Oral health in perspective of Unani literature: A review

Basharat Rashid

Abstract
Oral health is vital to quality of life as it ensures social and physical well-being and it acts as the mirror through which general health is reflected. It is said that oro-dental diseases are the on the top as compared to some common diseases in the world. Poor oral hygiene is a known essential predisposing factor of some oral diseases. Oral diseases in their various forms have afflicted humans since the dawn of the history. A discussion about oral diseases is mentioned in ancient Chinese, Greek, Roman, Egyptian, Arabic and ancient Indian medical and surgical treatises. Many renowned Unani physicians have too mentioned about various oral diseases and unhygienic conditions in their respective books. They have clearly mentioned how to maintain oral health and treat various oral conditions in their respective rich Unani texts. Present review paper is an attempt to throw some light over oral hygiene and practices, its historical background and diseases which occur due to poor oral health light of the Unani literature. This paper also attempts to highlight the possible management and preventive measures of oral diseases through Unani medicine.

Keywords: Oral health, Unani medicine, oral diseases, preventive measures

Introduction
Oral diseases have been a continual public health problem globally, with almost every individual experiencing poor oral health at least once in their lifetime [1, 2]. Oral health is defined a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal disease, tooth decay and tooth loss, and other diseases and disorders that affect the oral cavity [3, 4]. WHO claimed that poor oral health may have a significant effect on quality of life as well as on general health, and several oral diseases are related to chronic diseases. The experience of pain, difficulty with eating, smiling, chewing, and communication due to missing, discolored or damaged teeth have a major impact on people’s daily lives and well-being [5]. The most common oral diseases are dental cavities, periodontal (gum) disease, oral infectious diseases, trauma, and hereditary lesions. Dental caries is a rapidly emerging oral health problem amongst the children of India. Its incidence in different states varies between 31 and 89%. Severe periodontal (gum) disease, which may result in tooth loss, is found in 15-20% of middle aged (35-44 years) adults. It has been considered an important global oral health burden and in many developing countries its prevalence is increasing, thereby constituting a growing public health problem [5]. Dental plaque is an associated factor for caries and it has been demonstrated that poor oral hygiene contributes to an increased risk of caries. There is a high correlation between poor oral hygiene and the development of periodontal disease [5]. Unani Medicine through its rich literature have mentioned about the diseases which are affecting humans since time antiquity. Oral conditions are among one of those conditions through which every human being have been passing in all stages of their life. In classical Unani texts mention is also emphasised over the oral conditions, their possible management and how one can mention oral hygiene. This review paper enlightens over the knowledge regarding oral hygiene, practices and management of oral diseases and possible preventive measures for maintaining oral hygiene as mentioned in Unani system of medicine.

