Tactile Hallucinations Alleviated by Pselaphesia Counterstimulation: A case report

Shweta Kalita
Spartan Health Sciences University
Nikita Mehdiratta (nikitamehdiratta24@gmail.com)
Smell and Taste Treatment & Research Foundation
Drushti Birwatkar
Smell and Taste Treatment & Research Foundation
Alan Hirsch
Smell and Taste Treatment & Research Foundation

Case Report

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Abstract

Objective: Treatment of haptic hallucinations using tactile counterstimulation.

Introduction: The specific management through applying tactile counterstimulation for haptic hallucination has not heretofore been presented.

Case presentation: This 23-year-old right-handed male with nine past hospitalizations for depression, alcohol abuse, and manic episodes presents with means of the perception that hands were touching him and sexually stimulating him. He would feel the specter's hand or arm but not see the person. Usually, it was the same friendly woman. He would feel the touch around his chest, shoulders, or genitals. Her fingers would move in one place for 2-5 minutes, and occur 6-8 times a day. He would sometimes feel her elbows on his breasts, and the sensation would resolve when he put his hand on the region where the sensations were felt and would recur when he removed his hand. Mental Status Examination: Alert. Oriented x2. Cooperative, poor judgment and insight. Immediate Recall: able to recall six digits forwards and four digits backward. Interpretation of similarities concretely. Animal Fluency Test: 15 (abnormal). Columbia Suicide Severity Risk Scale: 25 (very severe suicide ideation).

Conclusions: Tactile counterstimulation may have acted as a distractor, causing a change of focus from the hallucinations to the actual physical stimulus. Alternatively, through stimulating large sensory fibers, potential sources of such tactile hallucinations, including the posterior cingulate cortex, may have been inhibited. In those who present with tactile hallucinations, a trial of counterstimulation tactile therapy may be worthwhile.

1. Introduction

Tactile hallucinations are manifestations of either organic or psychiatric origins. Associations with somatic disorders include 7% of those with Parkinson's Disease (1), Lewy Body Disease (2), Senile Dementia of Alzheimer's type (3), brain injury, dementia, hypophyseal tumor, diabetes mellitus, recreational medications including cannabis, lysergic acid diethylamide, cocaine, ecstasy, barbiturates, opioids and amphetamine (4), withdrawal syndromes including cannabis (5), and alcohol (6). Medications that induce tactile hallucinations include serotonergic agents, selective serotonin reuptake inhibitors, antiadrenergic agents, beta-blockers, and dopaminergic agents, including the norepinephrine dopamine reuptake inhibitors, monoamine oxidase inhibitors, stimulants, dopamine agonists and anti-parkinsonism drugs (7). Amongst psychiatric disorders, the apogee of the semiology of tactile hallucinations was described by Bruler, Yclept schizophrenia (6). This has also been described with Post Traumatic Stress Disorder (8) as well as various psychotic disorders, including Ekbom Syndrome (9) and psychiatric disorders with psychotic features including bipolar disorder and schizoaffective disorder (10). Non-pharmacological management includes transcranial direct neurostimulation, sleep therapy, and cognitive behavioral therapy (11). While therapy with maximizing attention to external stimuli has been

described (12), specific management through the application of tactile counterstimulation has not heretofore been reported. Such a case is presented.

2. Case presentation

A 23-year-old right-handed male presented to the hospital with suicidal ideation. He complained of being depressed and having manic episodes lasting as long as four days, along with being paranoid with racing thoughts and anxiety every other day. In addition, he gets panic attacks three times a week. He has had severe anxiety, hopelessness, and difficulty concentrating for the past three years.

