Original Article

The Delusion of Halitosis: Experience at an Eastern Nigerian Tertiary Hospital

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ABSTRACT

BACKGROUND: Halitosis is a recognized problem in dental practice. Some individuals have the belief that they have offensive mouth odour which neither the dental clinician nor any other person can perceive. This condition is known as delusional halitosis. Delusional halitosis can be classified as either Pseudo halitosis or Halitophobia depending on the response to initial treatment. Halitophobia is an olfactory reference syndrome and is a psychological condition that the dental surgeon is ill equipped to treat alone. This study aimed to analyse patients diagnosed with delusional halitosis, highlight our experiences and make suggestions for improved management of such patients.

METHODOLOGY: All patients who presented at the dental clinics of University of Nigeria Teaching Hospital between January 2005 and December 2009 with a primary complaint of oral malodour were examined organoleptically. Those with obvious halitosis and known psychological conditions were excluded from the study. Once a diagnosis of delusional halitosis was made, each patient was educated on the nature of halitosis, its causes and prevention. They then received oral prophylaxis and oral hygiene instructions. They were then recalled at one week, four week and six week intervals to establish a definitive classification.

RESULT: 18 out of the 25 patients who presented were diagnosed with delusional halitosis. 61% of them male and 39% of them female with an average age of 30yrs. Pseudo halitosis comprised a majority of the cases seen(13). Halitophobia was seen in the minority (5). Reasons sited for believing that they had mouth odour by the patients studied included, peoples reaction when they were in close proximity and how people tended to avoid them (94.4%), ability to self perceive the foul odour from their mouths (55%) and 27.8 % said they had been told by another person that they had bad breath. All the patients had very good oral hygiene, with a tendency to over indulge on oral care products and tended to use mouthwash, breath mints and sweets in an attempt to mask the perceived odour with a few having excessive tooth brushing habits. Most had visited 2 or more other physicians within the year of presentation at the clinic with the same complaint. The patients were embarrassed (55.6 %) frustrated (27.6 %), self conscious (11.1 %) or felt helpless (5.6 %) by their perceived foul mouth odour, but none claimed to have suicidal thoughts.

CONCLUSION: In all cases of delusional halitosis, there is usually an underlying psychosomatic problem, which can range from an over valued belief to a frank delusional disorder where the individual can hardly be dissuaded from their belief of mouth odour. A multidisciplinary approach to treatment between the dental surgeons and the psychological specialists may present the best approach for the patients.

KEY WORDS: Delusional Halitosis, Pseudo Halitosis, Halitophobia, Experience

INTRODUCTION

Halitosis describes an unpleasant foul objectionable odour emanating from the oral cavity[1]The predominant causes of halitosis are local factors occurring in the oral environment. Bacterial tongue coating, plaque, gingivitis, periodontitis, food packing around faulty dental restorations, along with poor oral hygiene habits all lead to the production of volatile sulfur compounds (VSC) that are expelled in oral air and are directly responsible for halitosis [2,3]. Ingested foods like onions and garlic, alcoholic beverages and smoking may also cause objectionable mouth odour[4]. Specific fetor associated with systemic conditions like diabetes, liver and renal diseases can also lead to halitosis [5]. Upper and lower respiratory tract diseases like sinusitis, bronchiactesis, lung abscess and some abdominal disorders such as peptic ulcer disease are common non oral causes of halitosis [5.]

Although gas chromatography for specific VSC, and sulfur monitors are widely employed for measuring and diagnosing halitosis, organoleptic measurements (sniffing of oral and nasal air) are still the most convenient and remain an effective method of diagnosing halitosis [6.]

Recognising actual halitosis does not present a challenge to most dental clinicians, however occasionally patients present complaining of foul mouth odour that does not exist and is not detectable by others including the dental clinician. This subjective belief in ones non- existent mouth odour is easy to diagnose but can be frustrating and time consuming to manage. In the extreme, referral to a psychological specialist may be the only course of action available to ensure successful treatment. This condition

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has been described variously as imaginary halitosis, hallucinatory halitosis, and psychogenic halitosis. We prefer to use the term delusional halitosis as coined by Iwu and Akpata [7]. Current classifications now divide delusional halitosis into Pseudo halitosis and halitophobia to differentiate the variable presentations and the different approach to treatment [8].

