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CASE REPORT

Waking Up and *Literally* Smelling the Coffee: Inducing Olfactory Function with 3-Phase Auricular Therapy

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ABSTRACT

Background: Loss of the sense of smell, from both known and unknown causes, can be refractory to medical intervention. Cases unrelated to head trauma or infection might be ignored or assumed to be untreatable.
Case: A 20-year-old male had lifelong anosmia. This patient received a single session of 3-phase auricular therapy (3PAT), including electrical stimulation and insertion of 3-mm, semipermanent ear acupuncture needles, covered by surgical tape and adhesive.
Results: Approximately 1 month following insertion of the acupuncture needles, the patient acquired a sense of smell, which had always been absent. He acquired and maintained his sustained sense of smell naturally in response to the 3PAT.
Conclusions: For cases of loss of sense of smell, particularly those of unknown etiology, 3PAT and its required evaluation techniques should be considered.

Keywords: acupuncture, anosmia, 3-phase auricular therapy (3PAT)

INTRODUCTION

Anosmia or hyposmia of apparent unknown origin is considered to be rare. This case report presents the details of a patient with an apparently lifelong-suppressed sense of smell that was remedied by a single session of 3-phase auricular therapy (3PAT). The patient reported having the experience of olfaction within 1 month of treatment, which has been maintained for more than 1 year, with no decrement in function.

People who have no recollection of having had a sense of smell may not be aware of their sensory deficit. Loss of sense of smell (anosmia) has frequently been reported due to head trauma. Such deficits have been observed in 20%–30% of patients with severe head injuries.[1] Neurologic diseases, degenerative conditions, and effects of aging can contribute to olfactory dysfunction.

Malnutrition, diabetes, aneurysms, nasal surgery, dementia, infection, and medications are also potential triggers. Numerous other potential causes exist for anosmia associated with damage to the brain or nerves. For example, general anesthesia is one of several documented chemically induced causes of anosmia (and hypogeusia).[2] The smoking-cessation medication, varenicline was found to cause loss of sense of smell until usage of the medication was suspended.[3] Gobba and Abbacchini reported a case of likely permanent olfactory damage due to exposure to a widely used insecticide containing pyrethrin and pyrethroids.[4]

Gradual restoration of olfactory function is expected and often achieved in post-traumatic and post-infection cases. However, it appears that olfactory dysfunction is poorly reported, underreported, or scarcely considered by patients. Gaines cited the highest prevalence of olfactory deficits exist in cases of mucosal inflammation due to chronic rhinosinusitis.[5]

Limited conventional medical evidence–based treatment exists for anosmia.[6] Public education on risks related to deficits in sense of smell is needed for both safety and quality of life (QoL) reasons. A paucity of published

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evidence exists regarding the implementation and efficacy of Traditional Chinese Medicine (TCM)–based acupuncture for cases of anosmia. This is also the case for auricular microsystem–based acupuncture. Some TCM studies have demonstrated its efficacy for some patients suffering from postviral olfactory dysfunction that was refractory to drugs or other therapies.[7] Vent et al. stated that olfactory function recovery after viral infection cannot be achieved reliably via pharmacology.[8] Their 2010 study revealed success with acupuncture.[8] A few other reports exist showing similar success.[9,10]

CASE

A fit and healthy, 20-year-old, 6'2″, Caucasian, male college student presented with no recollection or cognition of the sense of smell. He cited no comprehension of the meaning of ''sense of smell.'' However, he reported taste perception of apparently normal discernment.

Past Medical History

The intention of this intervention was exclusively investigation of the possibility of the patient acquiring olfactory function via 3PAT. No other symptoms, significant health concerns, or adverse medical history were reported at the time of evaluation. However, upon a 1-year follow-up consultation for documenting the remarkable results of this case, the patient learned from his mother that he had suffered an apparent brain bleed when he was 10 days old. It was initially diagnosed as an arteriovenous malformation. The bleed was subsequently recognized as the sequela of abusive head trauma (shaken-baby syndrome) caused by the patient's biologic father. The potential consequences of such an egregious action can include permanent brain damage. The patient had received antiseizure medication for 1 year.

