Management of halitosis secondary to periodontal disease: report of four cases

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Abstract

Halitosis is an offensive odour emanating from the oral cavity and it is a common clinical condition. The purpose of this study is to emphasize the importance of the correct diagnosis of the type of halitosis in order to achieve a successful management. The four cases reported in this study revealed that a cause of the halitosis can be found most of the time following thorough examination and elimination of the cause/source of the mal-odour eventually eliminates the halitosis. Dental practitioners should therefore be cautious in making a diagnosis of pseudo-halitosis and halitophobia which are very rare conditions and they should patients should be referred for expert management.

Key words: Halitosis, Halitophobia, Pseudo-halitosis, management, Diagnosis

Introduction

Halitosis is a term used to describe bad breath or fetor oris. It is an offensive odour emanating from the oral cavity. It is a common clinical condition about the third in the list of patients' chief complaints in dental clinics and it may be of diagnostic significance1. It may interfere with marital, dating, business activities and social lives of the affected individuals.

Identifying the underlying cause of the halitosis is very important in the management of this condition(1, 2, 3). Any patient that complains of halitosis should be assigned a separate appointment in order to carry out a thorough examination(3). Reports of the biochemical pathogenesis of halitosis has made its treatment simple(1, 2) Adeyemi(4), in her report of an update of halitosis reported that because halitosis is a sign or symptom rather than a disease, its treatment should be directed towards the etiology. Arowojolu and Dosumu(5) found statistical significant association between halitosis and oral hygiene status, social class and the age of the affected individuals. Rosenberge(3) reported that halitosis is a common condition that usually originates in the mouth itself and rarely from other sources. Sauz et al(6) in their comprehensive review of the etiology, prevalence, diagnosis and treatment strategies of halitosis reported acute necrotizing gingivitis, pericoronitis, dry socket and mouth ulcers as common causes.

However, Iwu and Akpata(7) in their review of literature and analysis of thirty- two cases described delusional halitosis in groups of people who don't have halitosis but felt that they have it and therefore seek professional help.

Report of Cases:

Case 1

A 72 year old retired school headmistress presented at the clinic with a long time history of halitosis. She had visited several dental centers in different cities of the south western region of Nigeria. A diagnosis of halitophobia was made during her last visit at one of these dental centers and was referred to a psychiatrist who ruled out any form of psychiatric ailment and was referred to this clinic for management.

On clinical examination, we found that the oral hygiene was good which was probably because during all her previous "dental visits" she always had professional dental prophylaxis and she brushes her teeth two or three times daily. The lower right canine tooth is inclined distally, overlapping the adjacent first premolar tooth. Deep periodontal pathologic pocket of 9mm depth and pus discharge through the pocket opening at the gingival margin was seen. A diagnosis of chronic periodontal abscess with deep peridontal pocket was made. Open flab gingival curettage and debridement was done and patient was placed on antibiotics for five days post operatively, dental flossing was prescribed and six monthly maintenance visit advised which the patient adhered to. Seven years after management, the halitosis has been eliminated.

Case 2

A 35 year old female medical doctor presented in the clinic with a long standing halitosis which she tried to manage by constantly licking sweets since she doesn't seem to get any solution from her previous several dental consultations at some dental clinics, even after professional dental

prophylaxis.
On examination, she had bilateral mesio-angularly impacted lower third molar teeth with distal deep periodontal pathologic pocket of 8mm each. Surgical dis-impaction of these teeth were done under local anesthesia. Four years post-operation review revealed that the patient is free from halitosis.

Case 3

A 24 year old final year female student presented with a complaint of long standing history of halitosis. She felt she has halitosis because of her perceived behavior of people around her whenever she talks. She has therefore decided to talk less and even when she has to talk, she does it with minimal mouth opening. She has had professional dental prophylaxis from previous dental visits where a diagnosis of arrested dental caries was made. On examination, the oral hygiene was good and she was found to have dental caries in the lower right and left first and second molars and bilateral vertically impacted third molars.
Amalgam restorations of the carious teeth and surgical dis-impaction of the third molars were done under local anesthesia. Two years post-management review shows that the patient no longer suffers from halitosis.

