Spontaneous Resolution of Dysgeusia

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**Background:** Dysgeusia, distortion of taste perception, is a debilitating disorder that affects thousands of Americans. Presently, most forms of dysgeusia are considered to be untreatable, and no data are available for counseling patients on the probability of recovery.

**Objective:** To examine the probability of resolution of symptoms among patients with dysgeusia who were evaluated at the University of Pennsylvania Smell and Taste Center, Philadelphia, from January 1989 to December 1994.

**Design:** In this retrospective study, 117 patients with primary complaints of dysgeusia were initially identified from a population of 429 patients with smell and taste disorders who were seen during this period.

**Participants:** Forty-eight patients agreed to participate. Each patient completed a telephone interview and a questionnaire that contained a dysgeusia severity rating scale, medical health questions, and the Beck Depression Inventory.

**Results:** Two thirds of the patients experienced spontaneous resolution of the dysgeusia, with the average duration being 10 months. A distinct relationship between the resolution of dysgeusia and depression was identified.

**Conclusion:** These findings, along with the evidence that some dysgeusias are treatable, bode well for a disorder that was heretofore considered by many physicians as unrelenting.


**DYSCGEUSIA, DISTORTED taste perception, is a markedly debilitating disorder.** Our research has shown that 35% of patients who suffer from this condition have clinical signs and symptoms of frank depression. Of the patients who have presented to our center, this subset of patients has demonstrated the greatest aberration in affect and overall deficit in daily functioning. This is not surprising, since dysgeusia, perhaps much more so than taste loss, affects food intake and its reinforcing properties—functions that are essential for survival.

Dysgeusia has been linked to such factors as periodontal disease, sinus disease, and the use of antidepressants. In addition, dysgeusia has been reported as an unusual symptom associated with a myriad of systemic disorders, including stroke and renal failure. Presently, few treatments of dysgeusia exist, and no data are available for counseling patients on the probability of recovery. This is likely owing to the wide diversity of the patient population and to a generally poor understanding of the disease processes that are involved. Therefore, to examine the probability of recovery, we performed a retrospective study of the frequency of resolution of dysgeusia in patients who presented to our center with the primary complaint of dysgeusia from January 1989 to December 1994.

The duration of symptoms ranged from 11 to 110 months. Idiopathic dysgeusia was the most common, single etiologic category (n=19, 40%); however, 60% (n=29) of the patients had identifiable causes of dysgeusia (Table).

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PATIENTS AND METHODS

STUDY GROUP

The subject group comprised 429 patients who presented to the University of Pennsylvania Smell and Taste Center during the study period. After obtaining informed consent, medical records were reviewed, and 107 patients were selected for the study based on the fact that these patients had presented with primary taste distortion. Inclusion criteria were based on findings from our previous report which demonstrated that true dysgeusia, and not distortion of “flavor” secondary to dysosmia, necessitates that the taste distortion be (1) identifiable (eg, bitter, sour) and (2) present even in the absence of an oral stimulus. These selection criteria ensured a study group that would be uncontaminated by persons who would have flavor distortion secondary to retronasal dysosmia. Forty-eight of the initial patient group were able to be contacted and agreed to participate. As observed in an earlier set of patients, those patients who presented with primary complaints of dysgeusia were more commonly women than men (69%). The mean±SD age of the study group was 62.0±14.3 years.

QUESTIONNAIRE

A 25-item questionnaire was sent through the mail to each participant. Questions were asked concerning patient demographics, use of medications, and symptom complaints. A 6-point category rating scale (identical to the one completed by the patients on their initial visit to our center) was included to ascertain the presence and magnitude of their dysgeusic sensation. Patients also completed the self-administered Beck Depression Inventory. Historically, dysgeusia has been considered to be a chronic, debilitating, and unrelenting disorder that is most commonly of an idiopathic origin. However, the results reported here indicate that there is a two-thirds chance of resolution within 2 years, with the average patient experiencing a resolution of symptoms within 1 year. Although the data confirm that idiopathic dysgeusia was the most common single etiologic category (40%), 60% of the patients had identifiable causes.

A subset of patients with dysgeusia were identified in this study who benefited from therapeutic intervention, including those patients with dysgeusia secondary to periodontal or paranasal sinus disease, gastroesophageal reflux disease, estrogen depletion at menopause, and vitamin B₁₂ deficiency. The latter 2 conditions, notably, have also been associated with burning mouth syndrome.

Interestingly, in patients with dysgeusia of an idiopathic origin, the disorder was less likely to resolve spontaneously than that in patients with dysgeusia secondary to identifiable causes. This finding is of uncertain significance and requires further examination in a larger sample. The use of strict criteria in patient selection contributed to the low numbers of patients within each causal category of the present study, but it ensured accuracy in identifying true dysgeusias. This was particularly useful in excluding patients from the study who were suffering from dysosmia that was confused as a flavor distortion.

Patients whose dysgeusia had resolved had lower Beck Depression Inventory scores on their initial visit to the center than did patients in whom the disorder had not resolved (mean±SD scores, 7.3±5.6 vs 11.3±7.2, respectively) (F [1, 45] = 4.41, P = .04), despite having equivalent ratings of dysgeusia severity at initial presentation (mean±SD scores, 3.1±1.0 vs 3.3±0.8, respectively) (F [1, 45] = 0.745, P = .39). A relationship between the cause of dysgeusia resolution of symptoms was seen, inasmuch as patients with identifiable causes of dysgeusia demonstrated a greater probability for resolution than those with dysgeusia of an idiopathic origin (χ² = 8.93, df = 1, P < .01); this was likely owing to the significant subset of patients with treatable dysgeusia (24% [7/29]). It was not possible to establish meaningfully whether the frequency of resolution of dysgeusia differed among the identifiable causes (eg, by χ² analysis), because of the low-sample size with regard to each group (Table).
showed that 32% of patients with unilateral chorda tympani damage and 78% of patients with bilateral chorda tympani damage experienced unrelenting dysgeusia. Those data, combined with the present results, remind the otologic surgeon that taste disruption secondary to chorda tympani damage frequently does not resolve,11 and it "... may become a major source of disquiet for the surgeon."12

It is striking that the patients who were most likely to demonstrate resolution of dysgeusia in our study group were those who initially presented with lower levels of depression. In our previous report, we demonstrated a relationship between antidepressants and dysgeusia; however, it is still unclear whether this was owing to the affective disorder or to the pharmacotherapy itself. Nevertheless, knowledge of the association between dysgeusia and depression may help to identify those patients who are less likely to recover spontaneously from dysgeusia, allowing for the initiation of therapeutic intervention for the affective component of the disease.

Selection bias, which is inherent in studying a non-random sample, may have affected generalization of the present results. Certainly, patients whose symptoms had already resolved would not present to the Smell and Taste Center for evaluation. This would suggest that the probability for resolution of dysgeusia overall is even greater than that outlined in the present study. Nevertheless, the discovery that spontaneous resolution of dysgeusia is likely, along with the finding that some dysgeusias are, in fact, treatable, bode well for a disorder that was heretofore considered to be unrelenting.

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REFERENCES