Identification and management of eating disorders in gynecology: menstrual health as an underutilized screening tool

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Eating disorders are life-threatening conditions that disproportionately affect females, often during child-bearing years. Although the endocrinological and reproductive sequelae of these conditions often fall within the treatment purview of obstetrician-gynecologists, the assessment of eating pathology is challenging and often not part of routine clinical care. This commentary focuses on one of the common presenting symptoms of eating disorders in women, menstrual dysfunction, and discusses considerations for its clinical management in gynecology. Assessment of menstrual status provides a natural starting point for provider-patient discussion of disordered eating and weight behavior. Routine screening for eating disorders is critical and must be universal given the serious long-term consequences of these disorders.

Key words: amenorrhea, anorexia, binge eating, bulimia, menstrual dysfunction

There is substantial evidence that eating disorders (anorexia nervosa, bulimia nervosa, and binge eating disorder) often go unrecognized by health care providers. Data collected from physicians working in obstetrics and gynecology suggests that although the majority of providers assess body weight and exercise habits, less than half assess a history of eating disorders or for concerns relating to body image.[1]

An assessment of specific eating disorder behaviors such as binging and purging are rare, with less than 10% of those surveyed indicating that such as assessment was part of their routine clinical care.[1] Thus, it is not surprising that physicians in these setting recognize less than 1 in 10 cases of bulimia nervosa or binge eating disorder.[2] Low rates of eating disorder assessment represent a missed opportunity. Early identification and intervention is critical, given the cumulative negative impact of these disorders on mental and physical health. Longer latency to treatment is associated with poor prognosis,[3-5] including increased mortality.[6]

Although early identification is paramount, several barriers toward recognition exist including lack of provider training, diffusion of responsibility, and patient denial of illness. In a study by Leddy et al[1] surveying Fellows of the American College of Obstetricians and Gynecologists, more than one third of physicians reported that training in diagnostic assessment of eating disorders was nonexistent during their residency; only 4% rated their training as adequate or greater. Moreover, despite the frequent neuroendocrine and reproductive sequelae of these disorders, only half of those surveyed reported that assessment of eating disorders was part of their role as providers.[1]

Barriers on the provider side are compounded by the fact that most individuals with eating disorders do not seek treatment.[7] Eating disorders, particularly anorexia nervosa, are often ego syntonic; denial of illness and ambivalence toward treatment are common.[8] Furthermore, patients may be reluctant to disclose their symptoms because of the shame and stigma attached to these disorders. Increasing evidence also points to poor mental health literacy as well as the social acceptability of fasting, extreme exercise, or other nonpurging weight-control methods as contributing factors.[9,10] The frequent reticence among those with eating disorders to seek medical or psychiatric care coupled with poor mental health literacy makes improving provider training around eating disorder recognition critical.

This commentary focuses on one of the common presenting symptoms of eating disorders, menstrual dysfunction, as a starting point for provider-patient discussion and highlights the critical importance of obstetrician-gynecologists in providing collaborative care. The impact of eating disorders on pregnancy, obstetric, and perinatal outcomes has been discussed extensively elsewhere[11,12]; therefore, the focus here is on introducing one method for eating disorder identification to provide guidelines for routine clinical management of nonpregnant women with eating disorders.

Clinical definitions

Anorexia nervosa is characterized by the restriction of food intake resulting in a significantly low body weight and an intense fear of weight gain (or persistent behavior interfering with weight gain) despite this low weight as well a disturbance in the way in which body shape/weight are experienced. Determination of significantly low body weight is made in the context of age, sex, developmental trajectory, and physical health, though

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Received April 4, 2016; revised June 18, 2016; accepted July 5, 2016.

The author reports no conflicts of interest.

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0002-9378/$36.00

http://dx.doi.org/10.1016/j.ajog.2016.07.009

Diagnostic and Statistical Manual of Mental Disorders, fifth edition, provides body mass index guidelines for illness severity: ≥17 kg/m^2 (mild), 16−16.99 kg/m^2 (moderate), 15−15.99 kg/m^2 (severe), <15 kg/m^2 (extreme).

