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زانكۆی پۆلیتیه كنیکی هه ولیر
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A research project About

Halitosis

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DEDICATION

I dedicate this project to God, my source of inspiration, wisdom, knowledge and understanding. He has been the source of my strength.

I also dedicate this work to my parents, who have encouraged us all the way and whose encouragement has made sure that I give it all it takes to finish that which I have started.

Furthermore, i want to dedicate to my lectures for their continual impact of knowledge.

To God is the glory.

Introduction

Halitosis, also commonly known as "bad breath," is a concern of many patients seeking help from health care professionals. The health care workers have neglected the subject of oral malodor but recently, along with the growing public and media interest in oral malodor; health care professionals are becoming more aware of their patient's concern. A patient with halitosis is most likely to contact primary care practitioner for the diagnosis and management. The present article succinctly focuses on the development of a systematic flow of events to come to the best management of the halitosis from the primary care practitioner's point of view

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. Miyazaki concluded that there was increased correlation between older age and malodor with aging resulting in greater intensity the of odor. (Kojima K .1985)

Most research shows association between poor salivation, chronic infections in the oral cavity and a deep hairy surface on the back of the tongue as facilitators of Halitosis. One report even suggests that emotional factors also influence its development.

In above 60 years age group of the Turkish individuals, the incidence was around 28%. A thorough literature search reveals a lack of studies on halitosis in India, especially among the general population.

Halitosis is a widespread problem in the general population. Due to increasing media exposure in recent years, halitosis has gotten the attention and awareness of patients and dentists. Nevertheless, it is still a taboo subject. Since the oral cavity is the source of halitosis in most cases, a dental practitioner should be the first person to contact (BMJ Publishing Group 2015). Before visiting a professional halitosis clinic, the majority of patients try to treat halitosis themselves. The most commonly used anti-halitosis products are chewing gum, candies, and mouth rinse. However, it is known that these products only have a masking effect, and thus they are not able to influence the cause of bad breath. (Querynin et al. 2004) More than half of the patients have, prior to their appointment at a halitosis clinic, already visited one or more general practitioners or medical specialists. Often, patients have a long history of suffering from halitosis, and the resulting social and psychological stress can be very high.

Symptoms

Bad breath odors vary, depending on the source or the underlying cause. Some people worry too much about their breath even though they have little or no mouth odor, while others have bad breath and don't know it. Because it's difficult to assess how your own breath smells, ask a close friend or relative to confirm your bad-breath questions.(fig. 1)

- **Respiratory tract infection**
Symptoms of an RTI include:
 - a cough – you may bring up mucus (phlegm)
 - Sneezing
 - a sore throat
 - muscle aches
 - breathlessness, tight chest or wheezing
 - a high temperature
 - Feeling generally unwell

- **Infections in the mouth**

Different oral infections can have different symptoms, but the most common ones are:

- Bleeding or sore gums.
- Tooth, gum, or jaw pain.
- Tooth sensitivity to hot or cold foods.
- Swelling of the gums, jaw, or lymph nodes.
- Loose teeth.
- Sores in the mouth, gums, or lips.

- **Dry mouth**

Symptoms may include:

- Dryness or a feeling of stickiness in your mouth
- Saliva that seems thick and stringy
- Difficulty chewing, speaking and swallowing
- Dry or sore throat and hoarseness
- A changed sense of taste
- Problems wearing dentures
- Dry or grooved tongue

- **Illnesses:** Symptoms of diabetes, lung disease, kidney failure or liver disease



Figure 1:- the symptoms

Causes

Halitosis can have multifactorial causes(fig.2). Nevertheless, in 80– 90 % of halitosis the source can be found in the oral cavity.

The bacteria are commonly found at the bottom of the microfurrows and crypts on the dorso-posterior surface of the tongue. These bacteria have also been associated with gingivitis and periodontitis. Further possible causes of intraoral halitosis are gingivitis, periodontitis, open caries lesions, inadequate dental restorations,(Lemos et al.2005) Extra-oral halitosis is uncommon and is mostly found in the ear, nose, and throat area or, in rare cases, in the gastrointestinal tract.

The most common causes of halitosis are stomatological diseases (over 80%), such as calculus, chronic gingivitis, periodontitis, caries, general dental practitioners should be able to manage patients with intraoral halitosis (Quirynen,et al .2019)



Figure2:-causes of halitosis

Diagnosis

The patient history should contain main complaint, medical, dental and halitosis history, information about diet and habits, and third part confirmation confirming an objective basis to the complaint. Halitosis history should be discretely and intermittently recorded. Questions such as frequency, duration, time of appearance within a day, whether others have identified the problem (excludes pseudo-halitosis from genuine halitosis), list of medications taken, habits (smoking, alcohol consumption) and other symptoms (nasal discharge, anosmia, cough, pyrexia, and weight loss) should be carefully recorded. The authors have designed an investigative protocol for the diagnosis of oral malodor that can be used in clinical practice and is of significance to family health care practitioners .(Brunner et al.2010)

The question "How do you know that you have halitosis?" (options: self reported, others have reported by straight or indirect way) gives an indication of possible existing psychogenic halitosis .

There are a variety of sophisticated detectors that can rate odor more precisely.

They include the following:

- **Halimeter:** This detects low levels of sulfur.

- **Gas chromatography:** This test measures three volatile sulfur compounds: Hydrogen sulfide, methyl mercaptan, and dimethyl sulfide.
- **BANA test:** This measures levels of a specific enzyme produced by halitosis-causing bacteria.
- **Beta-galactosidase test:** Levels of the enzyme betagalactosidase have been found to correlate with mouth odor.(Bicak et al.2018)

To diagnose what's causing your bad breath, your doctor will smell your mouth, nose, and tongue to try to determine the source of the odor.

