

Obestasis

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Abstract

Obestasis, a commonly experienced phenomenon, is the term given to the mild, pitting oedema that is associated with obesity. Obestasis can be due to various disorders, including lymphatic, microcirculatory and venous dysfunction, as well as sarcopenia. It can be worsened by protein deficiency, excessive salt intake, poor physical conditioning, and tight clothing or foot wear. Obestasis can also be iatrogenic, and can be a part of premenstrual syndrome. Obestasis may lead to variation in body weight, and impair quality of life. The management of obestasis is multifactorial, and includes nutritional optimization, lifestyle modification, rational pharmacological therapy and reassurance.

Keywords: Drug-induced oedema, iatrogenic, oedema, overweight, weight gain.

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Introduction

Oedema is a common occurrence in clinical medicine. The pathophysiology and presentation of oedema varied according to the clinical context.¹ Obestasis is defined as the mild, pitting oedema that is often noticed in persons living with obesity (Box). Obestasis can vary in style and severity, and can contribute 'dead weight' of up to 2-3 kg in some persons. While some amount of weight variability is physiological, e.g., (diurnal and menstrual variation), obestasis leads to oedema and weight (fluid) retention beyond this band width.

Clinical Features

Obestasis is important from a clinical perspective. It may lead to variability in weight measurement, and interfere with diagnosis and monitoring of obesity. It can also lead to discomfort, easy fatigability, and ulcers. These ulcers

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may be venous pressure ulcers. Obestasis may interfere with quality of life, e.g., difficulty in choosing footwear.² Clinically, obestasis is bilateral, gravitational, and most often, pitting in character.

Obesity increases intra-abdominal pressure which leads to impaired venous return from lower limbs. Secondly, obesity is associated with reduced lymphatic vessel contraction and increased capillary permeability which leads to extravasation of water and electrolytes to extravascular tissues. Hence, lymphatic and microcirculatory dysfunction, coupled with sarcopenia of the calf muscles, are the underlying mechanisms.³ Another important pathophysiology is neuroendocrine dysfunction associated with subclinical hypothyroidism (Figure 1).

The subclinical dysfunction may be unmasked by nutritional factors, physical inactivity, inappropriate clothing or footwear, prolonged sitting/standing posture (e.g.- long distance travel), and use of oedema-causing drugs. As obestasis has been acknowledged to be more common in postmenopausal women, underlying hormonal causes are assumed to be the culprit, and need to be further studied in this cohort.

History taking and a general physical examination are sufficient to identify obestasis. Patients must be asked about diurnal, irregular or monthly variations in their foot swelling. Many drugs, including dihydropyridines, thiazolidinediones, neuropathic pain agents, dopamine agonists, antipsychotics, nitrates, nonsteroidal anti-inflammatory (NSAIDS), steroids, angiotensin-converting enzyme (ACE) inhibitors, and insulin can contribute to oedema.⁴ Obestasis is a diagnosis of exclusion, and can be confirmed only if all known causes of oedema are ruled out.

Management

The management of obestasis is multifactorial.⁵⁻⁷ Reassurance, and explanation of the pathophysiology, as well as aggravating factors, is key to resolution of the condition. Optimization of nutrition, clothing, exercise regimen, and concomitant drug therapy is imperative. Use of diuretics should be avoided unless they are needed as anti-hypertensive drugs. In resistant discomforting obestasis, long-acting thiazides with aldosterone

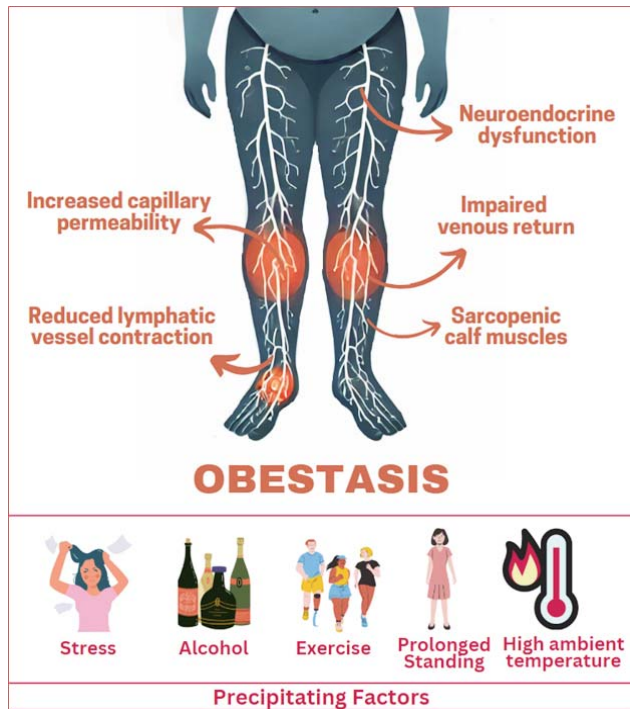


Figure: Obestasis- Pathogenesis and precipitating factors.

antagonists can be employed to improve quality of life in these patients. In refractory cases, bariatric surgery can offer significant improvement in obestasis.

Significance

Obestasis is a multifactorial condition requiring tailored approach to diagnosis and management. It is diagnosis of exclusion. It is a cause of concern for clinical health, a confounding factor in diagnosis and monitoring, as well as choice of therapy, and opportunity to encourage a healthy behaviour and lifestyle.

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Box: OBESTASIS

Definition: The mild oedema, of varying intensity, that may be encountered in persons living with obesity, in the absence of any obvious cause for the same.

Clinical features:

- ◆ Mild pitting oedema
- ◆ Variation in weight
- ◆ Discomfort and sensation of heaviness
- ◆ Alteration in size of footwear
- ◆ Foot ulceration

Precipitating Factors:

- ◆ Emotional stress
- ◆ High ambient temperatures
- ◆ Alcohol
- ◆ Exercise
- ◆ Prolonged standing

Etiology:

- ◆ Nutrition-related
 - Salt excess
 - Protein deficiency
 - Fluid excess
- ◆ Vascular anatomy related
 - Lymphatic oedema
 - Venous oedema
- ◆ External-related
 - Tight footwear
 - Tight clothes
- ◆ Hormone-related
 - Progesterone excess in luteal phase
 - Hypothyroidism
- ◆ Iatrogenic
 - Calcium channel blockers
 - Pregabalin
 - Anabolic steroids

Investigation:

Rule out thyroid, cardiac, renal, hepatic, obstructive, infectious causes.

Management

- Weight loss
- Salt/fluid restriction
- Aerobic exercise of lower limbs
- Calf strengthening exercises
- Ankle exercises
- Long acting thiazides with aldosterone antagonists
- Bariatric surgery

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