The aim of this study was to analyse a series of patients who were diagnosed with delusional halitosis in a tertiary hospital in eastern Nigeria and to highlight our experience with treating these patients along with suggestions for improved care.

METHOD

Consecutive patients who presented at the dental clinics of the University of Nigeria Teaching Hospital, Enugu between January 2005 and December 2009 with a primary complaint of oral malodour were examined organoleptically by two same organoleptic assessors. Patients who had either local or systemic factors responsible for their halitosis or who on organoleptic measurement were found to have frank halitosis were excluded. Similarly patients with known psychological conditions or who were found on history to be on any medication indicative of a psychological condition were also excluded from the study.

After a diagnosis of delusional halitosis was made, the same treatment protocol was used with all the patients. This comprised of initial education and counseling on the nature and causes of halitosis, its universal presentation, methods of combating it and misconceptions. Secondly oral prophylaxis, involving scaling and polishing was done and finally oral hygiene instructions were given with emphasis on tongue cleaning.

All patients were recalled for review at one, four and six week intervals. Patients who were satisfied with their management and no longer complained of mouth odour were classified as having pseudohalitosis. Whereas patients who did not seem to benefit from this treatment and persisted in their complaint of mouth odour were classified as having halitophobia. Halitophobic patients were referred to the mental health physicians for further management.

RESULTS

During the study period 25 patients presented with a primary complaint of mouth odour. 18 were diagnosed with delusional halitosis, 11(61%) men and 7 (39%) women (Table 1). The average age of these patients was 30.6 yrs with their age distribution shown in Table 2. When asked reasons for believing they had offensive mouth odour 17 (74.4%) claimed that the way people behaved around them when they were talking in close priority was the major indicator, (10) 55% said they could perceive their own offensive mouth odour by cupping their hand/hands and smelling the air they blew into the hands or by wetting either their upper lip or hand with their saliva and smelling it. 5 patients (27.7%) said they had been told by another person that they had bad breath. (Table 3).

When asked about their oral hygiene habits (Table 4), 12 patients said they brushed their teeth at least three times daily, 4 said they brushed 5 or more times during the course of a day.. 6 patients used dental floss routinely 15 patients had used four or more brands of toothpaste in the past 6 months preceding their visit to the dental clinic. 15 said they used mouth washes, chewing gum breath mints and sweets routinely to mask their mouth odour. The words that in the patients mind best described how they felt about their condition were, embarrassed (10), frustrated (5), self conscious (2) and helpless (1) (Table 5). The majority of patients had visited 2 or more other physicians in different centers with the same complaint within the year before presentation in our clinic.

After initial diagnosis, 13 (72.2%) patients were determined to be suffering from pseudo halitosis while 5 (27.7%) were determined to be halitophobic. The halitophobics consisted of 1 woman and four men.

Table 1. Sex distribution of Studied Patients

Sex	Number	%
Male	11	61.1
Female	7	38.9
Total	18	100

Table 2. Age distribution of studied patients

Age	Number of Patients
10 19	1
20 29	7
30 39	8
40 49	2
50 above	0

Table 3. Patient's reasons for believing they have offensive mouth odour

Reason	Number of Patients	%
I can smell my mouth odour	10	55
The reaction of people to the mouth odour	17	94.4
I was told I had mouth odour	5	27.8

Table 4. Oral Hygiene Habits

Tooth brushing (Daily)	1x	2x	3x	3x<
Number of patients	0	2	12	4

Use Dental floss routinely 6

Brands of tooth paste used in past 6 months	1	2	3	4	5	6	6<
Number of patients	0	0	3	5	5	4	1

Use mouthwash, chewing gum, breath mints and sweets to mask odour 15

Table 5. Best description of feelings about condition

Description	Number	%
I am embarrassed	10	55.6
I am frustrated	5	27.6
I am self conscious	2	11.1
I am helpless	1	5.6
I want to die	0	0

