



Letter to Editor

Potential relationship between eye and oral diseases

Zainab N Anajar. BDS, MSc candidate, Oral Medicine Department. Faculty of Dentistry. University of Benghazi

Dear Sir;

Research suggests that the oral diseases may play a role in many systemic conditions including eye diseases. There is a plenty of evidence in case histories of the direct etiological relation of foci of infection of the mouth to inflammatory disturbances of the eye. Dentists can often help in the diagnosis of the diseases that affect the eyes and oral cavity¹.

The relationship between infected teeth and eye diseases has been known for some time, several centuries ago, as early as 1817 where a case of contraction of the visual field was managed by the extraction of carious tooth, many cases of defective vision were effectually relieved by removal of pathological conditions discovered in the mouth².

Anatomically the orbit connects the oral cavity via its anatomical borders, the inferior wall of the orbit that formed by the maxilla, palatine and zygomatic bones. The medial wall formed by the ethmoid, maxilla, lacrimal and sphenoid bones. This connection may affect the way of spread of the bacteria from the mouth. Extension of odontogenic infection into the orbit can occur through a variety of pathways, root apices are anatomically proximal to adjacent muscle, connective tissue and sinuses, the most common route of spread is through the maxillary sinus into the inferior orbit via the inferior orbital fissure or defect in the orbital floor. Infection ascending from the canine fossa to the orbit or retrograde spread through the ophthalmic vein. Infection of maxillary molars may become life threatening through airway compromise or threatened vision by rapid spread involving the orbital area that may cause orbital abscess, superior ophthalmic

vein thrombosis and orbital abscess. Several hypotheses may be suggested to explain the potential association of periodontal disease with eye disease such as innate immunity involvement, similar risk factors for pathogenesis and changes in the eye choroid thickness³.

There are many examples of eye diseases correlated to dental conditions such as uveitis-and glaucoma, even when factors such HTN, DM where taken out of the equation. Furthermore, researchers noticed that streptococcus bacteria was more commonly found in the mouth of glaucoma patients than people with healthy eyes⁴.

In another way, dentistry is one of the professions in which the practitioners and patients both become exposed to eye related injuries which may result in ocular infections during daily routine⁵. A lot of dentists and dental personnel are at high risk of contracting eye infections during operative procedures involving aerosols⁶. Protective eyewear use can reduce the risk from blood-borne pathogens during procedures in which splatter or the use of aerosols might occur⁷. The subject become more important in the COVID-19 pandemic⁸.

As the majority of dental procedures are accomplished with instruments being passed over or near the patient's face and with aerosols and chemicals frequently in close proximity, both patients and dentists should wear eye protection. Curing lights are also a potential hazard to those who place restorative resins due to phototoxic and photoallergic reactions originating from absorbed radiation^{9,10}.

A dental clinic may be a source of eye related injuries because of a constant risk of mechanical trauma as well as the possibility of being exposed to various chemical and electromagnetic activity. protective eyewear for patients can protect their eyes from spatter or debris generated during dental procedure ¹¹.

In the view the present trend of dental thought and research toward the prevention of oral disease, there is a need to have in depth knowledge of the ocular complications due to dental infection and broadening prevention strategies toward ocular complications due to dental infections.

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