic symptoms	Screening tool options	Common physical symptoms to monitor	Pharmacological treatment	Psychological treatment
Anorexia nervosa (AN)	Female 13 - 25 years BMI < 18.5 Amenorrhea Restrictive eating Fear of weight gain	SCOFF EDDS (eating disorder diagnostic scale)	Hypokalemia Hypomagnesemia Hypophosphatemia Renal function ECG (bradycardia nd arrhythmias) Metabolic alkalosis Osteopenia	No evidence for fluoxetine or other SSRI (selective serotonin reuptake inhibitor) for AN symptoms SSRI beneficial for the treatment of comorbid anxiety and depression	Maudsley family-based therapy for adolescents CBT (cognitive behavioral therapy) or other comparable modality (no differences between modalities)
Bulimia nervosa (BN)	Female 16 - 35 years 18.5 > BMI < 25 Vomiting, fasting or compensatory behavior Strong drive for thinness	SCOFF EDDS	Hypokalemia Hypomagnesemia Renal function Metabolic alkalosis Russell signs Dental caries Enamel erosion	Fluoxetine or other SSRI or BN symptoms SSRI for comorbid symptoms	CBT has the most evidence for BN and comorbid symptoms Interpersonal therapy Dialectical behavior therapy
Binge eating syndrome	Male and female 20 - 50 years BMI > 25 Binge eating with the absence of compensatory behavior	EDDS EAT (Eating attitude test) QEWP-R (question-naire on eating and weight pattern -revise)	Complications related to obesity. Limited ability to lose weight.	Sibutramine for weight loss. Orlistat for weight loss. SSRI for comorbid depression or anxiety.	Group or individual CBT for binge eating and comorbid symptoms Behavior weight management
Night eating syndrome	Male and female BMI > 25 25 to 50% of kilocalories consumed after evening meal Initial insomnia	NA	Complications related to obesity. Limited ability to lose weight	Sertraline or other SSRI.	Research evidence not available Behavioral therapy for weight management or eating modification

Table 1: *The various types of eating disorders with respective characteristics.*

satisfaction with body appearance. Generally, adolescent females show concerns about being overweight and, ultimately, diet inappropriately. These children and young adults do not have eating disorders, but it is also a well-known fact that these patients may usually try to hide their illness, deny their inappropriate dieting habit when asked, and do not show early signs or symptoms, so the possibility of eating disorder remain undetected. Therefore, a pediatrician should follow the weight and nutrition pattern very closely and take a detailed his-

tory from the patient and parents and refer to the eating disorder specialist at earliest when suspected. The following screening question should be asked to assess a suspected adolescent or children with an eating disorder [8-11]:

- History regarding the highest the patient ever weighed and the height of the patient at that time.
- The least patient weighed in the past one year and the height at that particular time.
- History of exercise on how much, how often, and how intense patient do it? Any stress if the patient misses the workout.
- The diet history - specific amount, fluid intake, food groups, and particular restriction of certain food. A 24 hours diet history to be taken.
- Any history of calorie counting and fat counting before the consumption of food.
- History of binge eating, the frequency and amount of food taken.
- History of purging
- Any history of diet pills, laxatives, diuretics, constipation, and diarrhea.
- History of vomiting or induced vomiting, the frequency and duration of time after taking a meal.
- The previous history of weight loss therapy, whether it was helpful or not
- Family history of obesity, eating disorder, mental illness, depression, or substance abuse.
- Menstrual history – regularity of cycles, age at menarche, and last menstrual cycle.
- Drug history, alcohol consumption, smoking history, history of physical or sexual abuse.
- Syncope, dizziness, fatigue, weakness
- Pallor, easy bleeding or bruising with minor trauma
- Cold intolerance, hair loss, dry skin
- History of abdominal pain, epigastric pain, bloating and fullness
- Muscle cramps, joint pain, chest pain, symptoms of hyperthyroidism, diabetes, or infection should be elicited.

Some common eating disorders

Anorexia nervosa (AN) and Bulimia nervosa (BN)

The prevalence is 0.5 - 1% and is known to be more among adolescent girls and young ladies, while BN is prevalent about 1 - 1.5% among women, and clinicians often encounter more cases of BN than AN. AN can be diagnosed by assessing certain factors such as intense fear of becoming fat or gaining weight despite of being underweight, refusal of patient to maintain the normal body weight according to height and age during or after the growth period, unrealistic influence of maintaining shape or weight by self-evaluation, disturbed body image, constant denial being underweight, amenorrhea or absence of 3 consecutive menstrual cycle. While BN is characterized by a recurrent episode of binge eating as eating a substantially large amount of food in periods of time in comparison to most of the people wouldn't or they lack control over eating during the binge. A recurrent inappropriate compensatory behavior to gain weight is also seen characterized by self-induced vomiting, fasting, extreme exercises, use of laxatives, or diuretics. Compare to AN patient, BN patients place undue pressure on their bodies and live in fear of gaining weight [12].

