

# Is COVID-19 infection triggering oral herpes zoster? A case report

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April 05, 2024

## Abstract

Abstract Humans infected with COVID-19 are at risk of developing life-threatening conditions. We here present a case of rapid appearance of oral lesion of herpes zoster associated with COVID-19 infection. Our case highlights the importance of oral examination as well as oral care in patients with COVID-19.

## Is COVID-19 infection triggering oral herpes zoster? A case report

**Running head:** Herpes zoster after COVID-19 infection

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## Clinical message

Health practitioners should be concerned about the probably risen incidence of HZ during COVID-19 pandemic and consider appropriate therapeutic and protective measures against it.

## Abstract

Humans infected with COVID-19 are at risk of developing serious and life-threatening conditions. The clinical manifestations of COVID-19 were detected in asymptomatic cases to severe clinical symptoms with a major impact on the respiratory system. Few cases of cutaneous as well as oral lesion of herpes zoster in patients with COVID-19 were reported in the literature. We here present a case of rapid appearance of

oral lesion as a manifestation of herpes zoster associated with COVID-19 infection. Our case highlights the importance of oral examination as well as oral care in patients with COVID-19 infection.

## Keywords

Herpes zoster; Oral manifestations; COVID-19

## 1.Introduction

Recent data of patients infected with COVID-19 showed various clinical signs and symptoms as sore throat, headache, hypogeusia, diarrhea, bone ache, and in severe cases pneumonia[1]. Reactivation of herpes zoster (HZ) during the acute or subacute phase of COVID-19 was related to the decline in the varicella-zoster virus-specific cell-mediated immunity[2].

COVID-19 showed a direct impact on T- lymphocytes immune dysfunction resulting in lymphopenia which causes decreased body resistance to infection, and it may increase the reactivation of the HZ virus[3, 4].

We present a unique case of clinically diagnosed oral lesion of HZ infection 10 days after COVID-19 clinical signs and symptoms were detected. Our case highlights the importance of increasing the awareness among researchers and dental practitioners about the possible association between HZ and COVID-19.

## Case presentation

A49 years old female was referred to the Oral medicine and periodontology clinic, Faculty of Dentistry, Mansoura University for further evaluation of a painful lesion on the hard palate that appeared 10 days after the clinical signs and symptoms of COVID-19 infection as sore throat, fever, fatigue, bone pain, headache, and dry cough.

Intraoral examination revealed unilateral vesicles filled with clear fluid as well as painful erythematous areas involving one side of the hard palate which was preceded by initial stabbing pain. The pain was continuous, severe, and stabbing. The vesicles were small and few in numbers. Later, they increased in number with watery discharge. The palatal mucosa surrounding the vesicles was tender to touch. Fig1

Extraoral examination showed unilateral palpable submandibular and cervical lymph nodes. No swelling of the neck, no TMJ clicking, or tenderness of muscles of mastication. The medical history showed hypertension, osteoarthritis, and maxillary sinusitis.

Laboratory investigations revealed lymphopenia, neutrophilia, elevated levels of serum alanine aminotransferase and aspartate aminotransferase, elevated lactate dehydrogenase, and High C-reactive protein. Chest x-ray and CT were consistent with COVID-19 Infection. Fig2&3

The patient has been prescribed acyclovir 800mg tablets five times per day for 10 days as well as topical antiseptics with chlorhexidine. In addition, paracetamol was prescribed for pain and fever. After 10 days, the patient showed full recovery of the oral lesions.

## Discussion

The concern about the association between the COVID and HZ was raised[2, 3]. The clinical manifestations of COVID-19 were detected in asymptomatic cases to severe clinical symptoms with a major impact on the respiratory system[5]. Furthermore, HZ may appear in completely asymptomatic COVID-19 patients [6].

Recently, few reports of reactivation of herpes zoster during Covid-19 infection were published.

Elsaie et al. reported a HZ lesion in 2 patients with COVID-19 with mild or no respiratory symptoms and no history of contact with known or suspected COVID19 cases[3].

Desai et al reported unilateral vesicular painful rashes along the dermatomes T-11-12 in a patient with COVID-19 infection. The lesions were detected 6 weeks after the COVID-19 symptoms started[2]. However, we detected the HZ lesion 10 days after COVID-19 symptoms started.

We believe that few reports of herpes zoster in COVID-19 patients are due to many factors as a full evaluation of patients with COVID-19 in terms of oral mucosa is not commonly performed due to the severity of the diseases. In addition, it may be difficult for clinicians to detect those lesions in patients without painful symptoms.

Increased incidence of HZ during COVID-19 outbreak may be related to the intense stress during the infection and the altered immunity during the pandemic[7]. Biopsy wasn't performed on our patient however we recommend further research in the form of well-designed studies to be conducted to establish whether COVID-19 raises the risk of HZ. Health practitioners should be concerned about the probably risen incidence of HZ during COVID-19 pandemic and consider appropriate therapeutic and protective measures against it.

**CONFLICT OF INTEREST:** The authors declare no conflicts of interest.

**Sources of funding for your research:** There are no funding sources or sponsors related to the present work.

**Patient's consent:** Written informed consent was obtained from the patient for publication of this case report and accompanying images.

**Authors contribution:** All authors had a role in writing and revising this manuscript

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Fig1: Clinical photograph showing unilateral vesicles and erythematous areas of the hard palate

Fig2: Chest x-ray posteroanterior view shows ill-defined hazy irregular patches scattered all over the lung especially in the middle zone.

Fig 3: Non-contrast CT scan of the chest: Spiral axial thin cuts were taken through the chest without contrast injection with lung and mediastinal windows, reveals bilateral pulmonary pan-lobar scattered patchy zones of ground-glass opacification with fine inter-lobular septal thickening, likely of pneumonic nature.



