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Psychosocial Impacts Of Halitosis

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Abstract: The terms halitosis, oral malodor, bad breath, fetor ex-ore, or fetor- oris are used to describe an unpleasant odor that is consistently emitted from an individual's oral cavity. The Unpleasant breath is caused by odorous compounds that can be found in the environment. Either extrinsic or intrinsic in nature. Bad breath, or halitosis, is a common social obstacle that can lead to psychological difficulties. Patients with this ailment frequently seek the help of a variety of specialists for diagnosis and therapy. Only with a proper diagnosis and understanding of the cause can effective treatment be obtained. It should be highlighted that, in order to avoid misdiagnosis and inappropriate treatment, a multidisciplinary approach including general practitioners from multiple departments are required to solve the problem. Changes and contradictions in etiological factors and therapeutic techniques for halitosis, as reported in the literature, require further inquiry and analysis. The main aim of this literature is to assess the causative factors, the different diagnostic methods, and treatment options required in maintaining oral health as well as restoring an individual's mental health, self-confidence, and social status. Individual's social and psychological manifestations that are conditioned by halitosis are kept in mind while studying the above mentioned parameters.

Keywords: Halitosis, oral malodor, Bad breath, psychological effect.

1. INTRODUCTION

Halitosis is a disease may interfere with social contact, resulting in psychological changes that eventually lead to social and personal isolation [1]. It impacts everyone at some point in their lives and can be caused by a number of causes. The true prevalence of halitosis is unknown due to the difficulty of objective evaluation. After examining the whole population, Miyazaki et al. found that 6+23 % has malodor that is above the socially acceptable range.[2, 3] in clinical practice, some individuals with halitosis have actual malodor, whereas others have absolutely no malodor. It's been hypothesized that halitosis is a symptom linked to both physical and mental well-being, and that psychological illnesses are closely linked to the condition's reporting in the few of the patients[4]. Every day, people contact with one another, and halitosis has a detrimental impact on one's social life. Because the individual with halitosis may have developed tolerance or olfactory disturbance, he or she may be unaware of the problem. Because of this, the patient is unable to detect his or her halitosis, which is detected by his or her partner, family member, or friends [5, 6]. People with halitosis experience distress as a result of their illness, and they may avoid social interactions [7]. Halitosis is primarily caused by microbial amino acid metabolism in local debris. Volatile sulphur compounds (VSCs), such as hydrogen sulphide (H2S), methyl mercaptan (CH3SH), and dimethyl sulphide, are among the most common contributors to oral malodour (CH3SCH3). In individuals with halitosis, VSC levels are usually assessed and an organoleptic test (OLT) is performed to determine the level of oral malodor [5]. In comparison to the older age group, patients in the younger age group (53.5 %) had a higher incidence of halitosis. Younger people become aware of the changes in their bodies that occur as a result of puberty, and they are frequently subjected to peer pressure as a result of their surrounding[8, 9, and 10]. Halitosis has been linked to psychological qualities like despair, anxiety, paranoid ideation, and aggression, according to studies. These characteristics may contribute to a lack of desire in maintaining oral hygiene, exacerbating the problem [11]. Halitosis affects people of all ages however, the severity of bad breath increases with age, which may be influenced by the development of xerostomia. Approximately two-thirds of the population suffers from occasional halitosis during the day, whereas 5% of the population suffers from severe halitosis that necessitates immediate assistance. The article's focus is to look at the causes, diagnostic tools, and treatment choices for maintaining dental health while also restoring an individual's mental health, self-confidence, and social position[1].

