Clinical manifestations of vitamin deficiencies

Vitamin A: Nictalopie, photophobia, hyperkeratosis, Bitot’s spots
Thiamine (vitamin B1): Beriberi, chronic heart disease, encephalopathy (Wernicke)
Riboflavin (vitamin B2): Blurry vision, cheilosis, smooth tongue
Niacine/nicotinic acid (vitamin B3): Pellagra (diarrhea, dementia, dermatitis)
Pyridoxine (vitamin B6): Seizures, ataxia
Cobalamin (vitamin B12): Pernicious anemia
Vitamin C: Scurvy, poor wound healing
Vitamin D: Osteomalacia, rickets
Tocopherol (vitamin E): Hemolytic anemia, weakness, diplopia
Folate: Megaloblastic anemia
Phytonadione (vitamin K): Coagulopathy, mucosal bleeding, menorrhagia, easy bruising

Adapted from reference 4.

The outcome for individuals with eating disorders can be described by the rule of thirds. One-third of individuals improve, do well, and lead normal lives. Another third improve but manifest abnormal eating attitudes and behaviors when stressed. The remaining third follow a chronic and relapsing course, and a significant percentage die prematurely of medical complications or suicide. Patients in this last third have a relatively poor prognosis, which is determined by the severity of the malnutrition itself, psychiatric comorbidity, and a high recidivism rate (1, 2).

Patients with anorexia nervosa have a mortality rate of up to 5.6%, and 10% to 31% may never recover. It can take up to six years to recover completely (1, 6, 16-18). Patients can evolve throughout the spectrum of eating disorders—as many as 50% of patients with anorexia nervosa subsequently develop bulimia nervosa. Up to 45% of patients may never achieve marriage or stable relationships (1-7). The restricting subtype of anorexia nervosa has a worse prognosis than the compulsive subtype (1, 13-16). The restricting subtype of anorexia nervosa has a worse prognosis than the compulsive subtype (1, 14-17).

Restricting type: The patient does not perform binge-eating or purging behavior (self-induced vomiting or misuse of laxatives, diuretics, or enemas).

Compulsive (also known as “binge eating-purging type”): The patient regularly engages in compulsive (binge) eating or purging behavior (self-induced vomiting or the misuse of laxatives, diuretics, or enemas).

Patients with bulimia nervosa have a slightly better prognosis than those with anorexia nervosa, with 50% recovering within two years (1, 14-17). The mortality in the acute phase is the same, however, at 5.6% (1, 16-18), and the frequency of relapses is higher. As many as 46% of individuals with bulimia may still live with an eating disorder six years later (1, 16, 17). Psychiatric comorbidity is also prominent; 55% of patients have associated mood disorders and up to 42% have substance abuse problems (1, 16, 17).

Factors that predispose to poor prognosis for both AN and BN include prolonged disease duration, low initial weight, premenstrual azotemia, premorbid obesity (in the case of bulimia), compulsive exercise, conflictive family relationships, obsessive-compulsive traits and neurotic personality (1, 5, 19, 20).

Diagnosis

The differential diagnosis of the patient admitted with NI is very broad and includes diseases that predispose to severe body wasting and chronic inflammation, including malignancy, inflammatory bowel disease, celiac disease, malabsorption, diabetes mellitus, hyperthyroidism, hypopituitarism, adrenal insufficiency, chronic disease or infection, and superior mesenteric artery syndrome.

In addition to the possible overlap of psychiatric comorbidity, a starved brain and disordered eating can indicate a primary psychiatric disorder such as depression, mood disorder, substance abuse, anxiety disorder, and OCD. Schizophrenia is rarer; individuals with a starved brain may show evidence of thought disorder, but the mentation tends to clear as the eating disorder resolves (2, 13-15).