

DYSGEUSIA (BAD TASTE)

Introduction

The sensation of a bad, or unpleasant, taste is common – indeed most individuals have such symptoms, albeit only short-term. Long-standing unpleasant taste is infrequent and usually reflects local disease such as gingivitis and/or periodontitis.

Definition

Dysgeusia has been variously defined as a disgusting oral taste or altered taste sensation.

Hypogeusia is defined as a reduction in all 4 taste modalities i.e. sweet, salty, sour and bitter. *Ageusia* occurs when none of these 4 taste modalities can be perceived. A spontaneous, continuously altered, often metallic taste in the mouth is usually drug related and has been termed “phantogeusia”. Severe long-standing dysgeusia can be clinically significant as it may lead to individuals losing interest in food and their altered dietary intake can result in nutritional deficiencies with exacerbation of any pre-existing disease.

Aetiology

A wide range of disorders can give rise to an unpleasant taste in the mouth. Most commonly a bad taste arises from gingival inflammation (e.g. gingivitis and acute necrotising ulcerative gingivitis), periodontal inflammation (e.g. periodontitis with or without lateral periodontal abscess), or infection about an erupting wisdom tooth (pericoronitis). Upper respiratory tract infections such as tonsillitis and sinusitis may also give rise to dysgeusia (often with accompanying oral malodour). Long-standing oral dryness (xerostomia) can cause a loss of taste and occasional dysgeusia.

There are a wide variety of other causes of dysgeusia (summarised in Table 1), however, these are rare and affected patients are likely to have significant, clinically-detectable disease.

Long-standing dysgeusia without a likely local or systemic cause (idiopathic dysgeusia) can be referred by individuals with an underlying mental illness such as depression. Often such individuals have other oral symptoms without a cause, such as a burning sensation of the mouth and the symptom of xerostomia without features of oral dryness.

Various medications can give rise to an abnormal taste – patients sometimes complaining of a metallic or salty taste. The most commonly implicated agents appear to be antirheumatic, cytotoxic agents, captopril and penicillamine, although the commonly prescribed metronidazole frequently gives rise to a metallic taste. A summary of the drugs that give rise to dysgeusia is provided in Table 2.

Management

The management of dysgeusia principally entails improving oral hygiene, resolving any acute gingival or periodontal disease and lessening the risk of further similar disease.

Antibacterial mouthrinses containing chlorhexidine or triclosan, or oil-water-based preparations will further lessen the risk of gingival and/or periodontal disease.

Long-standing xerostomia should also be managed.

Patients with non-oral sources of dysgeusia, or without an obvious cause of dysgeusia, should be managed by appropriate specialists. There is little evidence that zinc or copper supplementation will

lessen idiopathic xerostomia, thus the majority of affected patients should be assessed, and when appropriate, managed by specialists of clinical psychology or psychiatry.

Prognosis

Most patients with dysgeusia have resolution of symptoms when the cause is identified and corrected. Patients with idiopathic dysgeusia will also generally have resolution of symptoms – often spontaneously – although some will require clinical psychology or psychiatry management.

Table 1. Reported causes of dysgeusia

| |
|---|
| <p><u>Common causes</u> Oro-dental infection Upper respiratory tract infection Sinus infection</p> |
| <p><u>Less common</u> Idiopathic dysgeusia Mental illness (e.g. depression) Drugs (see Table 2)</p> |
| <p><u>Uncommon</u> Neurological Stroke Head trauma (e.g. fractures of the petrous temporal bone) Cranial nerve disorders e.g. damage to the chorda tympani during middle ear surgery Carotid artery dissection with involvement of the chorda tympani Facial nerve palsy Multiple sclerosis Borrelia burgdorferi associated - neuropathy Gastrointestinal Irradiation of the head and neck Gastrointestinal reflux disease Hepatitis and hepatic cirrhosis Malabsorption (e.g. cystic fibrosis) Crohn's disease Others Diabetes mellitus Niacin (vitamin B3) deficiency Zinc deficiency Copper deficiency Mercury poisoning</p> |

Table 2. Medications associated with altered taste

| |
|--|
| <p><u>Antirheumatic agents</u> Penicillamine, levamisole, gold, levodopa</p> |
| <p><u>Antithyroid agents</u> Carbimazole, thiouracil</p> |
| <p><u>Anti-inflammatory agents</u> Phenylbutazone, acetylsalicylic acid</p> |
| <p><u>Anti diabetic drugs</u> Biguanides</p> |
| <p><u>Cytotoxic agents</u> Doxorubicin, methotrexate, vincristine, carmustine</p> |
| <p><u>Diuretics and antihypertensive agents</u> Captopril, diazoxide, ethacrynic acid</p> |
| <p><u>Antimicrobials</u> Metronidazole, lincomycin, ethambutol</p> |
| <p><u>HIV protease inhibitors</u> Amphotericin</p> |
| <p><u>Anti-seizure agents</u></p> |

Carbamazepine, baclofen

Others

Phenindione, allopurinol, vitamin D, oral contraceptive pill

Table 3 Clinical assessment of dysgeusia

The clinical assessment of a patient complaining of dysgeusia includes:

History of present complaint

In particular:

- duration
- site
- initiating, precipitating and relieving factors
- associated oral symptoms (e.g. burning sensation, oral dryness)

Social history

In particular:

- social aspects likely to increase psychological stress

Medical history

In particular:

- disease associated with xerostomia
- drug history
- upper respiratory tract infection(s)

Clinical examination

In particular:

- cervical lymphadenopathy
- salivary gland enlargement
- assessment of oral hygiene, gingival and periodontal inflammation
- features of long-standing xerostomia

Additional investigations*

Usually requires referral to appropriate specialists – e.g. otorhinolaryngology, rheumatology, gastroenterology, clinical psychology.

*There is rarely any need to undertake detailed laboratory investigations in the Oral Medicine setting.

Further reading

- 1) Deems DA, Yen DM, Kreshak A, Doty RI. Spontaneous resolution of Dysgeusia. *Arch Otolaryngol Head Neck Surg* 1996;122:961-63.
- 2) Prasad AS, Miale A, Farid Z, et al. Zinc metabolism in patients with the syndrome of iron deficiency, anaemia hepatosplenomegaly, dwarfism and hypogonadism. *J Lab Clin Med*.1963;61:537-49.
- 3) Schiffman SS. Taste and smell in disease. *New Eng J* 1983 (2 parts); 308: 1275-9; 1337-43.

Links

www.tau.ac.il/~melros/Society.html - International Society for Breath Odor Research (accessed 12nd April 2005).