AN is further classified as [12]

- Restrictive- Self-induced vomiting or use of laxative, no regular bingeing or purging.
- Binge eating/purging- on a regular basis who also meet the above criteria of AN.

BN is further classified as [12]:

- Purging- Self-induced vomiting on a regular basis, use of laxative and diuretics.
- Non-purging- advocating other inappropriate compensatory behavior such as fasting, intense workout, without the urge of self-induced vomiting or medication to purge.

Following physical symptoms can be seen in AN and BN [11].

Anorexia nervosa	Bulimia nervosa
• Bradycardia	• Sinus bradycardia
• Orthostatic blood pressure	• Orthostatic blood pressure
• Hypothermia	• Hypothermia
• Cardiac murmur, mitral valve prolapses	• Cardiac murmur
• Dull, thinning of scalp hair	• Hair without shine
• Sunken cheeks, sallow skin	• Dry skin
• Lanugo	• Parotitis
• Atrophic breasts	• Russell's sign (callus on knuckles due to self-induced emesis)
• Atrophic vaginitis	• Mouth sores
• Pitting edema of extremities	• Palatal scratches
• Emaciated and may wear oversized clothes	• Dental enamel erosion
• Flat affect	• Normal appearance
• Cold extremities, acrocyanosis.	• Cardiac arrhythmias.

Table 2: *Difference between anorexia nervosa and bulimia nervosa.*

Binge eating disorder (BED), Night eating syndrome (NES), Eating disorder not otherwise specified (EDNOS)

Binge eating disorder is the consumption of a large quantity of food in a 2 hours' time period with a perceived loss of control. The prevalence of this eating disorder is 2 - 3% in the general population. Symptoms include eating rapidly, alone, when not hungry, and feeling uncomfortably full of disgust afterward. There is no other compensatory behavior, unlike those in BN. The primary health care clinician should take care of differentiating it from overeating. The physical complication associated with binge eating is obesity. BED can also be a prognostic indicator for those who had a poor outcome of weight loss therapy. Psychologically it is best treated with cognitive behavioral therapy, and pharmacologically sibutramine is proven to be beneficial for binge eating [7,12,13]. Night eating syndrome was discussed by Stunkard in the 1950s, which include three diagnosis criteria such as evening hyperphagia or nocturnal eating, initial insomnia and, awakening from sleep. The first two criteria are essential for the diagnosis of NES. NES has been associated with depression, life stress, low mood (after 4 PM) and low self-esteem. Its prevalence is 1.5 - 5.2% in the general population. The common complication related to NES is obesity and limited or inability to lose weight [14].

The primary care physician should inquire about the night-time eating habits in patients who are commonly struggling with obesity and the inability to lose weight despite their best efforts. They should primarily focus on symptoms like hyperphagia and nocturnal ingestions, which occur after evening meals as well as sleep patterns such as initial insomnia and awakening from sleep. Ingestion of 25 - 50% of daily caloric diet combined with initial insomnia clearly signifies NES. Thus, the health care providers should encourage the earlier regular meal consumption in the daytime and increased protein intake; this leads to shifting in timing of overall caloric intake. Referral to a behavioral psychologist may also help [7].

Many patients presenting to physicians can be classified under category eating disorder not otherwise specified (EDNOS), designated by DSM as an eating disorder which does not fall under specified diagnosis criteria of AN or BN, but it shows more general psychiatric symptoms and degree of illness compare to AN and BN. It may include a female patient who satisfies all the criteria of AN but somehow continue to menstruate, who meet the criteria of BN but twice less likely of frequent binge eating. This failure to meet the criteria of AN and BN cannot rule out the eating disorder hence designated as "not otherwise specified" [12,15].

Conclusion

Primary health care personnel play various roles in identifying, diagnosing, and managing various eating disorders. By implementing proper screening strategies, and early prompt diagnosis can be made which further eliminate the more serious medical and psychological complication. Failure to diagnose early would only make the treatment more difficult later. The management includes nutritional, medical, the psychological intervention of patients. These days a large number of a pediatrician is specializing in adolescent medicines and has developed the skills to treat these patients with a multidisciplinary approach. Primary health care physicians can help families and children to be aware of the proper nutrition and physical activity required to prevent unhealthy weight and dieting habits.

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