Table 6. Classification of Patients with Delusional halitosis

Diagnosis	Number of patients	%
Delusional halitosis	18	100
Pseudo halitosis	13	72.2
Halitophobia	5	27.8

DISCUSSION

During the study period 18 cases of delusional halitosis were diagnosed consisting of 11men and 7 women. After the initial treatment period we were able to classify 13 patients as having Pseudohalitosis while 5 were classed as Halitophobia (Table 6). The delusion of halitosis presents either as pseudohalitosis or halitophobia[8]. Pseudohalitosis seems to represent an over valued belief, where the individual is totally convinced that he/she has an offensive mouth odour, even though it cannot be perceived by another person. As in the case of an over valued belief it is theoretically possible to dissuade the person from his/her erroneous belief with patient education of the problem, counseling, empathy and as in the case of pseudohalitosis, routine oral prophylactic measures, that the dental surgeon can readily provide [8,9]. If after this approach is employed, the individual persists in the erroneous belief of offensive mouth odour, then he/she is said to have halitophobia[8.] Halitophobia is an olfactory reference syndrome (ORS) [10]. ORS is a somatic delusional disorder characterized by one believing erroneously that some part of their body emits a foul odour that makes people react in a negative way to their body resulting in feelings of shame, embarrassment, significant distress, avoidance behaviour and social isolation by the afflicted individual[11, 12]. It is a psychological problem and such cases are usually beyond the realm of solo management by the dental surgeon.

Though the number of patients seen in this study was small, the majority of patients that presented were found in the 30 - 39 years age group (8 patients) and 20-29 (7 patients) respectively. This is similar to findings in two earlier Nigerian studies[7, 13]. Similarly the male to female ratio in our study which was 3: 2 also correlated favourably with the two previous studies.

A majority of individuals that suffer delusional halitosis will usually relate the behavior of people towards them when they talk in close proximity as confirmation of their perceived mouth odour as seen in our series. Such behavior may include stepping back, running a finger or hand over the face or nose, looking distracted, excessive blinking, pulling the nose and sniffing. However studies have shown that these common everyday actions when one is in close proximity to others are not usual reactions to people with offensive mouth odour [14, 15, 16].

Self determination of ones mouth odour by breathing into cupped hands or wetting the lips and wrists with saliva and smelling, have not proved to be effective [17, 18]. However it is still sited as a major reason for the individual's erroneous belief in a bad mouth odour. It was initially suggested that due to dulling of the sense of smell to ones oral odour by continuous exposure, one became inured to his or her own oral odours [19]. More recent studies have however reported subjective results that correlate positively with organoleptic scores obtained by odour assessors on self assessment by individuals [20, 21]. Though it was noted that in these reports the samples were removed from the mouth and thus the individual was less likely to relate the odour to their body image causing an improvement in their objectivity [16]. People that worried about their mouth odour were found to be less objective in their self assessment and rated their mouth odour to be higher verses those that didn't worry and were found to be more subjective and had similar ratings when compared with independent odour judges and laboratory measurements [16]. Based on these findings it has been postulated that preconceived assumptions about mouth odour play a significant role on self assessment ratings and were related to ones psychological make up [16,22].

Individuals that are told that they have mouth odour by another person may invariably actually have a mouth odour. Unfortunately people with low self esteem may persist in this belief that their mouths smell and become overtly worried about it even after the mouth odour has been treated. This creates a pseudo-halitotic who will require not only oral health care but may also require intervention to improve self perception and esteem.

Individuals that suffer from delusional halitosis tend to show increased attention to their oral hygiene, with good oral hygiene and little or no dental deposits [23]. Most will brush their teeth repeatedly during the course of a day and employ the use of other mouth odour reducing mouth rinses, chewing gum and breath mints routinely. Unfortunately this increased attention to oral care may become obsessive, with destruction of dental hard tissue and apical gingival migration from over enthusiastic tooth brushing and its consequent morbidity. There is also a recognized abuse of oral care products and a consistent search for different types of oral care products to combat the believed mouth odour [24]. In the patients studied there

was an obvious increased use of oral care products in an attempt to reduce mouth odour. The increased frequency of brushing and use of multiple toothpastes and oral rinses is clearly seen. Only two patents showed tooth wear lesions consistent with over enthusiastic incorrect tooth brushing.