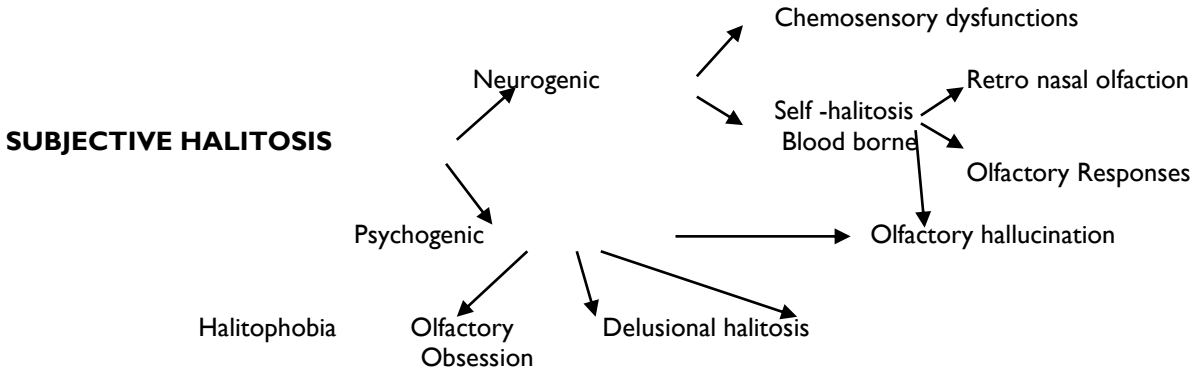
2. ETIOLOGY

Pathological halitosis is caused by intraoral and extra oral reasons. The majority of bad breath cases (80-85%) are of intraoral nature The main pathophysiology of bad breath is the degradation of organic compounds(e.g., saliva, food debris,desquamated epithelial cells into primarily volatile sulphur compounds (VSCs)} in the oral cavity caused by proteolytic anaerobic bacteria[1,7]. Bacteria such as Porphyromonas gingivalis, Fusobacterium nucleatum, and Prevotella intermedia cause foul odor in the mouth. These Gram-negative anaerobic infections can create odoriferous substances such as methyl mercaptan, hydrogen sulphide, and dimethyl sulphide, which are known as volatile sulphur compounds (VSCs) [2]. Although other organic components such as organic acids, indole/skatole, putrescine, and cadaverine may be implicated in the development of halitosis. The dorsum of the tongue posterior to circumvallate papillae consistently carry highest load of bacteria and main source of malodorous gases[12,13]. Open caries lesions, insufficient dental restorations, periodontitis, odontogenic infections, local infections such as pericoronitis, periimplantitis, or candidiasis, as well as poor oral and denture care, are the additional intra-oral causes. Reduced

salivary flow has a negative impact on the self-cleaning action of saliva. As a result, volatile chemicals are produced, resulting in halitosis. Saliva's antibacterial action is reduced as a result of decreased salivation, and Gram-positive species become Gram-negative. Diabetes, Sjogren's syndrome, long-term stress, depression, drug use, mouth breathing habit, and alcohol misuse may all cause hypo salivation leads to halitosis and increased caries activity[14]. In clinical practice, some people with halitosis have true malodor, whereas others have almost no malodor. Halitosis classified as genuine halitosis, pseudo halitosis, and halitophobia. Genuine halitosis is treated with periodontal treatment, dental and oral care, oral hygiene instructions, and counseling, whereas pseudo halitosis is treated with counseling that includes education and explanations of examination results showing that the patient's malodor is not beyond a certain limit[15]. Halitosis is thought to be a symptom of both somatic and emotional distress, with psychiatric illnesses being strongly linked to the condition in some people. Patients with halitosis who have psychological issues, such as halitophobia, do not exhibit oral malodor, according to prior studies [16]. Patients with oral malodor, as well as those who do not have oral malodor, may have a psychiatric illness.

3. SUBJECTIVE HALITOSIS

Subjective halitosis terms and concepts were recently changed and redefined. As a result, there are two types of subjective halitosis: Neurogenic and Psychogenic. Nonmeasurable halitosis, or subjective halitosis, has no psychopathologic significance.



3.1 Neurogenic Halitosis

There has been a lot of research done on neurogenic forms of subjective halitosis. There is a real chemical stimulus on the olfactory cells in this form, but no odorants are released into the from the mouth. The odor is solely perceived by the patient. In psychogenic forms of subjective halitosis, on the other hand, no chemical stimulation is elicited at the receptor level[11].

Chemosensory dysfunctions - Related conditions
- Dysosmia
- dysguesia
- Cacosmia
- Hyperosmia
- Parosmia
- Olfactory (including taste) receptor dysfunctions

Self-halitosis
- Retro nasal dorsolingual olfaction
- Blood borne olfactory receptor responses
- Olfactory hallucination (phantosomia)

3.2 Psychogenic Halitosis

Subjective halitosis has three psychogenic forms: halitophobia, olfactory obsession, and delusional.

3.2.1 ***Halitophobia*** is the most common variety, and it can be typically treated without psychologic medication by convincing the patient that the halitosis has been properly treated, and that the halitosis complaint will go completely.

3.2.2. *Olfactory Obsession*

If halitosis goes untreated for a long time, the next psychogenic type, odor obsession, develops. It's characterized by intrusive repetitive activities like brushing teeth or washing the mouth dozens of times, and it can overlap with obsessive-compulsive disorder phenomenological and neurobiological to variable degrees. Obsessive-compulsive disorders are characterized by

frequent and persistent intrusive and inappropriate ideas, thoughts, urges, or pictures that produce significant anxiety or distress. The patient is simply repeating the activity and/or thinking about the condition in cases of olfactory obsession.

3.2.3. *Delusional Halitosis*

Delusional forms of subjective halitosis develop when olfactory obsession and halitosis are persistent. These are defined by making observations about other people's actions. For example Patients may believe that their halitosis causes people to mock them, flee from them, and turn away from them

Halitophobia - Related conditions
-Halitosis anxiety
- Body odor psychosis
- Hypochondriasis
-Emotional disorder

Olfactory obsession- Obsessive compulsive disorder
Imaginary halitosis

Delusional halitosis- Olfactory delusion
- Olfactory reference syndrome
- Dysmorphic body odor
- Delusional bromosis
-Somatic delusional disorder

Imaginary halitosis refers to the last two types (olfactory obsession and delusional halitosis). Psychiatrists are the only ones who can cure imaginary halitosis. Each stage or type of subjective halitosis is distinct, although there are no clear distinctions between them. Patients with subjective halitosis may seek treatment from a dentist, who may struggle to discern between objective and subjective halitosis. Furthermore, there is a risk of misunderstanding or even misdiagnosis[11]. The term "social anxiety disorder" refers to a persistent worry or anxiety about one or more circumstances in which the individual may be scrutinized by others. Social contacts (e.g., having a discussion, meeting new people), being seen (e.g., eating, drinking), and performing in front of others are all examples (eg, giving a speech). Patients with objective halitosis may be self-conscious about their bad breath and avoid interacting with people in public places for fear of being judged.