He has had 3–4 years of auditory, visual, and haptic hallucinations. He perceives hands touching and sexually stimulating him daily, triggered by thoughts of being touched. The tactile sexual sensation onset was seven months ago when he did not know who was touching him, but he felt the personality and the presence of whoever was touching him, with the coincidence of voices that he perceived as angels. He would feel the specter's hand or arm but not see the person. Usually, it was a woman's arm that would touch him. The fingers that touched him had nails but without jewelry and were usually of the same friendly woman. Her arm would touch him, and her arm would wrap around him. He would feel the touch around his chest, shoulders, or genitals. Her fingers would move in one place for 2–5 minutes, occurring 6–8 times daily. He sometimes felt her elbows on his breasts, and the sensation would resolve when he put his hand on the region where the sensations were felt and recur when he removed his hand. These sensations would recur around the clock without change. These symptoms were reduced with distractions, for instance, while watching television. He also hears an internal voice telling the apparition to go away, after which they often will go away. Sometimes the woman's sensations would persist, and she would move her hands more intensely. She would rub her hand anywhere on his body and reach under his clothes. He was not bothered by the touching. Sometimes, this would occur coincidentally with smells like perfume and dog breath. The perfume scent would occur with her touching, and the dog breath odor would be independent of her touching. He would occasionally experience a taste of something he was unable to identify. Occasionally, he would experience brief visual hallucinations at the extremes of the horizontal visual fields of unfriendly people he cannot identify. Sometimes they are known to him, like his brother, but frequently they are strangers. The voices began two years ago, and they originated within his head.

With treatment with Seroquel one year ago, the voices moved from his head to outside his body on his right shoulder. While medicated with quetiapine, he found several hands touching him, both men and women. The voices and touching were made better with Abilify, making them seem less intense and less natural, although he frequently felt paranoid, like people were watching him. However, all medications failed to alleviate the psychotic symptoms.

His substance use history is significant for cocaine, phencyclidine, 3,4-methylenedioxymethamphetamine, and lysergic acid diethylamide use every alternate week in addition to six shots of alcohol every day. Furthermore, recurrent depression and alcohol abuse led to nine hospitalizations.

2.1 Mental status examination

The patient was cooperative, alert, and well-oriented in all three spheres. Insight and judgment, however, were lacking. His memory was intact for recent and remote events. In addition, concentration and attention were intact. Interpretation of similarities was marked as concrete. Since he only completed the tenth grade, proverb testing was not done. His calculations appeared normal. His animal fluency test result was 15, which is abnormal. The Columbia Suicide Severity Rating Scale reflected a score of 25, indicating severe suicidal ideation. The patient provided informed consent.

2.2 Treatment

The pharmacotherapeutic approach formulated was aripiprazole 25 mg a day and fluoxetine 15 mg a day, along with patient education on tactile counterstimulation.

3. Discussion

Providing direct somatic tactile stimulation to inhibit haptic hallucinations has been helpful in Jacksonian March with focal epilepsy with secondary generalization (13). Tactile counterstimulation for pathophysiologic sensations occurs with the management of reflex sympathetic dystrophy and neuropathic pain with acupuncture or transcutaneous neurostimulation (14). Sensory stimuli to reduce hallucinations have been utilized with audiological stimulation in those with auditory hallucinations and enhancement of ambient lighting in those with delirium-induced visual hallucinations (15). The mechanism for how tactile counterstimulation eliminates tactile hallucination is unclear. It may have acted as a distractor, causing a change of focus from the hallucinations to the actual physical stimulus, as described in the management of tactile hallucinations (12). Alternatively, this may have acted through stimulating large sensory Alpha fibers, projecting through the spinothalamic tract, synapsing at the ventral posterolateral nucleus of the thalamus, ultimately acting either directly on the parietal lobe postcentral gyrus to inhibit spontaneous somatic discharges or on the parietal lobe secondary association cortex and potential sources of such tactile hallucination including the posterior cingulate cortex, semiology of seizures which include asymmetric somatosensory symptoms (16).

4. Conclusion

This case demonstrated the successful utilization of tactile therapy as a counter-stimulant to treat persistent hallucinations. A trial of counterstimulation tactile therapy may be worthwhile in patients with tactile hallucinations, especially when there is medication resistance.

List of abbreviations

Not applicable

Declarations

Ethics approval and consent to participate: The patient provided informed consent.

Consent for publication: Written informed consent was obtained from the patient to publish this case report.

