

Efficacy of Individualized Homoeopathic Medicines in cases of Halitosis of age group 3 to 18 years: A Case Series.

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Abstract

Background: Halitosis or breath odor is defined as an unpleasant or offensive odor emanating from the mouth. In the general population, halitosis has a prevalence ranging from 50% in the USA to between 6% and 23% in China, and a recent study had revealed a prevalence of self-reported halitosis among Indian dental students ranging from 21.7% in males to 35.3% in females. The homoeopathic studies on halitosis are very much limited and thus the research wants to know the importance of homoeopathic management in cases of halitosis. **Aim and Objectives:** This research aimed primarily to explore the efficacy of Individualized Homoeopathic Medicine in cases of Halitosis of age group 3 to 18 years. The secondary objective is to know the prevalence and to find out the most commonly indicated homeopathic medicine. **Materials and Methods:** A thorough case-taking process, guided by Homoeopathic principles, was conducted on 45 participants having halitosis. The Organoleptic Scale was utilized to gauge halitosis. Indicated Homoeopathic medicines were prescribed based on symptom totality. Regular assessments, follow-ups, and statistical analysis using t-tests and Microsoft Excel were integral components of the methodology. **Results:** The result reveals 80% participants shown improvement in halitosis after homoeopathic intervention while 20% shown resistant to the improvement and statistically the study is highly significant as collected t value (13.33) exceeded the table t value of 2.02 at 5% significance. **Conclusion:** The study found that the indicated homoeopathic medicines exhibited a notable effect in ameliorating the halitosis, assessed by organoleptic scale of age group 3 to 18 years.

Keywords: Halitosis, Organoleptic Scale, Homoeopathy, Individualized.

Introduction

Halitosis or breath odor is defined as an unpleasant or offensive odor emanating from the mouth. The bad breath paradox consists in the fact that a person suffering from halitosis is often not aware of it, while another may be convinced that his/her breath smells bad, when in fact, the symptoms of halitosis are absent. A person's inability to sense his/her own unpleasant breath may result from the fact that exhaled the air is diluted so that during inhalation the unpleasant odor can no longer be sensed. According to the International Society for Breath Odor

Research, halitosis is classified into three main categories: genuine halitosis,

pseudohalitos, and halitophobia based on treatment needs. In the general population, halitosis has a prevalence ranging from 50% in the USA to between 6% and 23% in china, and a recent study had revealed a prevalence of self-reported halitosis among Indian dental students ranging from 21.7% in males to 35.3% in females. The homoeopathic studies on halitosis are very much limited and thus the research wants to know the importance of homoeopathic management in cases of halitosis especially in age group 3 to 18 years as it is seen from past study that children are more prevalent to halitosis. Halitosis arises from the production of volatile compounds mainly sulfur compounds (VSCs), aromatic,

nitrogen-containing compounds, alcohols, ketones, and others. These compounds are released due to pathological or non-pathological process and from either oral or extra oral origin. The whole process is initiated by the breakdown of components of the epithelial cells, salivary or serum proteins, and food debris that could be present on the dorsum of the tongue, in the saliva, or in the periodontal pockets by the action of a wide range of oral anaerobic microorganisms, which degrade organic substances and produce odorous compounds. [2] The primary aim of the management in such a scenario would be mechanically reducing the load of the microbial biofilm by enforcing a good oral hygiene regime, such as routine tooth brushing, flossing, tongue cleaning, and mouth rinses. Any complication arises further, then patient must consult to the physician and do treatment as suggested by the physician. The Researcher would like to identify the halitosis and identify the role of homoeopathic indicated medicine in improving halitosis by using Organoleptic Scale.

Review of Literature

An unpleasant odor from the mouth commonly referred to as bad breath or halitosis. The prevalence of halitosis among the pediatric population has been investigated worldwide with varying estimations, between 5% and 76.3%. In India, the prevalence of halitosis is common because of poor oral hygiene and lack of awareness of halitosis.

Aim and Objectives

This research aimed to explore to study the efficacy of Individualized Homoeopathic Medicines in cases of Halitosis in age group 3 to 18 years. The primary objectives included screening a population from Mahadevpur Zilla Parishad School, selecting eligible children based on the Organoleptic Scale, administering appropriate Homoeopathic medicine, and

assessing emotional changes through periodic follow-ups. The secondary objective is to know the prevalence and assess the most commonly indicated homoeopathic medicine in cases of halitosis in age group 3 to 18 years.

Methodology

Study setting, participants and design-

The research adopts a case series study design conducted at Mahadevpur Zilla Parishad School, over a six-month period. The selection of study subjects follows specific eligibility criteria, including an age group of 3 to 18 years, children's having Grades 2,3,4,5 from Organoleptic scale for screening, and obtaining written consent from guardians or authorities. Exclusion criteria encompass those children's having Grades 0, 1 from organoleptic scale, and lack of consent. Halitosis assessment before and after the study serves as matching criteria, with a sample size of 45 using convenience sampling. The Organoleptic Scale is employed for measurement, and data management involves computer use and a case record format. Statistical analysis is planned using t-tests and Microsoft Excel. The study focuses on investigating the improvement in halitosis and evaluating the impact of Homoeopathic medicines through a case series approach. The process involves selecting the study group at Mahadevpur Zilla Parishad School, assessing halitosis, utilizing the Organoleptic Scale, conducting Homoeopathic case taking, choosing the indicated medicine, and assessing halitosis status post-intervention. Positive and negative assessments are made based on score improvements or lack thereof. Graphical presentation and statistical evaluation will contribute to the conclusion drawn from this

comprehensive research.

