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Mini Review

COVID-19 Smell, and Taste Loss can be Restored Using Bitter Tasting Herbs: Deep Nerve Stimulation as a New Medical Hypothesis

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Abstract

The loss of smell and taste has reported as a serious problem among patients with COVID-19. No exact causes have been identified to explain this phenomenon. A recent study has found a genetic link that may explain the phenomenon. The main aim of this study was to establish a new medical hypothesis to explain the occurrence and treatment of this problem. We have previously found that if patients with COVID-19 and loss of smell and taste can restore both smell and taste by the intake of bitter tasting herbs such as Ammi visnaga. Many patients have restored lost smell and taste associated with COVID-19 using Ammi visnaga within 1 - 3 days. We think that neurological involvement is beyond the phenomenon and deep nerve stimulation is the reason beyond restoring lost smell and taste sensation. Taken together, our new medical hypothesis can be stated as: "Deep nerve stimulation can restore both smell and taste sensation".

***Keywords**: Smell; Taste; COVID-19; Stimulation; Genetic Link; Nerve*

Introduction

Chemosensory dysfunction (CD), which includes persistent olfactory (POD) and gustatory (PGD) dysfunctions, is one of the most common symptoms of long-Coronavirus Disease 2019 (long-COVID-19) [1]. CD will be a severe health problem in the near future, given the high prevalence of CD in people who have COVID-19 for the first time, their high frequency in people who have reinfections [2] and their high frequency in people who have been vaccinated against COVID19 [1]. Unlike other sensory deficiencies, the impact of CD on a person's well-being is frequently neglected or downplayed by individuals who do not deal with these disorders on a regular basis [3]. Nonetheless, olfactory, and gustatory perception integrity is important for well-being, as it influences nutrition, social behavior, and the ability to protect oneself from environmental threats [4].

Shelton., *et al*. [5] gathered data on COVID-19-related loss of smell or taste from 69,841 people via online surveys. They conducted a multi-ancestry genome-wide association research and discovered a substantial genome-wide region near the UGT2A1 and UGT2A2 genes. Both genes are found in the olfactory epithelium and are involved in odorant metabolism. These findings establish a genetic link to the molecular mechanisms behind COVID-19-related olfactory or gustatory loss.

COVID-19 signs such as a loss of smell (anosmia) or taste (ageusia) are among the earliest and most reported markers of the acute phase of SARS-CoV-2 infection. It differs from other viral symptoms in that it appears suddenly and there is no mucosal blockage [6]. While many COVID-19 patients complain of a loss of smell or taste, the underlying cause is unknown [7]. The researchers used self-reported data from over 1 million participants to conduct a genome-wide association study (GWAS) of COVID-19-related loss of smell or taste in this study [8]. The researchers identified SARS-CoV-2 test-positive individuals who reported a loss of smell or taste and compared them to test-positive individuals who did not report a loss of smell or taste by asking study participants to report the symptoms they had during their COVID-19 experience.

Klopfenstein., *et al*. [9] conducted a study to determine the prevalence and characteristics of anosmia and dysgeusia in COVID-19 patients. The study included 70 patients, with the mean age of 57 years, 29 males (41%). Twenty-seven individuals (39%) had pneumonia. The three most common symptoms were fatigue (93%), cough (80%), and fever (77%). Anosmia (53%) and dysgeusia were both present in (48%). Anosmia lasted an average of 7.4 days, with 51% of patients recovering before 28 days. At the end of the follow-up, only one patient with anosmia had not recovered. Anosmia patients had pneumonia less frequently (10/37 vs 17/33, p = 0.036), were hospitalized less frequently (13/37 vs 20/33, p = 0.033), and required oxygen therapy less frequently (6/37 vs 17/33, p = 0.002). There were no statistically significant differences in viral load between anosmia patients and non-anosmia patients (5.5 [2.08.6] vs. 5.3 [2.18.5] log copies/mL, respectively, p = 0.670). COVID-19 had a fatality rate of 6% in our trial, with four deaths. Taken together, in half of COVID-19 patients, anosmia and dysgeusia are present. Anosmia lasted on average 7 days, with a good outcome in less than 28 days.

Alkhatib [10] showed that the use of herbs that have strong bitter nature was able to restore taste and smell loss following exposure to COVID-19.

No exact reasons have been identified to explain loss of smell and taste associated with COVID-19. The recent study by Shelton., *et al*. [8] tried to establish a genetic link between COVID-19 and smell and taste loss. I think that it is a matter of neurologic impact due to our findings, and accordingly, we reached to the following new medical hypothesis: "Deep nerve stimulation may restore smell and taste loss following exposure to COVID-19".

Conclusion

The results of this study showed that smell and taste loss can be restored by deep nerve stimulation, which acts as a new medical hypothesis.

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