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Blind Taste Testing: A Case Study of an Emergency Room RN with Covid-19 Anosmia & Hypogeusia (Loss of Taste & Smell)

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Background

- SARS-CoV-2 is the cause of COVID-19 which has a diversity of symptoms (from mild to severe)¹
- 1st death reported 11 Jan 2020²
- A loss of the sense of taste and smell in some patients, noted as most prevalent symptom⁴; (early on not thought a symptom)^{3,4}
- The emergency room RN (subject of case study), was wearing personal protective equipment (PPE) consisting of an N-95 mask and face shield during a procedure on a patient with Covid; the patient coughed forcefully during the procedure and was **not** wearing a mask (occurred before patients were being universally masked).
- The subject's spouse conducted blind taste testing with various spices, flavors, and fruits after the subject was unable to taste Wasabi

Objectives

- To describe a subject's anosmia related to COVID-19
- To alert others of possible taste deficiencies (anosmia) that may occur with COVID-19 and the nursing implications of anosmia.

Design/Sample

- Individual case study
- Case study of a Healthcare provider with a confirmed positive Covid diagnosis during the Covid pandemic after treating a Covid + patient.

Methods

- Subject had posted on social media video footage of blind taste-testing sessions after positive diagnosis of Covid
- Primary Investigator (PI) contacted the subject and obtained written consent from subject to feature as a case study
- PI recruited nurse research assistant
- Video footage of blind taste-testing sessions were reviewed and transcribed
- Further information was obtained through email correspondence.

Data

The subject was male, had O+ blood type, did not take medications or supplements, and was not treated or hospitalized for Covid.

Results-Spices



Table 1. Responses to Spices

Spice	Response
Curry	"Is it flour? Tastes like ashes in my mouth"
Cajun	"It burns, is it black pepper?"
Chili powder	Could feel texture, could not taste, but noted "my nose is watering"
Cayenne	"I don't taste anything, it just burns."
Chipotle	"Is it citrusy? My tongue is screaming..." was a "tiny bit sweaty."

Results-Liquids



Table 2. Responses to Liquids

Liquid	Response
Flavored oils	"Water"
Worcestershire	"Is it vinegar?"
Dijon Mustard	"Soy sauce, jelly, texture is horrible"
Catalina salad dressing	"It's just disgusting, but I don't know"
Fish sauce	"Awful, is it vinegar?"
Soy Sauce	"Tastes salty"
Tabasco	"Taking my breath away, like a hot sauce?"
Water Enhancers	Response
Pina Colada	"Is it berry? It tastes like berries"
Strawberry	"Is it a lemonade?"
Watermelon	
Blackberry	"Watermelon strawberry, or.. melons?"
Lemonade	

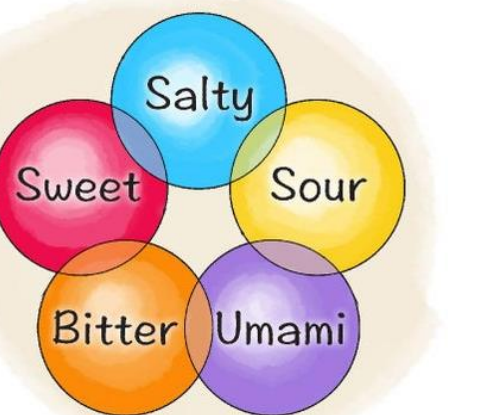
Table 3. Responses to Fresh Fruits

Fruit	Response
Kiwi	Identified by texture only
Peaches	Identified by texture only
Pears	Identified by texture only
Papaya	Identified by texture only
Dragon Fruit	Identified by texture only
Mango	Could not identify
Tamarin	Tasted some "bitterness"



Discussion

- Simple methods to determine if sense of taste is impaired could aid in early detection to reduce the spread of COVID-19
- Blind tasting of items with similar textures, as texture may clue the subject to the item for early detection of Covid-19.
- Saltiness was detected, spicy was interpreted as "burning" with nose watering and sweating
- Subject could not detect scents.



Conclusions/Implications

- This taste testing table can provide insight for others who may experience anosmia with COVID-19
- Patients with anosmia from Covid or other causes may possibly enjoy food textures as loss of taste and smell impact appetite
- Anosmia has been shown to decrease appetite which could lead to poor skin integrity for elderly/compromised individuals due to malnutrition or weight loss^{5,6}
- To combat anosmia, provide patient education/interventions to enhance food appearance and texture.

References

- Scan QR code for references
- Photos of taste testing items courtesy of subject's spouse.