If the odor doesn't seem to be coming from your teeth or mouth, your dentist will recommend that you visit your family doctor to rule out an underlying disease or condition.

classification of difference types of halitosis

1. **Physiologic halitosis:** This type of halitosis is not caused by any underlying health condition or disease but is rather a result of the normal processes in the body, such as when we wake up in the morning with "morning breath" due to decreased saliva production during sleep.
2. **Oral or dental halitosis:** This type of halitosis is caused by poor oral hygiene practices, gum disease, dental caries, or other oral health issues.
3. **Systemic halitosis:** This type of halitosis is caused by underlying medical conditions or diseases such as respiratory tract infections, liver or kidney problems, diabetes, or gastrointestinal disorders.
4. **Dietary halitosis:** This type of halitosis is caused by the consumption of certain foods or drinks that have strong odors, such as garlic, onions, coffee, or alcohol.
5. **Psychogenic halitosis:** This type of halitosis occurs due to psychological factors such as stress, anxiety, or depression, which can affect the body's natural odor.
6. **Medication-induced halitosis:** This type of halitosis is caused by certain medications that can dry out the mouth or have a strong odor, such as antidepressants, diuretics, or chemotherapy drugs.

7. **Hormonal halitosis:** This type of halitosis is caused by hormonal changes during puberty, menstruation, or pregnancy, which can affect the body's natural odor.
8. **Bacterial halitosis:** This type of halitosis is caused by the presence of bacteria in the mouth or on the tongue, which can produce foul-smelling gases.
9. **Smoking-related halitosis:** This type of halitosis is caused by smoking or using tobacco products, which can leave a strong odor on the breath and increase the risk of gum disease and other oral health issues.
10. **Halitophobia:** This is a psychological condition where a person becomes overly concerned about having bad breath, even when there is no evidence of halitosis. This can lead to social anxiety and affect a person's quality of life.

Treatment

To reduce bad breath, help avoid cavities and lower your risk of gum disease, consistently practice good oral hygiene.(BMJ Publishing Group Limited 2015) Further treatment for bad breath can vary, depending on the cause. If your bad breath is thought to be caused by an underlying health condition, your dentist will likely refer you to your primary care provider.(fig.3)

If extra-oral halitosis is diagnosed, the patient is referred to appropriate specialists such as an otorhinolaryngology's or internist In addition(Seemann R, Conceicao MD, Filippi A, Greenman J, Lenton P, Nachnani S, et al. Halitosis management by the general dental practitioner- results of an international consensus workshop.(Dal Rio et al.2007)

No one treatment for bad breath has been shown to work for certain You may need to try several different things, or a combination of treatments.



Figure3:- Treatment

For causes related to oral health, your dentist will work with you to help you better control that condition. Dental measures may include:

- **Mouth rinses and toothpastes.** If your bad breath is due to a buildup of bacteria (plaque) on your teeth, your dentist may recommend a mouth rinse that kills the bacteria. Your dentist may also recommend a toothpaste that contains an antibacterial agent to kill the bacteria that cause plaque buildup.
- **Treatment of dental disease.** If you have gum disease, you may be referred to a gum specialist (periodontist). Gum disease can cause gums to pull away from your teeth, leaving deep pockets that fill with odor-causing bacteria. Sometimes only professional cleaning removes these bacteria. Your dentist might also recommend replacing faulty tooth restorations, a breeding ground for bacteria.

Reference

- Kojima, K. Clinical studies on the coated tongue. *Jpn. J. Oral Maxillofac. Surg.* 1985, 31, 1659–1678.
- Quirynen, M.; Avontroodt, P.; Soers, C.; Zhao, H.; Pauwels, M.; Van Steenberghe, D. Impact of tongue cleansers on microbial load and taste. *J. Clin. Periodontol.* 2004, 31, 506–510.
- Roldan, S.; Herrera, D.; Santa-Cruz, I.; O'Connor, A.; Gonzalez, I.; Sanz, M. Comparative effects of different chlorhexidine mouth-rinse formulations on volatile sulphur compounds and salivary bacterial counts. *J. Clin. Periodontol.* 2004, 31, 1128–1134.
- Thoppay JR, Filippi A, Ciarrocca K, Greenman J, De Rossi S: Halitosis; in Farah C, Balasubramaniam R, McCullough M (eds): *Contemporary Oral Medicine*. Cham, Springer, 2019.

Seeman R, Conceicao MD, Filippi A, Greenman J, Lenton P, Nachnani S, Quirynen M, Roldan S, Schulze H, Sterer N, Tangermann A, Winkel E G, Yacgaki K, Rosenberg M: Halitosis management by the general practitioner – results of an international consensus workshop. *J Breath Res* 2014;8:17-101.

Lemos JA, Abranches J, Burne RA: Responses of cariogenic streptococci to environmental stresses. *Curr Issues* 2005;7:95-107.

Brunner F, Kurmann M, Filippi A: The correlation of organoleptic and instrumental halitosis measurements. *Schweiz Monatsschr Zahnmed* 2010;120:402–408.

Bicak, D.A. A Current Approach to Halitosis and Oral Malodor –A Mini Review. *Open Dent. J.* 2018, 12, 322–330.

Dal Rio, A.C.C.; Nicola, E.M.D.; Teixeira, A.R.F. Halitosis- an assessment protocol proposal. *Braz. J. Otorhinolaryngol.* 2007,73, 835–842.