

# Good Oral Hygiene can protect us from Current Pandemic

\*J A Qazi

Head of Oral Medicine, Department of Oral Medicine and Periodontology, Peshawar Dental College, Prime Foundation of Pakistan, Peshawar, Pakistan

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\*Corresponding author: J A Qazi, BDS, MSc Oral Medicine / Periodontics, MFDS RCPS Glasgow, MFDS RCS Edin Head of Oral Medicine, Department of Oral Medicine and Periodontology, Peshawar Dental College, Prime Foundation of Pakistan, Peshawar, Pakistan. Tel. No: +92334-9172009; + 9291-5202264; E-mail: edwardian706@yahoo.com

## Abstract

Saliva has a pivotal role in the transmission of COVID 19 and maintenance of oral hygiene is essential for good overall general health and quality of life which is achieved by tooth brushing with toothpaste and oral rinses. It is ascertained that toothpaste and mouth washes reduces the amount of bacteria due to its significant antibacterial action on the biofilm and have substantively which is maintained for 24 hours. Although all mouth washes does not have antiviral effects especially on coronavirus but SARS-CoV2 is vulnerable to the oxidation so it is recommended that Oral rinse containing oxidizing agent which reduce salivary load viral of oral micro biota may be used. The purpose of this short communication is to review this.

**Keywords:** Toothpaste; Oral Rinse; COVID 19

## Introduction

During the global pandemic of COVID 19 one of easiest way to prevent from this virus is washing hands with soap and water or sanitizer. The Corona virus is an enveloped virus and very effective at sticking to hands, the soap molecules are so similar to outer layers of virus the molecules in the lipid bilayers are attach to soap molecules this disturb the neatly ordered shell around the virus dissolving in the running water and killing it. The soaps, detergents and hand washing solutions have sodium lauryl sulfate which is surfactant so washing hands with soap is strongly recommended by WHO for the prevention of Coronavirus. The Maintenance of good oral hygiene is essential to maintain good overall health of the individual and it is achieved by brushing at least twice daily with toothpaste, flossing and oral rinses which have anti plaque, anti caries and anti-bacterial properties. One of ingredient of toothpaste is detergents which are mainly Sodium Lauryl Sulfate (SLS) also present in soap is in toothpaste with a concentration of 0.5-2 % [1]. Sodium Lauryl Sulfate is an anionic surfactant naturally derived from coconut and or palm kernel oil. It promotes wetting of tooth surfaces help to spread toothpaste evenly help to reach places even in hard. It has antimicrobial activity against protozoa, bacteria and viruses as in soap used for hand washing.

The corona virus after infection lives and multiply for 4 days in the throat and recently in publication of International journal of oral sciences "Saliva: potential diagnostic value and transmission of 2019 nCoV" [2]. This virus besides in lungs is also found in salivary glands and tongue which are hosts for 2019 nCoV due to expression of ACE2. According to Chinese COVID 19 is vulnerable to oxidation so oral rinses such as 0.2% povidone or 1% hydrogen peroxide are recommended and hoped that would help to reduce the salivary load of oral microbes, including 2019-nCoV. Chlorhexidine (CH) has a potent antibacterial and antifungal agent but ineffective against Polio virus, adenovirus and Herpes virus it is used as 2% for the prevention of Ventilator associated pneumonia and reduction of oropharyngeal colonization especially gram positive. In vitro anti-viral effectiveness of Peridex mouth containing 0.12 % Chlorhexidine gluconate has veridical effects on HSV, Cytomegalovirus, influenza A, Para influenza so CH exerts its antiviral effect on envelopes of these viruses [3]. Hydrogen peroxide, is a convenient mean for virus inactivation and its 3% concentration inactivate all viruses in 1-3 minutes. The Coronavirus and influenza viruses are found to be most sensitive [4].

Hydrogen peroxide in high concentration can damage Oral soft and hard tissues with prolong duration exposure but when use in low concentration on daily basis for extended period of time in self-care administered oral health care products as dentifrices and mouth rinses thus there is no adverse effects on low concentration. Patient education is necessary when self-employed.

Therefore, the above mentioned oral hygiene instructions such as tooth brushing and oral rinses which may have antiviral activity can be recommended to all those who are at risk such as health care workers, elderly patients in nursing care and Specially in all dental hospitals and clinics to do oral rinses preoperatively to reduce the salivary viral load [5]. Brushing maintains good oral hygiene and mouth washes on the other hand reduce the

bacterial and viral load in the oral cavity [6]. These are important considerations for dental researchers who can help medical Colleagues at this time of Pandemic and the dental community can look at this aspect and start clinical trials to evaluate the preventive effects of these mouth washes in reducing viral load of infection and possibly disease progression.

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