4. MALODOR ASSESSMENT

Organoleptic testing, gas chromatography (GC), and sulphide monitoring are the three primary approaches for assessing oral malodour.Organoleptic measurement is a sensory test that scores a subject's mouth malodor based on the examiner's perception. Sulphur in mouth air can only be detected via GC, which requires equipment with a flame photometric detector. Because it is selective for volatile sulphur compounds (VSC).GC is regarded the gold standard for measuring oral malodor. BANA test, chemical sensors, salivary incubation test, beta-galactosidase activity quantification, ammonia monitoring, and ninhydrin method are some of the other measurement methods. For chair-side use, the BANA test is useful. It is a test strip that identifies short chain fatty acids and proteolytic obligate gram negative anaerobes that hydrolyze the synthetic trypsin substrate and produce halitosis. It identifies periodontal bacteria such as Treponema denticola, Porphyromonas gingivalis, and Treponema forsythensis [1, 4, 7.]

5. MANAGEMENT

It should not be forgotten that patients with halitosis require assistance and are frequently frightened and distrustful about any treatment. To provide proper therapy, a precise diagnosis is required. The goal of treatment is to eradicate the causative component, improve the hygienic status of the oral cavity, and eliminate the unpleasant mouth odor. The treatment can be carried out in a variety of ways, including mechanical and chemical reduction of microbes, odor concealment, and chemical neutralization of VSCs. Dietary changes, the use of sugar-free chewing gum, tongue brushing with a toothbrush, tongue scraping, and the use of zinc-containing toothpastes all contribute to clinically significant findings in the treatment of intraoral halitosis. Antibacterial ingredients in mouthwash liquids including triclosan, cetylpyridinium chloride (CPC), and chlorhexidine (CHX) inhibit the growth of bacteria that produce bad breath. Mouth rinse liquids containing CPC and CHX inhibit the development of VSCs, when most of those containing zinc and chlorine dioxide may neutralise halitosis-causing sulphur compounds.The only scientifically proven and clinically effective method to stop halitosis is to attack the ability of bacteria to produce VSCs and to convert the VSCs into non odorous and non-tasting organic salts. Another way to prevent bad breath is to simply replace the odorous bacteria in the oral environment with non odorous bacteria. probiotic Aktiv-K12, which is reintroduce the good bacteria (Streptococcus salivarius strain k12) into the oral environment[5,6]. The usage of oral hygiene products has a big impact on a person's social behaviour, and it's especially crucial for those who are self-conscious about their bad breath in social situations. When compared to patients without halitosis, patients with halitosis have significantly higher scores for anxiety, phobic anxiety, sadness, obsessive-compulsive disorders, and paranoid ideation. People who suffer from oral malodor frequently misinterpret the attitudes of those around them. As a result, patients should be informed that how people treat them has nothing to do with whether or not they have halitosis, but rather with the cause for their attitude[6].

People with halitophobia who attribute their emotional distress to a false mal odor should be referred to a clinical psychologist for mental evaluation and therapy in the early stages of the disorder[7.] Treatment of delusional halitosis necessitates a multidisciplinary approach involving psychologists and psychiatrists in addition to health care practitioners. Mutual understanding between the physician and the patient is crucial for a successful ultimate result in the treatment of halitosis. To alleviate the patient's stress, the physician should express acceptance, empathy, and reassurance [1, 7.11.]Patients with halitosis may be overly worried or more prone to neurosis since halitosis is not a self-evident symptom and can be perceived rather than a true symptom. In the halitosis therapy, it is vital to identify whether a physical or psychological approach is more appropriate for specific patients [4.] The patients' quality of life can be greatly improved by maintaining their social connections. The patient's primary healthcare provider, as well as family and friends, should offer support and reassurance on a regular basis. Considering the complex nature of halitosis, each case should be approached individually while monitoring the patient's treatment strategy. The primary healthcare professional, an ENT expert, a dentist, a gastroenterologist, a nutritionist, an endocrinologist, and a clinical psychologist are all included in the diagnosis and management[2.]

6. CONCLUSION

Halitosis is a significant obstacle to people's everyday life to establish and maintain social relationships, which has a detrimental impact on the individual's psychological condition. Because oral malodor is frequently conditioned by general somatic disorders and taking numerous medicines, early diagnosis of the problem is critical, and only the identification of the causative factors allows for proper and specific treatment involves medical specialists from various fields. As a result, treatment should focus on removing etiological causes and maintaining adequate oral hygiene. Finally Bad breath is described as a **"social handicap"** that causes the sufferer to avoid social situations.

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