Components of an Effective Obesity Treatment Plan

Goals and Staging Methodologies

There are several methodologies used to stage overweight and obesity. One is the Edmonton Obesity Staging System (EOSS), which rates overweight and obesity from stage 0 to 4.[1] The American Association of Clinical Endocrinologists (AACE) also uses a numerical staging system.[2] This document will review the AACE staging system and the EOSS. Both provide a framework from which to view and stage obesity as a chronic disease similar to other chronic diseases.

After diagnosis, comprehensive treatment plans to address obesity management should be individualized and include primary, secondary, and tertiary interventions.

The goal of obesity treatment should be to minimize or reduce complications and improve quality of life, rather than just lowering BMI. All obesity treatment plans should include comprehensive lifestyle interventions, including an eating plan, increased physical activity, and behavioral skills training to support these changes.

AACE recommends staging patients with overweight and obesity based on BMI and adiposity-related complications.

- Stage 0: Overweight BMI 25 to 29.9 kg/m^2 (23-24.9 kg/m^2 in certain ethnicities) and no complications. Obesity BMI $\geq$30 ($\geq$25 in certain ethnicities) and no complications.

- Stage 1: Obesity BMI $\geq$ 25 kg/m^2(>23 kg/m^2 in certain ethnicities) with 1 or more mild to moderate complications.

- Stage 2: Obesity BMI $\geq$ 25 kg/m^2 (23 kg/m^2 in certain ethnicities) with at least 1 severe complication.*

(*Severe complications cited by AACE: type 2 diabetes, hypertension, obstructive sleep apnea, obesity-hypoventilation syndrome, Pickwickian syndrome, nonalcoholic fatty liver disease or nonalcoholic steatohepatitis, pseudotumor cerebri, gastroesophageal reflux disease, asthma, venous stasis disease, severe urinary incontinence, debilitating arthritis, or considerably impaired quality of life.)

The EOSS stages overweight and obesity based on obesity-related health conditions, psychological conditions, and functional limitations. Issues in any one of the three areas determines stage placement. Like the AACE staging system, interventions are based on the stage.

- Stage O: No sign of obesity complications; no physical or psychological symptoms; no functional limitations.

- Stage 1: Presence of mild obesity complications and risk factors such as prediabetes, prehypertension, elevated liver enzymes; ***or*** mild physical symptoms such as dyspnea, occasional joint pain; ***or*** mild psychological symptoms and/or impairment of well-being.

- Stage 2: Established obesity complications such as type 2 diabetes, sleep apnea, osteoarthritis; ***or*** moderate psychological complications and conditions such as depression, anxiety disorder, eating disorders; ***or*** moderate functional limitations.

- Stage 3: Significant complications such as myocardial infarction, heart failure, diabetic complications, incapacitating osteoarthritis; ***or*** severe psychological complications such as major depression and suicidal ideation; ***or*** significant functional limitations.

- Stage 4: Severe physical complications; ***or*** severely disabling psychological complications; ***or*** severe functional limitations.

Interventions

Primary

Patients with a BMI <25 kg/m^2 (<23 kg/m^2 in Asians and Asian Americans) and a normal waist circumference are considered normal weight and should receive primary prevention. Patients should be screened annually with BMI and waist circumference. Primary prevention is education to prevent progression to overweight and obesity and includes health education about healthy eating, physical activity, and creating a healthy environment.

Secondary

Patients in Stage 0 (with overweight or obesity but no complications) have as a first priority prevention of the progression of the disease. This is accomplished by stopping any weight gain or working on weight loss to prevent complications. This secondary treatment is accomplished with lifestyle and behavioral therapy and consideration of pharmacotherapy if lifestyle therapy is not effective.

Tertiary

Tertiary therapy is for patients in Stage 1 and 2 (BMI $\geq$25 and complications). The goal of tertiary treatment is to treat the complications and prevent disease progression. Treatment still

includes all the components of lifestyle therapy but also includes considering pharmacotherapy with BMI ≥27 without waiting for lifestyle to work alone. Bariatric surgery can be considered at the outset of treatment for patients with Stage 2 and BMI ≥35.

AACE recommends that if a plateau of weight loss occurs and adiposity complications are not responding, then intensification of obesity therapy is appropriate. Because obesity is a chronic disease, ongoing follow-up, re-evaluation, and long-term treatment are required.

Although not a part of the AACE secondary and tertiary treatment, many obesity specialists recommend that sleep hygiene be part of all teaching due to the importance of sleep in obesity hormone levels. Consider adding sleep hygiene education to your treatment plan for all patients with overweight and obesity.

References

1. Garvey WT, Garber AJ, Mechanick JI, et al. The American Association of Clinical Endocrinologists and the American College of Endocrinology position statement on the 2014 advanced framework for a new diagnosis of obesity as a chronic disease. *Endocr Pract*. 2014; 20: 977-989.
2. Sharma AM, Kushner RF. A proposed clinical staging system for obesity. *Int J Obes (Lond).* 2009; 33: 289-295.