Historical Background
The ancient history of the world’s fascination with oral health is a long and illustrious one. Neolithic age and prehistoric age people used agents and devices that have evolved, by custom, myth, beliefs and by research, to enable people, with professional assistance, to maintain good oral health. The intent of early humans was probably not to clean the teeth but simply to remove an unpleasant subjective sensation [6]. A variety of oral hygiene measures have been used since before recorded history. The first known mention of tooth decay and toothache occurs on a Sumerian clay tablet now referred to as the "Legend of the worm It was written in cuneiform, recovered from the Euphrates valley, and dates from around 5000 BC [7].
As early as 3000 BC, Assyrian cuneiform medical texts mention teeth-cleaning procedures. Toothpicks dating back to this same time have been found in other sites in Mesopotamia (modern-day Iraq). *Aesculapius*, the Roman equivalent of Greek god of medicine and healing was believed to advocate cleansing the mouth and teeth (1193 - 1164 BC). Ancient Greek physician *Hippocrates* is the first to recommend a dentifrice powder to clean the teeth (355 BC). Oral hygiene was practiced by the Sumerians. Elaborately decorated golden tooth picks found in excavations in Mesopotamia; suggest their interest in cleanliness of mouth [7]. The embalmed bodies (mummies) of Egyptians of 4000 B.C. showed the signs of periodontal diseases. The oldest scriptures of Egyptians medicines Ebres and Edwin Smith papyrus contain many references to gingival diseases and prescriptions for strengthening the teeth. The ancient Egyptians also wore amulets to prevent toothache. The Ebres papyrus (1500 BC) details a recipe to treat “gnawing of the blood in the tooth”, which included fruit of the gebu plant, onion, cake, and dough, to be chewed for four days [9]. Among the ancient Greeks *Hippocrates* (460 B.C, also known as father of medicine) proposed humor pathalogy. According to him four essential humours are phlegm, blood, yellow bile and black bile. He said that the deposition on tooth has corroding action on tooth; he also stated that stagnation of juices in teeth was a cause of toothache. As long ago as 3000 BC, the ancient Egyptians constructed crude toothbrushes from twigs and leaves to clean their teeth. Similarly, other cultures such as the Greeks, Romans, Arabs and Indians cleaned their teeth with twigs. Some would fray one end of the twig so that it could penetrate between the teeth more effectively. *Hippocrates* and *Aristotle* write about dentistry, including the eruption pattern of teeth, treating decayed tooth, filling of teeth which is having a cavity with twigs. Some would fray one end of the twig so that it could penetrate between the teeth more effectively. *Hippocrates* and *Aristotle* write about dentistry, including the eruption pattern of teeth, treating decayed tooth, filling of teeth which is having a cavity with twigs. Some would fray one end of the twig so that it could penetrate between the teeth more effectively. 

### Some of the Most Common Oral Conditions As Mentioned In Unani Literature

#### Dental Caries (Taakkul Asnan)

Dental Caries is a localised destruction of the calcified portion of tooth by microorganism. It is one of the most common diseases of the world. There are a few people who have not suffered from it at any stage. Early Unani physicians have described the decaying and cavity formation in teeth. For that they have suggested some precautions as not to allow the food to get putrefied in stomach, avoid hard and sticky foods, proper cleaning of teeth and application of various drugs in the form of *Manjan* and gargle for the treatment. They used the detoxification (*Istafagh*) by means of purgative and *Fasad* [11-13].

*Rabban Tabri* renowned Unani physician had advised the filling of teeth which is having a cavity with *Agar garha*, *Afyun* and *Post-e-Kibhr*. To avoid decaying of teeth he has suggested gargle with rose oil mixed with vinegar. To keep teeth as well as gums healthy he has suggested the massage of *Saad*, *Gulsurkh*, *Kandur*, *Maazo*, and *Post-e-Anar* in the roots of teeth and gums [11, 14].

#### Periodontal Disease (Amraz-e-Lissa)

Diseases of all the elements supporting the teeth represented by cementum, periodontal membrane, gingival and alveolar bone constitutes periodontal disease. Those which involve chronic and progressive destruction of periodontal membrane and alveolus are termed as perio-dontitis.

In Unani system *Post anar*, *Gulnar*, *Mazoo*, *Aaqar garha*, *Samaq*, *Namak* are used to treat this condition. Make power of these drugs and then mix it with fermented vinegar of *Habbul Aas*. Make tablets and use them [13].

#### Halitosis (bakhrlf fam)

Halitosis typically emanates from the oral cavity or nasal passages. Volatile sulphur compounds resulting from bacterial decay of food and cellular debris account for the malodour. Periodontal disease, caries, acute forms of gingivitis, poorly fitting dentures, oral abscess, and tongue coating are common causes.

*Tabri* explained the causes of *bakhrlf fam* (halitosis) as that bad odoured fluid which remain stagnant for long time in the stomach, infected gums or food particles which remain fixed inside the teeth for long time. If the halitosis is due to stomach fluids then evacuate the stomach fluids by laxative drugs like *Majoorn Fanjnoos*, *Iyaraj Faqra*, *Aaqar qarha*, *Haleela zard* etc. [11].