Case 4

A 32 year old female trader presented with a perceived condition of halitosis because of her interpretation of other people's behavior as an indication of her own bad breath. A diagnosis of halotiphobia was made by the dentist she consulted based on his organoleptic measurement and because the patient's spouse never complained about it.
On examination, the oral hygiene was fair, deep periodontal pockets were found around all the first and second molars. Deep gingival curettage of all the pathologic pockets were done under local anesthesia with professional dental prophylaxis and oral hygiene instructions and motivations. The importance of keeping maintenance visit was stressed and the patient adhered to it. One year post-management review shows that the patient no longer has halitosis.

Discussion

Halitosis is a very important clinical condition that should not be handled with levity. The effective management critically depends on appropriate diagnosis of the type of halitosis. This paper presents four cases of genuine halitosis secondary to periodontal conditions and impacted teeth seen at the Periodontology unit of the University College Hospital (UCH). They have been previously diagnosed as pseudo-halitosis or halitophobia in some other dental clinics and have been psychologically affected. Improper diagnosis of the etiology of halitosis may lead to visiting several dentists and a few patients with halitophobia have been reported to commit suicide(2).
The diagnosis of halitophobia (psychological halitosis) or pseudo-halitosis should be the last result after intense examination and the use of an oral mal-odour detecting system that would have ruled out other causes of genuine halitosis. Although halimeters are portable and easy to use, most are not specific for volatile sulphur compounds(8) and Rosenberge(3) reported that although these methods of measurement of halitosis are correlative, quantitative and helpful, the clinician should also make a differential judgment by actually smelling the odour emanating from the patient's mouth and nose.
Muyazaki et al(9), established the recommended examination for halitosis and a classification with corresponding treatment needs which will be helpful in the management of these group of patients.
Yaegaki and Geil(10) have however broadly classified halitosis into three main groups : (a) Genuine halitosis which can be physiologic (e. g ingestion of odoriferous food substances, menstruation induced ('mousey' breath) or pathologic e. g oral (coated tongue, malpositioned teeth, dental caries, periodontal disease, poor oral hygiene, dental abscesses, dentures, impacted teeth etc), or extra-oral e.g. respiratory tract structures (sinuses, nasopharynx, bronchi, trachea, lungs) and systemic (Leukaemia, febrile illness causing dehydration, ketoacidosis from prolonged fasting , uremic breath, etc).
(b) Pseudo-halitosis in which oral mal odor does not exist but the patient believes that he/she has oral mal odor. (c) Halitophobia: This occurs if after treatment for either genuine or pseudo-halitosis the patient still believes that he/she has halitosis. Most of these patients interpret other people 's behavior e.g. nose covering, averting face, stepping back etc as an indication of their own bad breath .
The(11) treatment needs (TN) were categorized into five classes to provide guidelines for clinicians in treating patients with this condition.

	Treatment Need (TN)
Physiologic halitosis	T N – 1
Oral pathology halitosis	T N – 1, T – 2
Pseudo-halitosis	T N – 1 & T N – 4
Extra oral pathology halitosis	TN – 3
Halitophobia	T N – 5

Culled from: Yaegaki K, Gail J M. Diagnosis of Halitosis by utilizing questionnaires and organoleptic measurement. Quintessence International 1999; 18: 745-753

This group of patients can be identified through administration of questionnaires to assess the psychological condition(4).

T N- 1, T N – 2 & T N – 4 are the responsibility of the dental practitioner.
T N -3 would be managed by a physician or medical specialist
TN – 5 would be managed by a physician, psychiatrist or psychologist.
T N – 1 involves oral hygiene instructions and motivation. Tongue (dorsoposterior region) cleaning.
T N – 2 involves mainly periodontal and restorative treatments
T N – 3 involves referral to the medical specialists for the management of the extra oral pathological conditions.

T N – 4 is the management of pseudo-halitosis and it involves counseling with literature support, education and explanation of the result that the intensity of their mal odor is not beyond a socially acceptable level. Some of this group of patients responds to counseling and if they don't they should be given T N – 5.

T N -5 for halitophobia patients: This group of patients are the most difficult to diagnose and manage which cause them to be mismanaged because they only receive treatment for genuine or pseudo-halitosis even though they do not have oral mal odor.

The successful management of halitosis therefore is elimination/correction of the cause which depend on the correct diagnosis of the type of halitosis which should be done painstakingly and not hurriedly. It may also be concluded that the case of halitophobia or pseudo-halitosis is rare within the limitations of these reports.

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