ORIGINAL ARTICLE

Prevalence of Halitosis Among General Population: A Cross Sectional Study in Jamshoro

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ABSTRACT

Objective: To find out the prevalence of halitosis among general population in Jamshoro.

Study Design: Descriptive, cross sectional study.

Place & Duration: Department of Dentistry, Liaquat University of Medical and Health Sciences Jamshoro, on March 19th and 20th 2015.

Material & Methods: Two hundred subjects were examined in a free camp and questionnaires were filled by patients who were free from respiratory tract infections.

Results: Total subjects included in the study were 200. Gender distribution showed 105 (52.5%) men and 95 (47.5%) women; so, there were more men than women. Moreover, frequency of bad breath showed that 57.9% of women and 33.3% of men were affected from halitosis.

Conclusion: Tooth brushing along with tongue brushing should be a part of our daily routine habit. Government and health care professionals should pay more attention on awareness and knowledge of halitosis because halitosis could be a sign of underlying systemic disease.

Keywords: Halitosis, Proportion, Men, Women

INTRODUCTION:

Halitosis refers to unpleasant odor of mouth and is considered to be a medico-social problem in the universe.[1] There is evidence that healthy adults have socially unacceptable bad breath on waking up in morning.[2] Halitosis can result from oral and non-oral sources.[3] Former constitutes approximately 90% of the total cases,[4] factors that contribute to this include deep carious lesions, reduced saliva flow, tongue coating, exposed necrotic tooth pulps, mucosal ulcerations, unclean dentures, oral carcinoma, impacted food or debris.[4] Non-oral causes may be disorders involving larynx, paranasal lesions and systemic diseases like diabetes mellitus.[5] Gram negative anaerobic bacteria, volatile sulfur containing and proteinous compounds give rise to production of malodor in the mouth.[6-10] Volatile compounds which are main cause of oral odor are hydrogen sulphite (HS_2) and methyl captan (CSH3SH).[11,12] For extra oral or blood borne halitosis dimethyl sulphide (C2H6S) is the contributor.[1]

According to previous studies, the prevalence of halitosis ranges from 2% to 50% globally.[13-15] Halitosisis a major international problem to the general population due to its adverse consequences on societies and cultures affecting on private and professional life.[16]

It impairs quality of life and contributes to social isolation resulting into psychogenic and mood disorders.[17] Oral malodor is a serious underlying medical condition warranting immediate seeking of professional care.[18] Therefore, aim of the study was to find out the prevalence of halitosis among general population in Jamshoro.

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MATERIAL & METHODS:

This cross sectional study was conducted on Oral Health Day (OHD) during 19th and 20th March 2015 arranged by Faculty of Dentistry, Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro. There were 200 subjects selected in the study who came for free dental checkup in the camp. Moreover, pre-examination instructions were given to and consent was taken from the subjects. Inclusion criteria for this study was: age from 12 to 70 years of either gender, free from respiratory tract infections, refrain from smoking for at least 1 hour prior to check up, refrain from eating garlic, onions and spicy foods before and during examination.

Questionnaire were prepared in English, Urdu and Sindhi languages that includes both open and closed ended questions comprising of knowledge regarding halitosis, demographic details, medical, dental and drug history, smoking and dietary habits. Questions were made under supervision of experts. Questionnaires were distributed among patients in a camp who came for free dental checkup. Pamphlets were distributed in which oral hygiene instructions and preventive measures of halitosis were given. Flossing technique was also demonstrated as the patients were unaware of this technique. SPSS version 16 was used for data entry and analysis. Results were presented in descriptive statistics.

RESULTS:

Total subjects included in the study were 200. Gender distribution showed 105 (52.5%) men and 95 (47.5%) women; so, there were more men than women. Moreover, frequency of bad breath showed that 57.9% of women and 33.3% of men were affected from halitosis. The findings on gender distribution and frequency of halitosis are presented in table 1.

Table 1. Gender Distribution and Frequency of Halitosis

Gender	Yes	No	Total
Male	35 (33.3%)	70 (66.7%)	105 (52.5%)
Female	55 (57.9%)	40 (42.1%)	95 (47.5%)
Total	90 (45%)	110 (55%)	200 (100%)

DISCUSSION:

Halitosis or malodor is socially unacceptable and embarrassing to the sufferers. For masking this malodor, chewing gum and mint, repeated mouth rinsing and brushing are attempted to desperately get rid of halitosis.[19] Moreover, patients with periodontitis have been found to suffer more from halitosis than those without it.[6] In our study, we had 45% general population suffering from halitosis. Our results were higher than the studies from Saudi Arabia,[20] Jordan[21] and Kuwait[22] which had 36.8%, 25% and 23.3% prevalence of halitosis respectively. According to the literature, prevalence of halitosis was between 2-44%.[15] This variation in the results was due to the difference in sampling technique and assessment methods and subjectivity of the diagnostic criteria.

Sometimes, malodor due to halitosis is either inoffensive or unnoticeable.[23] Its self-perception may be related to psychogenic or somatic disorders necessitating psychiatric consultation.[24,25]

Furthermore, despite the introduction of modern techniques like gas chromatography and sulfide monitoring, the organoleptic test (OLT) is the gold standard for detecting halitosis.[26] Regularly, an estimated 30% of the world population suffers from halitosis problem.[27] We had predominance of females in our study than male population. Out of 105 males, only 35 (33.3%) were suffering from halitosis whereas 55 (57.9%) out of 95 females had halitosis. These findings were similar to the studies conducted in Kuwait[22] and Italy[28] which had significant halitosis among females. Studies have proved that patients who experienced bad breath do not clean their tongue while brushing and there is a significant association of frequency of tooth brushing and malodour.[29]

This problem is a serious health issue challenging multidisciplinary approach towards the treatment; successful treatment depends on correct diagnosis and using cause-related therapy.[25]

CONCLUSION:

Tooth brushing along with tongue brushing

should be a part of our daily routine habit. Government and health care professionals should pay more attention on awareness and knowledge of halitosis because halitosis could be a sign of underlying systemic disease.

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