#### Stomatitis (qula-e-duhan)

Stomatitis or Aphthous ulcers are superficial and painful; they occur in any part of the mouth. There are three main types of stomatitis; Traumatic, Infective and Aphthous stomatitis. Early Unani physicians as *Rabban Tabri*, *Zakariya Razi*, *Abbas Majoosi* and *Ibn Sina* have specified some ulcers of the mouth which erodes the tissue where ever present, and may appear at gums, lips, tongue and often referred to as *Qurah Khabisa, Aaklah-al-fam*. Reason, they said are acid humours mostly black bile (*mutaharrir saqaud*) [14-17]. Drugs as mentioned in Unani literature include *Zargul, Nishasta, Tabasheer, Tukhme kurpha, Dhanya hhushk, Rasoot Makki*. Make powder of these drugs and mix small amount of *Kafoor* and apply to the affected portion and leave it for some time as such [16].

#### Odentalgia (wajaul asnan)

Toothache, also known as dental pain, is pain in the teeth and/or their supporting structures, caused by dental diseases or pain referred to the teeth by non-dental diseases. Toothache is the most common type of oro-facial pain and when severe, it is considered a dental emergency, since there may be a significant impact on sleep, eating, and other daily activities. It is one of the most common reasons for emergency dental appointments [20].

*Ali Ibn Abbas Majoosi* has suggested the gargle with water in which *Post-e-Anar* and *Samaq* has been boiled for inflamed gums. If pus is also coming add *Har khilt* and sometime gums are tender. If gums are inflamed or swollen, *Bhang, Murmuki, Afyun, Naamak-e-Turckhi, Bayza Sokhta, Samaq, Namak-e-Lahori*, *Sajaz Hindi* and for the decayed tooth he has recommended application of *Bhang, Murmuki, Afyun, Filfil and Heeng* in the form of paste [17]. *Ibn sena* recommended *Sutitra, Shajrina, Ma’jun al-khabth and Kaukab* tablets for tooth ache [21].

#### Gingivitis (Warne-Lissa)

It is an inflammatory lesion confined to the tissue of the marginal gingiva. Sometime the gum becomes inflamed during the eruption of teeth in the children due to *Har khilt*, like increase amount of *Safra or Dam* and sometime gums also gets inflamed by few kinds of drugs like mercury mixed with other drug used then also gum become inflamed and pain occur [22].
Preventive Measures for Maintaining Oral Hygiene in Unani System of Medicine