With no current medical maladies beyond anosmia, and no medical evidence of any physical abnormalities of this patient's organs of smell having ever been reported, the current author hypothesized that a bioenergetic malfunction and subsequent neurologic disconnect was a possible etiology for the patient's anosmia.

Examination

Techniques of 3PAT, pioneered by Paul Nogier, MD, were implemented. The patient's right auricle was examined using a bipolar auricular acupuncture–point detector (NET-3000, Colorado Medical Devices). Investigation included probing for the presence of bioelectrical activity within somatographic projection regions that correlate with nasal structures, as well as those associated with the olfactory neurologic pathways. All 3 of Dr.Nogier's embryologic-based phase regions were considered. Areas considered for potential involvement included nasal structures and brain structures known to be associated with the sense of smell. Regions of potential energetic blockages, as defined by both Dr. Nogier and Nader Soliman, MD, FAAMA,[11] were scanned. The amygdala (Soliman[11]) and corpus callosum (Dr. Nogier) have been established as structures for which energetic blockage, if present, must first be treated to maximize subsequent treatment efficacy. Dr. Soliman stated that the interhemispheric callosal fibers play an important role in integrating the olfactory functions between the two cerebral hemispheres.[11]

Electrically active, ear acupuncture points were detected in the following zones: Amygdala (phase 1); Corpus Callosum (phases 1 and 3); Thalamus (phase 1); and Olfactory Cortex (phases 1 and 2). No nasal-projection points were detected (Fig. 1).

Treatment

Treatment was administered to each electrically detected auricular-acupuncture point (on the patient's right ear only) for 10 seconds using a NET-3000 microcurrent stimulator. This instrument delivers all necessary Nogier zonal electrical frequencies (2.5, 5, 10, 20, 40, 80, and 160 Hz). Once each point was treated electrically, Spinex™ intradermal semipermanent needles (size #3) were inserted and covered with protective adhesive tape. A point located within the

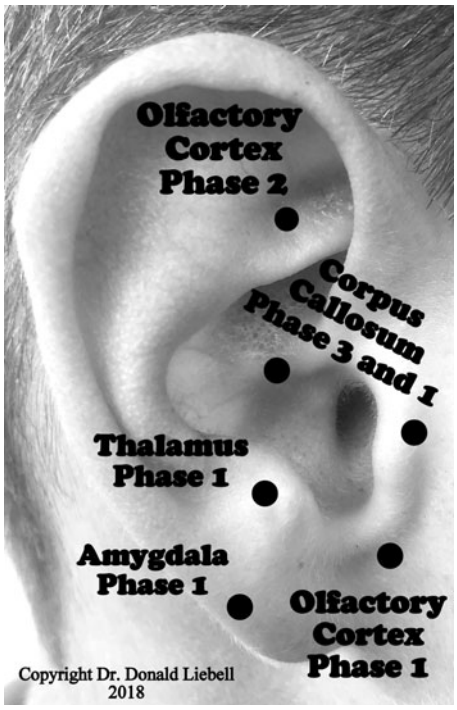

FIG. 1. Electrically active ear acupuncture points were detected in the following zones: Amygdala (phase 1); Corpus Callosum (phases 1 and 3); Thalamus (phase 1); and Olfactory Cortex (phases 1 and 2).

Amygdala zone was first treated, followed by those of the Corpus Callosum (Dr. Nogier's phases 1 and 3). A Thalamus phase 1 point was treated, followed by phases 1 and 2 points detected within the Olfactory Cortex zones. The patient retained the needles for ~3 weeks, thus receiving ongoing stimulation (Fig. 1). To date, no follow-up treatment has been necessary.

