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Oral/Dental Manifestation of Covid 19 Infection

Dr.Abhinav Saraswat
BDS ,PGCCIOI (Dental Implant)
Dental surgeon , Implantologist
Private practitioner, Dr.Abhinav's Dental clinic , Jaipur , Rajasthan,India.

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Coronavirus disease 2019 (covid -19) is an infectious disease caused by a newly discovered coronavirus (SARS -COV -2) which belongs to seventh type of the the coronavirus family. COVID virus is a enveloped , single stranded RNA genome , belongs to coronaviridae family.
It has recently lead to a pandemic of unimaginable magnitude. Incubation period of covid 19 is known to be 1 to 14 days , some studies show incubation period of 5 days.
Loss of smell (Anosmia) and Taste (Ageusia) are the the first or early sign of infection, in many patients , With fever, generalised pain , cough , sore throat , shortness of breath , chest pain , loss of appetite etc.
Maximum harvest of covid 19 virus is at ACE 2 (Angiotensin converting enzyme) receptor, found on the kidney, liver, intestines, oral epithelium, lungs. It is most abundant on the oral mucosa especially on the dorsum of tongue , palate , buccal mucosa. Hence, it is not surprising to see oral manifestations too, in this infective disease.

ORAL MANIFESTATIONS OF COVID 19 :-
ORAL PAIN
DESQUAMATIVE GINGIVITIS
ULCERS
BLISTERS
PALATAL MUCOSA ERYTHEMA
TONGUE WHITE LESION /CANDIDIASIS
GEOGRAPHIC TONGUE
WHITE LESIONS ON TONGUE
XEROSTOMIA (DRY MOUTH)
THRUSH LIKE ULCERS (candidiasis)
HERPETIFORM LESIONS
BONE RESORPTION DUE TO SECONDARY INFECTION
We hereby report a few cases who presented initially with oral symptoms and later developed, other symptoms of covid 19 infection.

ERYTHEMA MULTIFORME LIKE ERUPTIONS SPECIALLY ON PALATAL MUCOSA
PERICORONITIS ARROUND THE 3rd molar

Case (1)

A 74 yr old gentleman, presented to a dental clinic with complaints of pain in left upper back tooth region since 3-4 days. On examination tenderness was present , no mobility , intact gingiva , not decayed ,of second molar. Hence, IOPA x ray was taken which showed PDL widening , and advised for root canal treatment.

Subsequently, on the next day, patient developed fever 37.7℃ and procedure postponed. Covid 19 RT PCR was advised, which turned out to be positive. Patient was admitted to the hospital and was managed as per the standard protocol. CBC showed normal values , ESR – 40 , LDH – 502 , PCT – 0.15, ferritin – 1000. Patient was discharged after clinical improvement, in a few days.

Patient revisted dental clinic after 2 months with same complaints of On examination gingival recession had increased , mobility present , bone loss was seen now, which was absent initially. So he was now planned for tooth extraction. Patient was on antiplatelet so withhold for 3 days then extraction done. Bone loss and Gingival recession increased rapidly after covid , normally not seen earlier. It may be due to inflammation and secondary infection.

Case (2)
A 66 yr old lady came to dental clinic with complaints of pain and burning sensation in right side of tongue , on and off and radiating to back side. She also associated with dryness of mouth (xerostomia).

She was a known case of hypertension, on regular medication.

On local examination white lesion on tongue was visible which was scrapped off . On palpation it was tender , and molars are intact with smooth surface. Patient had history of covid infection 1 month back and had recovered completely. Patient was managed with local application of steroid trimicinolone 0.1 % , tab flucanazole 150 mg once a day for 10 days , clotrimazole lozenges twice a day , chlorhexidine 0.2% mouth wash 10 ml thrice a day for 10 days , lignocaine with choline salicylate Local application thrice a day before meal , multivitamin once a day . After 10 days of course patient revisted the clinic, patient was comfortable, symptomatic now and the lesion ha also completely resolved. All medicines were stopped and she was asked to follow up after 15 days . On the subsequent follow up visit, patient was still asymptomatic.
5