Daily mechanical removal of plaque by the patient appears to be the only practical means for improving oral hygiene on a long term basis. Unani treatment as application of drugs like Kafoor, Sadaf, Mazoo, etc and daily gargle with vinegar in which salt is mixed effectively removes the plaque. Hence it would be best choice. After that process requires motivation on the part of patient, education instruction followed by encouragement and reinforcement [13, 23]. Galen favouring the humoral theory said that dental caries is produced by internal action of acrid and according humours and has recommended the drugs which are cold and dry in temperament for the treatment of diseases of gums and teeth [13, 24]. Early Unani physicians have described the decaying and cavity formation in teeth. For that they have suggested some precautions as not to allow the food to get putrefied in stomach, avoid hard and sticky foods, proper cleaning of teeth and application of various drugs in the form of Manjan and gargle for the treatment. They used the detoxification (Istafragh) by means of purgative and Fasad [11, 13]. Rabban Tabri renowned Unani physician had advised the filling of teeth which is having a cavity with Aqar qarha, Afyun and Post-e-Kibr. To avoid decaying of teeth he has suggested gargle with rose oil mixed with vinegar. To keep teeth as well as gums healthy he has suggested the massage of Saad, Gulsurkh, Kundur, Mazoo, Pos-e-Anar in the roots of teeth and gums [11]. Another renowned Unani physician Zakaria Razi, for prevention from diseases of gums has advised proper cleaning by Khilal to get rid of food debris between teeth and regular cleaning by Manjan made from the powder of Gulsurkh, Samur turfa, Shabe-yamani, Kafoor and Sandal. According to him for cleaning and whitening the teeth the powder of Zarawand, Sartan Sokhta, Namak, Kundur, Kafe-darya, and Zajaj should be used and if cavity has formed or teeth has decayed, fill the cavity with Kibreet, Rasot, Jaz, Samagh-e-Batam or only with Kafoor and if gums are bleeding and inflamed gargle with Shab-e-Yamani and Salt [17, 25]. Ali Ilben Abbas Majosi has suggested the gargle with water in which Post-e-Anar and Samaq has been boiled for inflamed gums. If pus formation is also there, add Sandal, Long, Kafoor, Sumbuluteeb and Mustagi. Drugs which keeps teeth clean and white are Kafe-Darya, Sheeh Sokhta, Post-e-Bayza Sokhta, Namak-e-Lahori, Sajaj, Hindi and for the decayed tooth he has recommended application of Bhang, Murrmuki, Afyun, Fijil and Heeng in the form of paste [17]. Ibn Sina has suggested that teeth decay because of those hot humours whose source of production is stomach [15]. When these juices remain stagnant in teeth they further erode the tooth. So, for the treatment he has advised the detoxification of body (Istafragh) by means of purgative and Fasad [11, 13], for prevention from decaying the teeth and gums he has recommended to avoid very hot and cold, sticky and hard edibles. He also clarified the corrodig action of depositions on tooth. In cavity formation he has advised the filling of cavity with Mustagi, Shoneez, Afyun, Alkul Batam and for inflammation of gums he has suggested the application of astringent drugs like Zofia, Gulnar, Sumbuluteeb and Bartang [15, 25, 26, 27]. Hakim Ajmal Khan advised proper cleaning after eating and removal of debris by miswak or tooth pick and gargle with Alum in water for healthy teeth and gums. In case of cavity formation he advised its filling by Aqar qarha, Naushader and Afyun for bleeding and on inflamed gums apply Sahaga, Mazoo, Kabaab Cheeni in the form of paste or manjan [28].

Qarshi has advised the use of drugs which are cold in temperament as Sandal, Kafoor, Gulnar, Damul Akhwain, Bansalochan and has recommended the regular use of Kaat Safed, Zeera Kirmani, Namak Lahori, Zinjabeel, Kashineez in the form of manjan, as these drugs reduces the deposition on tooth. Sabit Bin Qarah has recommended the powder made from Abhal and Post-e-Beikhe-kibr for the protection of gums and teeth [29].

Mohammed Kabiruddin has clearly explained that bleeding in gums is due to deposition on tooth which is not cleaned properly for that he has recommended use of Phitkari, Geru, and Sang-e-jarahat. Akbar Arzani also had recommended the application of oil mixed with salt at sleeping time. Filling of cavity according to him should be done with Mustagi and Kafoor. For most of the dental and gums problems drugs which were cicative, healing or astringent in function are used for local application and to the patient detoxification from harmful humors (tanajja) either by purgative or fasad is provided as a whole [31]. Zakariya Razi also advised treatment of oral diseases by venesection and leeching [16]. According to Unani literature cicative and astringent drugs when regularly applied makes gums and teeth strong, i.e. prevent dental caries and periodontal diseases.

Conclusion

Thus from the above discussion the inference may be drawn that Unani classical literature had clearly mentioned various oral conditions, possible causes and preventive measures. One can achieve highest degree of oral health by adopting these preventive measures. As is claimed by World Health Organisation that poor oral health may have a profound effect on general health as well as on quality of life, hence it is recommended to adopt such a way of living with respect to oral health as mentioned in classical Unani literature in order to promote oral health and there by general health and overall wellbeing.

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