RESULTS

The patient reported that ~1 month following the insertion of the ear acupuncture needles, he experienced cognition of the musty smell of a building upon entering it. He subsequently enjoyed the smell of coffee for the first time in his life. The patient can now smell cooking in progress upon entering a home, and he discerns different odors easily. The smell of a gas burner or fire has become possible. As an undesirable, but physiologically sound consequence of acquiring sense of smell, foul odors, such as that of flatus and excrement, are now discernible too.

DISCUSSION

It might seem unlikely that treatment of auricular energetic projections of the thalamus would or could be involved in inducing sense of smell in a patient with anosmia. Olfaction differs from other human senses in that its signals are thought to bypass the thalamus *en route* to the forebrain. However, the thalamus transmits smell sensory input to the hypothalamus, hippocampus, and the amygdala. These brain structures each play a key role in emotions, memory, and perception. A 1993 study published in *Behavioral Neuroscience* demonstrated how amygdala lesions blocked odor preferences in rats.[12] A more-recent functional magnetic resonance imaging (fMRI) study demonstrated amygdala activity elicited by emotional and odoriferous stimuli. The findings suggested a bridging of chemical and emotional stimuli to produce neurobiologic and behavioral effects.[13] It is clinically significant that both the Corpus Callosum and Amygdala are regions designated for evaluation and potential treatment with 3PAT in support for sufferers of post-traumatic stress disorder (Dr. Soliman).[11]

Positron emission tomography (PET) has revealed an association between post-traumatic anosmia and dysfunction of the orbitofrontal and medial prefrontal cortices.[14] Other research has suggested further accurate diagnostic imaging via a combination of MRI and PET scans, which have indicated involvement of the olfactory bulb (PET) and olfactory nerve (MRI).[15] These technologies have been instrumental in scientific understanding of olfaction. Nevertheless, this case presents further evidence in support of the usage of extremely low-cost evaluation methods, which can lead to effective, safe, and low-cost treatment. Outstanding as MRI, PET, and other diagnostic technologies certainly are, thousands of dollars per evaluation are spent on these technologies. Such costs could be potentially reduced via implementation of bioenergetic evaluation and management based upon the auricular acupuncture microsystem. Research, development, and implementation of such a microsystem could transmogrify medical systems worldwide.

Expanding the far-reaching potential benefits of 3PAT through publication of remarkable case studies is intended to support furthering of practice of an *investigational* type approach to this grossly underutilized and magnificent healing art and science. It is quite common for practitioners of natural and holistic healthcare methods to achieve results for patients with allegedly intractable medical conditions. With little or no funding for comprehensive studies to validate and document such methods scientifically, substantial populations of people needlessly suffer lower QoL, merely due to lack of awareness of, and access to, extraordinarily effective treatments. Assumptions that various medical conditions and symptoms are genetic or due to permanent damage are, in the current author's opinion, a tragic consequence of a hubristic and misguided medical model.

The significance of adhering to Dr. Nogier's 3-Phase and zone-based approach to auricular therapy cannot be underestimated. An anatomical point–based approach would not have likely facilitated the astonishing results achieved in this case. As evidenced by this particular case of 20-year anosmia, any attempt to treat him via generic/anatomical Lung or Nose auricular acupuncture points would have likely been futile; the patient's nose and lungs proved to be insignificant with respect to his condition.

Many auricular therapists (both novice and experienced) stimulate the *Shen Men* and Point Zero auricular points successfully, as part of protocols to address many symptoms. It is clear that this practice has substantial clinical merit—regardless of the practitioners' intent, knowledge, experience, or lack of scientific rationale. Unbeknownst to these practitioners, in some cases, what might be perceived as treating the *Shen Men* point could be, in fact, stimulating a point within the auricular projection zone of the Olfactory Cortex in Dr. Nogier's phase 2, which is the physical damage or degenerative auricular-therapy phase. A point detected electrically within the well-known *Shen Men* zone could also correspond with the ectodermal thalamus (Dr. Soliman).[11] In the current case of induced olfactory function, the treated point was more likely an energetic projection of the olfactory cortex.

