Background  Taste warns us of danger and is a stimulus for appetite. The most common taste disorder is dysgeusia, commonly defined as a qualitative distortion of the sense of taste. Though taste acuity declines with age, many patients with age-related hypogeusia are not subjectively bothered by it. Rather patients are more often to report dysgeusia when they experience an abrupt alteration resulting in an overly strong/weak taste as occurs in many progressive illnesses frequently encountered by palliative care clinicians. Among the seriously ill, dysgeusia can adversely influence nutrition and quality of life as well as lead to food aversions, distorted smells, and loss of eating pleasure (1,2). This Fast Fact will assist clinicians caring for seriously ill patients better identify and care for patients with dysgeusia.

Etiologies   Dysgeusia is more closely associated with medical illness than age. Much of the medical literature on dysgeusia has been focused on cancer patients, as cancer is a putative risk factor for dysgeusia. In cancer, dysgeusia is most associated with chemotherapy and radiation; yet there is considerable intra-individual variability regarding the intensity of impact (3). Patients with head and neck cancer and those exposed to tyrosine kinase inhibitors or taxane based regimens are most at risk (4,5). Common non-malignancy causes of dysgeusia in the seriously ill include, infections, zinc deficiency, hypothyroidism, Cushing’s Syndrome, liver disease, sequelae from ENT operations, and medications such as psychotropics, opioids, and antihypertensives.

Medical Evaluation   Patients often fail to volunteer symptoms of dysguesia to their clinicians and when they do, the symptom is often ignored (6). Hence, patients with cancer or other described risk factors should be routinely asked about distorted smell and taste.

- Do you have an altered sense of smell or taste which interferes with eating?
- Do you experience a metallic taste when eating?
- Have you developed aversions to certain foods? (7)

In addition, clinicians should evaluate for:

- Recent ear or respiratory infections, Bell’s palsy, cranial nerve deficits, or dental procedures.
- Cheilitis -- a painful inflammation and cracking of the corners of the mouth
- Mucositis or thrush
- Gastrointestinal symptoms such as dysphagia, weight loss, appetite changes, and early satiety
- Thyroid function testing if clinically appropriate
- The “3 drop test” is available to measure taste thresholds and identify hypogeusia by using sugar, citric acid, sodium chloride and caffeine or quinine; however, most experts believe such tests likely offer little guidance in the management of dysgeusia (8).

Impact on Quality of Life (QOL)  Chemotherapy induced dysgeusia most often resolves within months. However, in that time, it can have a devastating effect. Because eating habits are shaped by life experiences and life experiences are shaped by eating habits, dysgeusia can alter customs within the family unit and lead to a reduction in socialization around meals (9,10).

Non-Pharmacological Management Strategies   Many with dysguesia try home remedies such as lemon juice, candy before meals, sweet drinks, plastic utensils, drinking from a straw, brushing teeth and tongue before meals, and using salt, soda or antibacterial mouthwashes before eating even though there is little evidence to their use (11). There is weak evidence for flavor enhancers (e.g. salt, sugar, monosodium glutamate, monopotassium glutamate) during chemotherapy (12). Randomized trials of dietary counseling had mixed results (13). Acupuncture is likely ineffective (14).

Pharmacological Management Strategies   First, clinicians should treat identified reversible causes if consistent with goals of care and the patient’s overall medical situation. Once these are ruled out, clinicians may consider empiric therapies. There are a multitude of ineffective drugs which clinicians should be aware: corticosteroids, vitamin A, gabapentin, gingko biloba, glutamine, and amifostine have all
been shown to be non-beneficial (15-17). Other medications may help, however the data are not fully convincing. A randomized trial demonstrated taste improvement with alpha lipoic acid (available over the counter); however, other studies did not reproduce this finding (18-20). Dronabinol at low doses such as 2.5 mg twice daily may improve dysgeusia in advanced cancer without improving appetite; however, it is not always covered by insurance (21). Multiple randomized trials of zinc supplementation at doses between 30 to 50 mg three times a day demonstrated a modest improvement in taste acuity and taste quality among individuals undergoing chemotherapy and/or radiation (22,23). This benefit was not observed in a non-cancer population (24).

Summary Although there are no guidelines for the assessment and management of dysgeusia, clinicians should inquire about dysgeusia in at risk patients to better identify reversible causes such as thrush, mucositis, and hypothyroidism. Much like fatigue, anorexia, or other common constitutional symptoms in serious illness, inquiring about dysgeusia can better ennoble clinicians to the patient experience. Zinc at doses of 100-150 mg daily has modest benefits but it can cause adverse effects such as eczema and gastrointestinal distress. Those who do not tolerate zinc or fail to respond after 1-2 months may benefit from dronabinol 2.5 mg twice daily or alpha lipoic acid.

References


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