Scale used

Rosenberg & McCulloch scale	Description
0	No detectable odour
1	Hardly detectable odour
2	Light odour
3	Moderate odour
4	Strong odour
5	Extremely strong odour

Adapted from Rosenberg and McCulloch.⁷⁵

Study Procedure

The researcher have selected the study group at Mahadevpur Zilla Parishad School, Nashik and started their study primarily by screening the population which comprises of 110 participants assessed by Rosenberg & McCulloch Organoleptic scale ; out of which 45 participants were selected on the bases of scale grades and patients positive consent for the study. After screening, a thorough case assessment was done followed by Individualized Homoeopathic Intervention based on totality of symptoms. After every 15 days of intervals, follow-ups were taken and homoeopathic intervention was done if needed. During a course 6 follow-ups, assessment of halitosis status was done post homoeopathic intervention. The data has been collected and Statistical analysis is planned using t-tests and Microsoft Excel.

Intervention

A thorough case assessment was done by the researcher and on the basis of totality of symptoms, each participants was given an Individualized Homoeopathic Medicine.

Statistical analysis

The statistical analysis was done using paired t-Test based on the pre and post interventional results of Organoleptic

Scale.

Result

The results of the study reveal noteworthy insights in the cases of halitosis. Furthermore, the statistical analysis, as indicated by the calculated t-value of 13.33 exceeding the tabulated t-value of 2.02, provides robust evidence to support the research hypothesis. The substantial difference between the calculated and tabulated t-values underscores the reliability of the findings, allowing for the confident acceptance of the hypothesis with a high degree of statistical confidence. Moving beyond the halitosis assessment, the study also delves into the prescription patterns of Homoeopathic remedies. The most frequently prescribed remedies include Arsenic album (35%), Sulphur (15%), Pulsatilla (12%), Merc sol (8%), Belladonna (5%), & many more. These findings contribute valuable insights into the practical application of Homoeopathic medicines in addressing halitosis in age group 3 to 18 years. The prominence of specific remedies offers potential avenues for targeted interventions and further research in the field of halitosis for this vulnerable population.

Demographic Variable	N	%
Gender		
Male	23	51%
Female	22	49%

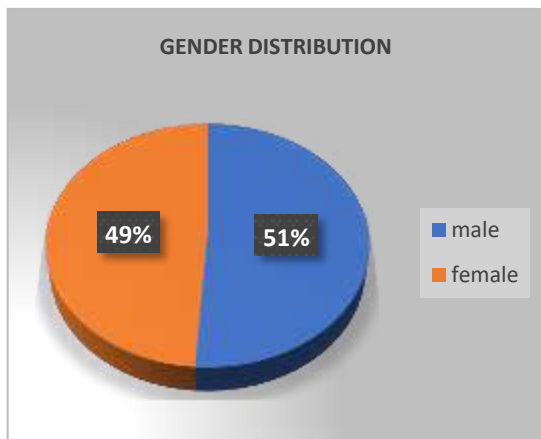


Figure01-Gender distribution among the study group.