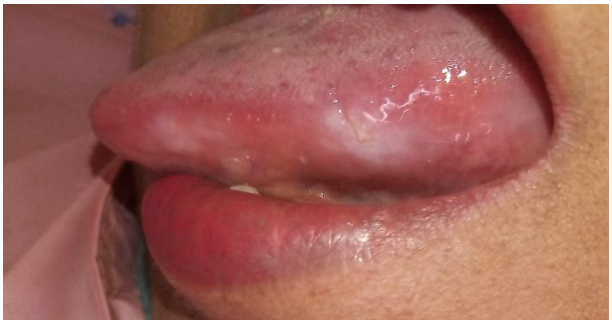

FIG 1 PRE TREATMENT

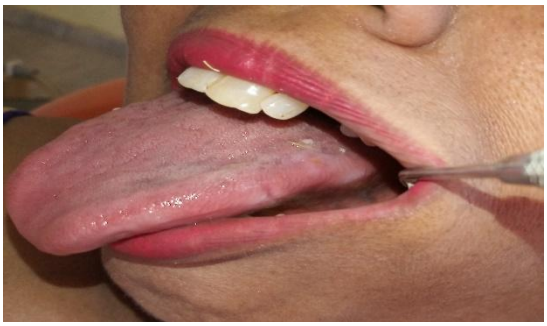

FIG 2 FOLLOW UP AFTER 1O DAYS

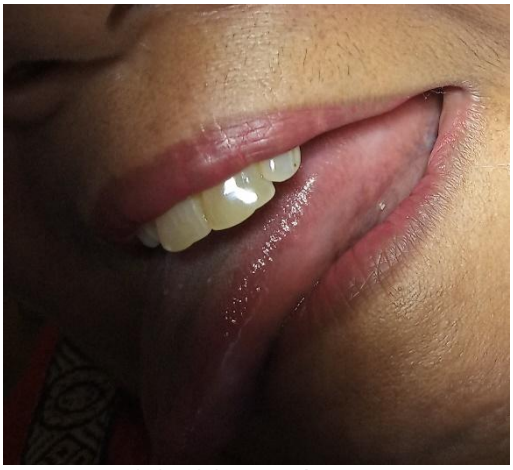

FIG 3 POST TREATMENT

We assume, our patient may have had a poor oral intake, due to loss of taste, during the covid period and afterwards, hence making her more prone to secondary infections, bacterial or fungal.

Case (3)
A 31 yr old, gentleman came to dental clinic with c/o pain in left lower tooth , continuous in nature initially, which later was intermittent. He had a h/o RCT performed 1 year back. On examination tooth tenderness on percussion.X ray taken showed no periapical pathology. Patient was prescribed some NSAID's and was kept under close observation. He then developed fever after 2 days and covid 19 RT PCR was suggested, which was now positive. Patient was quarantined and was started on the standard treatment protocol by a Physician. After 15-20 days of recovery patient was absolutely comfortable and asymptomatic, with respect to oral symptoms.

So we reached at conclusion that due to covid, inflamations may occure at tooth and inflammatory chemical developed there so tenderness occurred but after treatment of covid tenderness weined off and I observed the patient till 3 months no any complaints related to that tooth so somewhere immunity weak due to

covid infections and compromised the oral hygiene so affected the tooth as well as oral soft tissues.Oral symptoms of covid infection appeared in 7 out of 10 patients as I observed in my study.

Case (4)

A male patient case of post covid since 1 month and was on steroids from long duration presented with sudden onset face swelling, pain on face radiating toward head and eyes , swollen eyes , multiple tooth pain with mild mobility, reduced mouth opening gradually . MRI Orbit +PNS +Brain done shown suggestive of mucormycosis fungal invasive disease involving mucosa of right maxillary , right ethmoidal sinuses with extension into right nasal cavity involving middle and inferior nasal turbinates. Nasal Endoscopy biopsy shown eroded mucosa and biopsy taken showed KOH positive. Patient was underwent debridement followed by injectable liposomal amphotericin and Posaconazole.

Another one patient presented with multiple intraoral gums blister with siuns opening , face swelling and unable to close eyes, fever, nasal discharge yellowish , reduced mouth opening , fever , nasal congestion , retromolar swelling . MRI Orbit +PNS +Brain done shown suggestive of sino mucosal thickening in left maxillary and bilateral ethmoid extending towards to TMJ ramus suspected of mucormycosis . patient was underwent debridement and mild maxillectomy followed by oral prosthesis in follow up.

So we reached at conclusion that due to covid, inflamations may occure at tooth and inflammatory chemical developed there so tenderness occurred but after treatment of covid tenderness weined off and I observed the patient till 3 months no any complaints related to that tooth so somewhere immunity weak due to covid infections and compromised the oral hygiene so affected the tooth as well as oral soft tissues.Oral symptoms of covid infection appeared in 7 out of 10 patients as I observed in my study.