The Bitter Touch: Acquired Tactile-Gustatory Synesthesia

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Abstract

Introduction. Gustatory sensation in response to tactile stimulation has been reported to occur in only 0.6% of synesthetes and has rarely been formally described.

Methods. Case Study: A 29-year-old female with schizoaffective disorder – depressed subtype, two months prior to presentation, began noticing that when she touched objects, she would experience an abnormal taste in her mouth. When she would touch specific items with her fingertips, for instance wood, bedsheets, tables, cups, plates, silverware, metal, trash cans, and toothpaste would induce a bitter taste. Touching wood caused the most intense bitter taste. Touching glass did not precipitate a taste.

Results. Mental Status Examination: Disheveled and guarded with minimal eye contact. Anxious and agitated. She believes people are stalking her and that cell phones, radios, and computers emit radiation which makes her head burn as if it is on fire. She perceived that inanimate objects, such as furniture, were staring at her. Other: CT scan of brain with and without contrast: normal.

Discussion. This could be due to neural overactivation between brain regions due to a neighborhood effect, with cross-firing of connecting fibers. The cortical taste area of the brain lies within the Brodmann area 43 of the parietal lobe which includes the preas well as post-central gyri extending into the parietal operculum. Brodmann areas 3, 1, and 2 in the postcentral gyrus is where the primary sensation for touch is mediated. The stimulation in adjacent and overlapping anatomical structures may be explained by ephaptic transmission with firing of one causing discharge of the second, yclept the adjacency principle.This co-localization hypothesis is further supported by the occurrence of pathological state of seizures which manifest both tactile and gustatory sensation. Such a hypothesis would be supported by Anderson's 1886 observation discussing a peculiar sensation in the right arm and hand elicited concurrently with a bitter sensation in the mouth. Through an overflow phenomenon, touch may induce a diffuse serotonergic discharge to more remote regions of the brain that may mediate their functions through serotonin, such as taste. Possibly, other pathology may be invoked to explain this synesthesia. A deprived sensory system may be hyper-receptive to stray or overflow of sensations which are then interpreted within the sensorily deprived sensory system, as in Charles Bonnet syndrome. In the chemosensory sphere, sensory deprivation is associated with chemosensory hallucinations. If the patient manifests gustatory deficit, it may have predisposed her to sensitivity to such stray or overflowing sensory stimulus from touch manifesting as gustation. In those who present with synesthesia, investigation of pathology in the sensory system of the receiving concurrent sensation is warranted.

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Dissociative Identity Disorder in an Inpatient Setting

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Abstract

Despite recognition in current and past versions of DSM, dissociative identity disorder (DID) remains a controversial psychiatric disorder which hampers its diagnosis and treatment. Factors that lead misdiagnosing of DID are the unfamiliarity with spectrum of dissociative disorders, the existence of feigned DID, the reluctance of individuals with DID to present their dissociative symptoms, and lack of knowledge and appreciation of its epidemiology which is shown to have 1.5% lifetime prevalence. An accurate diagnosis allows the appropriate interventions leading to fewer hospitalizations.

KC is 28 y.o. female with a psychiatric history significant for polysubstance use, PTSD, and GAD, who presented to the ED due concern for DID per mother. Prior to presentation, she had thrashed her mother's home of which she denies recollection. She has a history of early sexual trauma by her own family. She screened 44 on the Dissociative Experiences Scale (DES). Throughout her hospitalization, she exhibited questionable lapses of disassociation, although there were no noted changes of posture, dress, speech, or acknowledgement of alters. She was discharged on Remeron 15 mg, Risperdal 2 mg, and Prazosin 2 mg with outpatient resources for trauma-based therapy.

DID is characterized by two or more distinct identities or personality that coincide with fluctuating states of consciousness and changing access to autobiographical memory. The neurological similarities between personality states in DID and PTSD subtypes support a trauma-related etiology of DID. Although there are many interviewing tools, the DES has been the most widely used clinically. Although collateral information, detailed history, and DES were concerning for DID, observation did not show distinct dissociative episodes as discussed by collateral (alter described as destructive and cold towards her own infant) although the hospital environment may not have provided enough stress for patient to transition from one personality to another.

The International Society for the Study of Trauma and Dissociation proposes a phase-oriented treatment approach: 1) establishing safety, stabilization, and symptom reduction; 2) confronting, working through and integrating traumatic memories; 3) identity integration and rehabilitation. From inpatient standpoint, phase 1 and 2 may be promptly addressed. Besides initiation of Remeron and Risperdal (consistent with treatment of DID in two prior case reports), implement grounding techniques and coping mechanisms against triggers for dissociative episodes. Inpatient screening can facilitate earlier accurate diagnosis, faster and more targeted interventions, prevent unnecessary direct and indirect societal costs, and, most importantly, improve quality of life for those with the disorder.

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