Anorexia nervosa is further subtyped depending on the presence (binge eating/purging type) or absence (restricting type) of regular engagement in binge eating and/or purging behavior. Diagnostic crossover between anorexia nervosa subtypes is common.[13] The Table presents physical symptoms commonly associated with anorexia nervosa.

Bulimia nervosa is characterized by recurrent episodes of binge eating, or uncontrolled eating of an abnormally large amount of food in a discrete time period, that is coupled with inappropriate compensatory behavior (eg, self-induced vomiting, laxatives misuse, diuretics, enemas or other medications, fasting, or excessive exercise) to prevent weight gain.[14] For diagnosis, these behaviors must occur at least once per week on average; however, the frequency increases to multiple times per day in severe cases.[14] Similar to anorexia nervosa, self-evaluation is unduly influenced by body shape and weight.[14] Individuals with bulimia nervosa are typically average or slightly above average weight. Thus, weight is the primary symptom differentiating bulimia nervosa from binge eating/purging-type anorexia nervosa (Table).

The most prevalent eating disorder, binge eating disorder, is characterized by binge eating that occurs on average at least once per week in the absence of compensatory behavior.[14] Episodes of binge eating are associated with significant distress and often feelings of disgust, shame, or embarrassment. Binge eating often occurs alone and is marked by eating more rapidly than normal, until uncomfortably full or when not physically hungry. The majority of individuals with binge eating disorder are overweight or obese, and binge eating disorder is common among those seeking weight-loss surgery. Thus, it is important to note that eating disorders occur in individuals of all weight ranges.

TABLE
Clinical characteristics and commonly associated physical symptoms of eating disorders

Eating disorder	Clinical characteristics	Commonly associated physical symptoms
Anorexia nervosa[a]	Restrictive eating May also binge eat and/or purge Underweight/emaciated	Amenorrhea Osteoporosis Bradycardia Hypotension Hypothermia Lanugo hair Dry skin, brittle nails Gastric dilation, constipation Electrolyte abnormalities Edema
Bulimia nervosa	Binge eating with purging, fasting or other compensatory behavior Normal weight	Menstrual irregularities PCOS Parotid enlargement Dental erosion Russell's sign (scarring on back of hand due to vomiting) Hypotension Edema Electrolyte abnormalities
Binge eating disorder	Binge eating in the absence of compensatory behavior Typically overweight or obese	Menstrual irregularities PCOS Medical complications associated with obesity (heart disease, diabetes, hypertension, etc)

BN, bulimia nervosa; *PCOS*, polycystic ovary syndrome.

[a] If purging associated physical symptoms for BN also apply.

Boisseau. Menstrual status and eating disorders. Am J Obstet Gynecol 2016.

Menstrual disturbance: a common presenting symptom

Endocrine and physiological abnormalities including primary and secondary amenorrhea and menstrual dysfunction are commonly associated with eating disorder pathophysiology. Although no longer a requirement for diagnosis,[14] approximately 90% of women with anorexia nervosa report amenorrhea, the majority of which report secondary amenorrhea.[15] Although there is a clear association between reduction of body weight, nutritional status, and amenorrhea,[16,17] some women with low body weight have normal or infrequent menses.[15,18]

Amenorrhea also precedes weight loss in approximately 20% of women with anorexia nervosa.[19,20] Importantly, nutritional status, not psychiatric status, seems to be the determining factor that differentiates between women with and without amenorrhea. Studies report few meaningful differences in the course of illness, psychiatric comorbidity, eating disorder-related cognitions, or treatment outcome between menstruating and nonmenstruating patients.[21-25] Thus, the absence of a regular menstrual cycle can be thought of as one marker of nutritional insufficiency but not pathognomonic for the disease.

Amenorrhea associated with anorexia nervosa is secondary to hypothalamic dysfunction, characterized by the suppression of gonadotrophin-releasing hormone pulsatility and subsequent estrogen deficiency.[20] This malnutrition-induced functional hypothalamic amenorrhea is associated with a host of other physiological changes reviewed