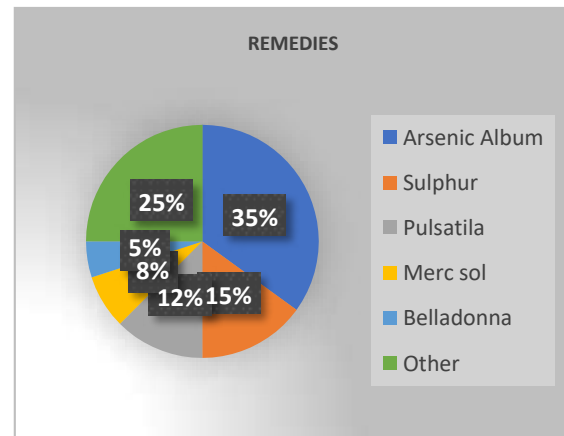


Figure03-Result of the study

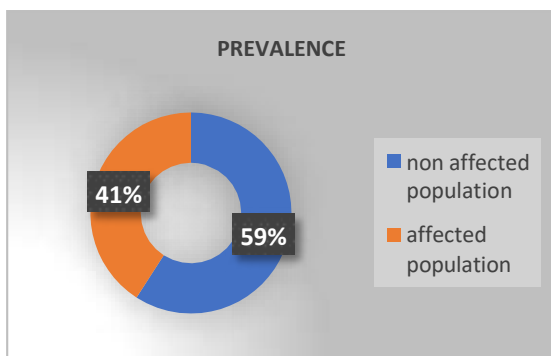


Figure02- Pie-chart representing the prevalence of halitosis

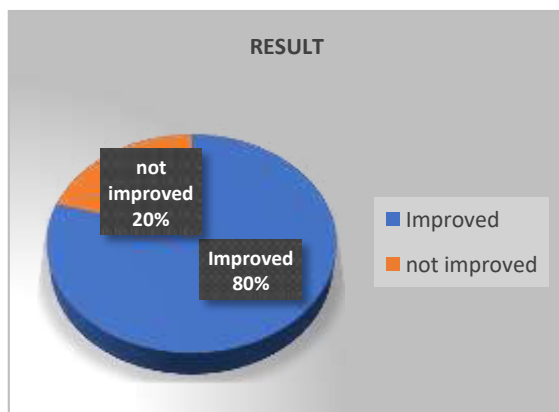
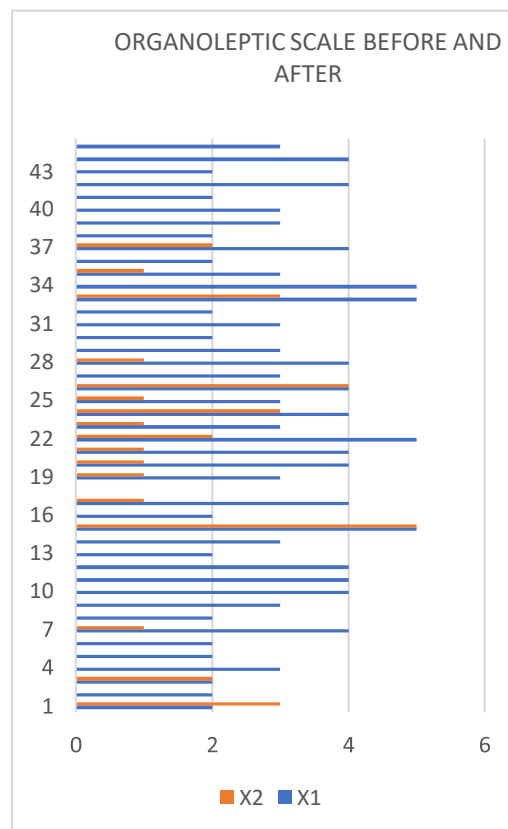


Figure04- Most commonly indicated homoeopathic medicines.

Figure05- Graph Showing Before and After Scores of Organoleptic Scale

After analyzing the data using the t test; The Calculated t-value of 13.33 significantly exceeds the tabulated table t-



value at 5% significance (2.02) as well as 1% significance (1.680). Consequently, we embrace the alternative hypothesis with a high degree of statistical confidence.

The Calculated t-value of 13.33

Sample Size (n)	Standard Deviation(d)	Calculated t value(t)
45	1.22	13.33

Figure06- Representation of Qualitative Analysis of the Study

Discussion

This study summarized the current evidence of homoeopathic intervention for patients suffering from halitosis. Though it is difficult to interpret the evidence on the benefit of homoeopathy in halitosis, it has shown positive directions for future research. During the course of the study, the prevalence was found to be around 40.9% among 110 participants of age group 3 to 18 years while the prevalence difference among the gender was negligible; 51% males and 49% females. The study assessed the effect of individualized homoeopathic medicines in the management of Halitosis. During the course of study, it has been observed that the most common cause of halitosis is poor oral hygiene and WHO in its notification has also observed it. The participants were also having some other disease conditions like gingivitis, dentin, otitis externa, etc. The homoeopathic medicines were prescribed after thorough case analysis, of which the most common remedies were Arsenic album, Sulphur, Pulsatilla, Merc sol, Belladonna, & many more. During this study, we have not only observed just improvement of halitosis but also the improvement of accompanying symptoms. The use of individualized homoeopathic medicines helped to provide relief to the accompanying complaints also.

significantly exceeds the tabulated table t value at 5% significance (2.02) as well as 1% significance (1.680). The research endeavour focused on comprehensively evaluating the case, aiming implement effective Homoeopathic interventions. Noteworthy challenges emerged during the study, including the hesitancy and shyness exhibited by the children, lack of proper scale of implementation, lack of proper homoeopathic interventional sources and absences of guardian of the patient. Despite these challenges, the research yielded illuminating insights into the cases of halitosis in age group 3 to 18 years. The experience underscored the paramount importance of oral hygiene; if not maintained may lead to halitosis and other oral disorders. The researcher further wants the strategic foresight to explore either by considering wide range of age group or by improving proper scale for identification or by using specific homoeopathic intervention or by co-relating halitosis by specific disease condition. This newfound expertise holds promise for future research endeavors, contributing valuable knowledge to the field and potentially influencing the fortunes of people in similar circumstances.

Conclusion

The study found that the indicated homoeopathic medicines exhibited a notable effect in ameliorating the halitosis, assessed by organoleptic scale of age group 3 to 18 years. The findings underscore the potential of Homoeopathy in addressing halitosis in this vulnerable demographic, emphasizing the importance of further research and interventions in the field.

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