CONCLUSIONS

fMRI research to date has provided some evidence to validate auricular therapy. However, the specificity of

auricular acupuncture points correlating to specific anatomical structures is still a matter of debate and criticism.[16] fMRI research could likely provide fascinating and valuable insights into the mechanism of action for inducing/restoring the sense of smell. Cases such as the current one suggest further evidence for the 3-phase and zone based approach to the science and art of auricular therapy. An anatomical point–based approach would not suffice. The outcome of this case demonstrates the merits of integrating 3PAT as a standard evaluation and management approach for promoting numerous aspects of health and wellness. The young man in this case study quite likely could have enjoyed a normal sense of smell throughout his life, had 3PAT been provided to him when he was old enough for his sensory deficit to be clinically recognized. A single treatment apparently corrected his bioenergetic dysfunction, which, to date, has not required any further management. The results of this case undoubtedly justify research investigation with a large data sample of participants with anosmia or hyposmia.

AUTHOR DISCLOSURE STATEMENT

No competing financial conflicts exist.

REFERENCES

1. Costanzo RM. Neural regeneration and functional reconnection following olfactory nerve transection in hamster. *Brain Res*. 1985;361(1–2):256–266.
2. Dhanani NM, Jiang Y. Anosmia and hypogeusia as a complication of general anesthesia. *J Clin Anesth*. 2012;24(3):231–233.
3. Daghistani KJ. Anosmia due to varenicline: A case report. *Otolaryngol Online J* 2014;4(3):97.
4. Gobba F, Abbacchini C. Anosmia after exposure to a pyrethrin-based insecticide: A case report. *Int J Occup Med Environ Health*. 2012;25(4):506–512.
5. Gaines AD. Anosmia and hyposmia. *Allergy Asthma Proc*. 2010;31(3):185–189.
6. Boesveldt S, Postma EM, Boak D, et al. Anosmia—a clinical review. *Chem Senses*. 2017;42(7):513–523.
7. Dai Q, Pang Z, Yu H. Recovery of olfactory function in postviral olfactory dysfunction patients after acupuncture treatment. *Evid Based Complement Alternat Med.* 2016;2016: 4986034.
8. Vent J, Wang D, Damm M. Effects of traditional Chinese acupuncture in post-viral olfactory dysfunction. *Otolaryngol Head Neck Surg*. 2010;142(4):505–509.
9. Michael W. Anosmia treated with acupuncture. *Acupunct Med.* 2003;21(4):153–154.
10. Mueller CA, Hummel T. Recovery of olfactory function after nine years of post-traumatic anosmia: A case report. *J Med Case Rep*. 2009;3:9283.
11. Soliman N. *Soliman's Auricular Therapy Textbook: New Localizations and Evidence Based Therapeutic Approaches.* Bloomington, IN: Authorhouse; 2008.
12. Sullivan RM, Wilson DA. Role of the amygdala complex in early olfactory associative learning. *Behav Neurosci.* 1993; 107(2):254–263.
13. Mujica-Parodi LR, Strey HH, Frederick B, et al. Chemosensory cues to conspecific emotional stress activate amygdala in humans. *PLoS One*. 2009;4(7):e6415.
14. Varney NR, Pinkston JB, Wu JC. Quantitative PET findings in patients with posttraumatic anosmia. *J Head Trauma Rehabil*. 2001;16(3):253–259.
15. Atighechi S, Zolfaghari A, Baradaranfar M, Dadgarnia M. Estimation of sensitivity and specificity of brain magnetic resonance imaging and single photon emission computed tomography in the diagnosis of olfactory dysfunction after head traumas. *Am J Rhinol Allergy*. 2013;27(5):403–406.
16. Romoli M, Allais G, Airola G, et al. Ear acupuncture and fMRI: A pilot study for assessing the specificity of auricular points. *Neurol Sci*. 2014;35(suppl1):189–193.

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