Almost all the sufferers of delusional halitosis posses similar personality traits; low self esteem, high levels of anxiety, emotional instability, interpersonal sensitivity, nervousness, manipulative thoughts and increased suspiciousness [25]. This has led to the postulation that in delusional halitosis there is an underlying psychosomatic disorder, which may vary from an over valued belief, a social phobia, a monosymptomatic hypochondrial psychosis, depression, schizophrenia or an affective disorder [6,9]. This is highlighted by the fact that many individuals suffering from genuine halitosis remain completely unaware of the fact and will only rarely come for treatment when they are pushed by people in close contact like a spouse, family member or friend. This is the so called bad breath paradox [10,18]

Recognising and accurately diagnosing a psychological disorder is not always easy, especially so for the dental surgeon who has little or no training in psychological medicine. Yaegeki and Coli [26] developed a questionnaire which tries to address this problem in respect of patients who present complaining of halitosis

In all cases of delusional halitosis the clinician should strive to establish a good rapport with the patient, making sure that he never argues with the patient on the existence of an offensive mouth odour [10, 27]. Accepting that an odour does exist but that it is not overt at the time of examination, helps build confidence in the patient that there is a sympathetic professional listening to his over bearing problem [16]. Often halitophobics will refuse to listen to the clinician who tells them that they do not have halitosis or suggests that there is a psychological aspect to the condition and refers them to a psychological specialist [10]. Such patients often end up visiting doctor after doctor, in a bid to find a solution to their delusion, which may become a perpetual unresolved problem, leading to frustration, depression and in extreme circumstances the individual may become suicidal [28]. In our series this was evident as a majority of the patients had visited 2 or more doctors with the same complaint within the year of their presentation. Embarrassment and frustration with their condition was prevalent, however none of the patients we saw during the study period indicated any suicidal thoughts.

Deluded patients will often try to dictate their treatment as they may have tried different solutions or may be fixated on a specific source of their problem. It is important that the clinician does not make any curative promises nor colludes with the patient in carrying out treatment or administering medication for which there is no indication. This may to the deluded patient confirm the presence of his mouth odour (9).

During the study period we routinely referred halitophobic patients to the mental health physicians for continued expert management. However, our experience showed that due to stigmatization to psychological treatment in our environment, these individuals were reluctant and in almost every case did not continue their follow up care with such specialists. We have because of this non compliance to referrals, changed our treatment approach in line with the guide lines suggested by Eli, Baht, Koriat et.al [16]. They suggested that self breath odour estimation by the patient, employment of the patients confidant in organoleptic measurements, the use of objective measurement equipment like the Halimeter in association with organoleptic assessment where possible and the early participation of the psychological specialist in the dental environment in a multi disciplinary manner, improve the over all quality of patient care and the patients compliance and acceptance of treatment. Our recent experience with deluded patients tends to support this. We also believe that increased education of dental surgeons in recognising, diagnosing and preliminary treatment of related psychological problems will improve their ability to provide quality care in such patients.

Dental surgeons should remember that patients with psychological problems might present with ethical and medico legal problems. It is thus always important that good clinical records are kept of all visits and the patients should always be chaperoned and never be seen alone [29].

CONCLUSION

Delusional halitosis may be either pseudohalitosis or halitophobia. In all cases there is usually an underlying psychosomatic problem. Patients with pseudohalitosis can usually be dissuaded from their erroneous belief that they have severe halitosis. Halitophobics cannot be dissuaded from their belief and require specialist psychological care beyond the realm of treatment of the dental surgeon. A multidisciplinary approach to treatment in the dental setting with psychological specialists along with the patient and patient's confidant's participation may give the best treatment outcome.

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