

## Dysgeusia: An Atypical and Neglected Psychiatric Symptom Induced by Fibrillary Astrocytoma

To the Editor:

Brain tumors can be associated with a variety of psychiatric symptoms,<sup>1</sup> possibly accompanied by no other physical or neurologic signs. We describe dysgeusia as an atypical and neglected psychiatric symptom of brain cancer.

### CASE REPORT

A 31-year-old woman with a 4-month history of dysgeusia (which had appeared suddenly) reported “having a salty taste in the mouth after eating any kind of food.” She had had Hodgkin’s lymphoma 10 years previously, which had been treated with chemotherapy and radiotherapy. She also had had Hashimoto thyroiditis, for which she was still taking levothyroxine (50 µg daily).

The patient had not been taking any medication immediately before the onset of dysgeusia. Neurologic examination revealed nothing else of note. She had no history of depression, anxiety, or psychiatric disorder or therapy.

The patient underwent a battery of tests for psychodiagnostic evaluation. Hamilton depression rating revealed mild depression (15 at baseline; normal range 0-8), and State-Trait Anxiety Inventory Form Y 1-2 revealed mild anxiety (50 at baseline; normal range 0-41). The patient scored 8 on the visual analogue scale.

We hypothesized that the abrupt appearance of dysgeusia might be related to a neurologic disorder; thus, magnetic resonance imaging of the brain was performed with and without intravenous paramagnetic contrast. Results revealed a large midline chiasmatic mass (14 × 16 mm) extending to the suprasellar region and exhibiting low signal intensity on T1 and high signal intensity on T2.

The mass had caused displacement of the anterior cerebral artery, compressing the carotid siphon laterally and the

pituitary gland downward, and deflecting the hypothalamic-hypophyseal stalk to the bottom left (Figure 1A, B). Histologic examination of the mass via endoscopic endonasal transsphenoidal biopsy showed a fibrillary astrocytoma (Figure 1C).

The patient underwent a subtotal removal of the lesion, recovered uneventfully, and was discharged 10 days later. At her final examination, all symptoms (ie, dysgeusia, anxiety, and depression) had disappeared. Six months after surgery, she continued to have normal taste and reported no recurrence of the symptoms.

### DISCUSSION

Taste disturbance has been found in association with local (eg, low salivary flow rate), systemic (eg, viral infection), and psychologic (eg, depression) factors.<sup>2,3</sup> Because the tumor mass was localized within the chiasmatic area extending to the suprasellar region and its size involved no damage to the gustatory cortex, dysgeusia was not considered as a neurologic sign of the tumor. Indeed, because psychiatric symptoms (depression and anxiety) might be indicative of a possible brain tumor, as previously documented,<sup>4</sup> and depression and anxiety are sometimes associated with taste disturbance,<sup>5</sup> it is likely that abruptly appearing dysgeusia might constitute an atypical psychiatric manifestation.

A relationship between mood and taste has been recognized for many years. Taste disturbance, or dysgeusia, might be an “atypical and neglected symptom of depression,” even if it has not been recognized as a true physiopathologic symptom and little work has been done on the mechanisms whereby taste is disturbed in affective disorders.<sup>5</sup> Taste can be extremely plastic and is profoundly affected by modulation of the serotonin or noradrenergic systems in normal healthy individuals, and it is supposed that the taste threshold is directly related to the anxiety level.<sup>5</sup>

### CONCLUSIONS

To our knowledge, this is the first case of an abrupt occurrence of dysgeusia due to a fibrillary astrocytoma as a psychiatric symptom accompanied by anxiety and depression. This case report illustrates the need for a prompt assessment with neuroimaging studies, for a more accurate and early diagnosis, when a patient presents with a sudden onset of psychiatric symptoms, even if they are atypical (eg, dysgeusia).

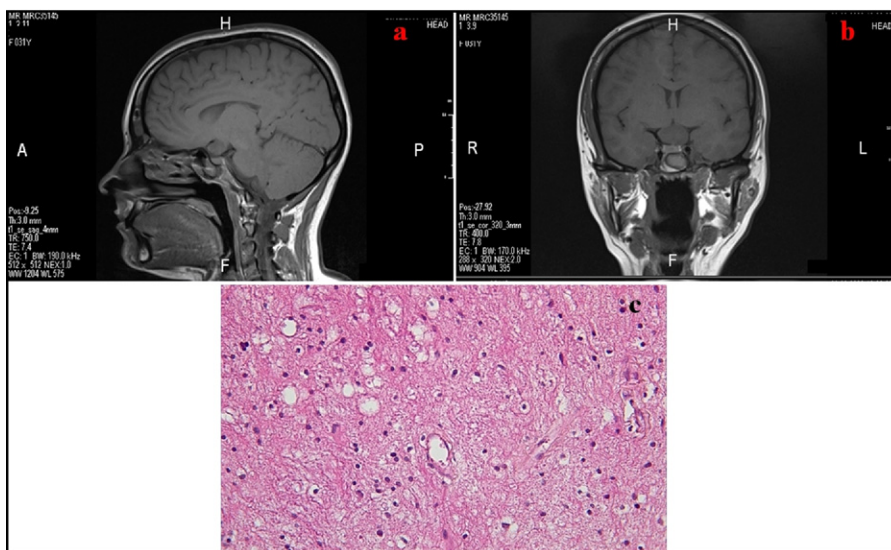
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**Figure 1** Sagittal (A) and coronal (B) magnetic resonance imaging of the brain, showing a 14 × 16-mm midline chiasmatic mass compressing the pituitary gland and deflecting hypothalamic-hypophyseal stalk to the bottom and left. C, Moderately cellular tumor composed of uniform fibrillary astrocytic cells with slightly microcystic stroma (hematoxylin–eosin 20×).

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