Anorexia and Cachexia

Anorexia is defined as diminished appetite. In patients with serious illness, anorexia is often accompanied by cachexia, or wasting syndrome. Cachexia is excessive involuntary weight loss in the setting of serious illness. It usually has disproportionate muscle wasting, cannot be reversed by conventional nutritional support, and leads to progressive functional impairment. It is associated with increased mortality.

Common findings in cachectic patients include reduced nutritional intake, asthenia or weakness, unintended weight loss (more than 10% premorbid body weight), biochemical alterations such as anemia or low albumin, biochemical indicators of systemic inflammation (e.g., elevated C-reactive protein), and edema.

Prevalence

Anorexia and cachexia are common in patients with life-limiting diseases such as cancer, AIDS, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), end-stage renal disease (ESRD), and dementia. It is particularly common in some advanced cancers, such as pancreatic and gastric. As many as five million Americans per year are affected.

Causes of Anorexia and Cachexia

Anorexia and cachexia have many causes, and it is often difficult to know whether one or multiple factors are involved.

Anorexia may be related to depression, loss of smell, xerostomia or mucositis, chronic gastrointestinal disease, or persistent symptoms such as pain. Cachexia presumably requires a pathophysiological process that involves altered energy metabolism, such as systemic inflammation with production of pro-inflammatory cytokines (e.g., interleukin-1 alpha, interleukin-6, and tumor necrosis factor-alpha) secondary to disease, or increased basal metabolic rate or disease-induced hypermetabolic state.

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Assessment

Comprehensive assessment is the foundation for management of anorexia and cachexia. Assessment requires a careful history, an examination, and medication review. If the potential for a reversible cause exists, it may also require appropriate diagnostic assessment.

To assess anorexia and cachexia, serial measurements of weight and dietary intake should be noted. Assessment tools may be helpful, such as the Patient-Generated Subjective Global Assessment (PG-SGA), Mini-Nutritional Assessment (MNA), Malnutrition Universal Screening Tool (MUST), and Simplified Nutritional Appetite Questionnaire (SNAQ).

Laboratory measures, such as albumin and/or prealbumin levels, and transferrin levels, may be informative.

Management of Patients with Anorexia or Cachexia

Management should include treating reversible causes where possible and desirable, as guided by the goals of care. Symptomatic treatment of anorexia is considered on a case-by-case basis.

Treatment of Anorexia

Pharmacological approaches consist of drugs in several classes which have the capacity to stimulate appetite. They include progestins like megestrol acetate, anabolic steroids like oxandrolone, glucocorticoids such as dexamethasone, cannabinoids such as tetrahydrocannabinol, and other drugs, such as mirtazapine. Megestrol acetate is the best studied of these drugs, in doses of 160mg to 800mg daily. Dosing should be started at a relatively low dose.

Studies also suggest that eicosapentaenoic acid (EPA), an omega-3 fatty acid component of fish oil, can down-regulate the production of proinflammatory cytokines at a dose of 2 grams a day. Weight gain, dietary intake, and appetite were seen to improve when EPA was added to a conventional oral nutritional supplement.

Other therapies also may be helpful. Treatments may address mouth sores or xerostomia, and changes in diet may address aversions to strong orders or heavy spices, or early satiety. Small, frequent meals (five to six times a day) dense in calories such as eggs may be preferred. Some patients benefit from nutritional supplements.

While these interventions may benefit some patients, realistic counseling is needed to prepare patients and families for the possibility that weight loss will continue as an illness progresses.

Myths and Facts About Cachexia and Anorexia

- **MYTH**: Cachexia only happens in cancer patients.
- **FACT**: Cachexia is seen in many medical conditions, including cancer, AIDS, COPD, multiple sclerosis, CHF, tuberculosis, familial amyloid polyneuropathy, mercury poisoning (acrodynia), and hormonal deficiency.

- **MYTH**: Physical exercise has been suggested as a promising countermeasure for preventing cachexia.
- **FACT**: The data remains controversial, and no concrete data suggest that exercise prevents cachexia.

- **MYTH**: Tetrahydrocannabinol (Dronabinol) is the first-line therapy for the treatment of cachexia.

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- **FACT**: Dronabinol is one of a number of pharmacotherapies that may be considered to address anorexia and cachexia.

- **MYTH**: Artificial nutritional support is indicated for all palliative patients who experience anorexia or cachexia.
- **FACT:** A Cochrane review concluded that there are insufficient good quality trials to make any recommendations for practice with regards to the use of medically assisted nutrition in palliative care patients.

- **MYTH:** Aggressive efforts to increase oral nutrition are always indicated.
- **FACT:** In the setting of advanced illness, oral nutrition may be best guided by emphasizing "what one likes" rather than "what is right or of value" nutritionally. As the illness progresses, intake inevitably decreases. Ice chips, small sips of beverages, and good mouth care becomes the norm.

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