Availability of data and material: Not applicable

Competing interests: The authors declare that they have no competing interests.

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Authors' contributions: SK analyzed and interpreted the patient's results on the effects of tactile counterstimulation therapy on the patient's hallucinations. NM summarized the existing literature. DB significantly contributed to the manuscript's drafting. AH made substantial contributions to interpreting its neuroanatomical basis. All authors read and approved the final manuscript.

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References

1. Fénelon, G., Thobois, S., Bonnet, A. M., Broussolle, E., & Tison, F. (2002). Tactile hallucinations in Parkinson's disease. *Journal of neurology*, *249*(12), 1699-1703.
2. Ukai, K. (2019). Tactile hallucinations in dementia with Lewy bodies. *Psychogeriatrics*, *19*(5), 435-439.
3. Chaudhury, S. (2010). Hallucinations: Clinical aspects and management. *Industrial psychiatry journal*, *19*(1), 5.
4. Sidhu, K. A. S., & Dickey, T. O. (2010). Hallucinations in children: diagnostic and treatment strategies. *Current Psychiatry*, *9*(10), 53-61.
5. Rohr, J. M., Skowlund, S. W., & Martin, T. E. (1989). Withdrawal sequelae to cannabis use. *International journal of the addictions*, *24*(7), 627-631.
6. Berrios, G. E. (1982). Tactile hallucinations: conceptual and historical aspects. *Journal of Neurology, Neurosurgery & Psychiatry*, *45*(4), 285-293.
7. Nakamura, M., & Koo, J. (2016). Drug-induced tactile hallucinations beyond recreational drugs. *American journal of clinical dermatology*, *17*(6), 643-652.
8. Gómez, J. M., Kaehler, L. A., & Freyd, J. J. (2014). Are hallucinations related to betrayal trauma exposure? A three-study exploration. *Psychological Trauma: Theory, Research, Practice, and Policy*, *6*(6), 675.
9. Hinkle, N. C. (2011). Ekbom Syndrome: A delusional condition of “Bugs in the skin”. *Current psychiatry reports*, *13*(3), 178-186.
10. Baethge, C., Baldessarini, R. J., Freudenthal, K., Streeruwitz, A., Bauer, M., & Bschor, T. (2005). Hallucinations in bipolar disorder: characteristics and comparison to unipolar depression and

schizophrenia. *Bipolar disorders*, *7*(2), 136-145.

11. McCarthy-Jones, S., Hayward, M., Waters, F., & Sommer, I. E. (2016). hallucinations: New interventions supporting people with distressing voices and/or visions. *Frontiers in psychology*, *7*, 1418.
12. Fowler, D., & Morley, S. (1989). The cognitive-behavioural treatment of hallucinations and delusions: A preliminary study. *Behavioural and Cognitive Psychotherapy*, *17*(3), 267-282.
13. Elisevich, K., Jenrow, K., Schuh, L., & Smith, B. (2006). Long-term electrical stimulation–induced inhibition of partial epilepsy: Case report. *Journal of neurosurgery*, *105*(6), 894-897.
14. Cruccu, G., Aziz, T. Z., Garcia-Larrea, L., Hansson, P., Jensen, T. S., Lefaucheur, J. P., ... & Taylor, R. S. (2007). EFNS guidelines on neurostimulation therapy for neuropathic pain. *European journal of neurology*, *14*(9), 952-970.
15. Manford, M., & Andermann, F. (1998). Complex visual hallucinations. Clinical and neurobiological insights. *Brain: a journal of neurology*, *121*(10), 1819-1840.
16. Pelliccia, V., Avanzini, P., Rizzi, M., Caruana, F., Tassi, L., Francione, S., Valeria Mariani, Piergiorgio d'Orio, Laura Castana, Roberto Mai, Michele Terzaghi, Lino Nobili & Sartori, I. (2022). Association between semiology and anatomo-functional localization in patients with cingulate epilepsy: A cohort study. *Neurology*, *98*(22), e2211-e2223.