

Uncommon COVID-19 presentation in early infancy-A case report

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Abstract

Croup is a common respiratory tract infection in children. It is usually due to parainfluenza virus, however, recently croup has been associated with SARS-COV-2 infection in children. This case report describes a case of croup in infancy due to SARS-COV-2 in Dubai, United Arab Emirates.

Keywords: COVID-19, croup, stridor, infancy, children

Abbreviations

SARS-COV-2: Severe Acute Respiratory Syndrome Coronavirus 2; UAE: United Arab Emirates

Introduction

In children, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) commonly presents with fever, cough or shortness of breath or is sometimes asymptomatic [1]. There have been few case reports about croup caused by SARS-CoV-2 infection, which is a rare symptom, and its characteristics or clinical presentations have not been sufficiently revealed [2].

Case Report

Six months old male British national previously healthy infant presented to the emergency department in King's College Hospital London-Dubai with 1-day history of fever and braking cough with noisy breathing. Parents also stated that he had runny nose for 3 days. Parents denied any drooling, history of choking, skin rash or gastrointestinal symptoms. He attended nursery but according to the parents no contact with sick patients or COVID-19 patients. Both parents have no similar symptoms. His vaccinations were up to date according to the national vaccination regimen of UAE.

On examination, the patient had audible stridor at rest with mild acute respiratory distress. His body temperature was 38.4°C, respiratory rate was 38 rpm, heart rate: 177 bpm and SpO₂: 97% in room air.

On further physical exam, he had rhinorrhoea and on chest examination there was subcostal retractions but on auscultation there was fair air entry bilaterally with transmitted breath sounds.

He was diagnosed as moderate croup; therefore, oral dexamethasone was given along with inhaled epinephrine. The patient was kept in the emergency department for observation for 2 hours. Initially stridor was relieved by the inhaled epinephrine however, stridor re-occurred, and another dose of inhaled epinephrine was indicated. After the second dose of inhaled epinephrine, patient was admitted for further observation and management.

Nasopharyngeal swab for respiratory viral panel was performed which resulted in severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2).

The patient was admitted to the pediatric ward where he remained stable during the hospital stay, the stridor was relieved, and the respiratory distress was settled. He was discharged after 12 hours of admission in stable condition. Subsequently, a telemedicine follow up was performed which ensured there was no further sequelae for SARS-CoV-2 infection.

Discussion

Croup is a common viral infection affecting the upper respiratory tract. The diagnosis of croup is usually clinical; children present with a slow development of respiratory stridor and a croupy, “barking seal” cough. Fever may be present and with progression of disease, distress, agitation and cyanosis may develop [3]. It is usually associated with parainfluenza, respiratory syncytial virus, rhinovirus and Human coronavirus NL63 (HCoV-NL63) [4].

Since COVID-19 pandemic, few cases of croup due to SARS-COV-2 were described in the literature [5,6].

The proportion of croup cases in pediatrics was significantly higher during the omicron wave than that during the delta wave 5 which is similar to the same period for our patient.

Choi YY, *et al.* studied 21 patients with croup due to SARS-COV-2 aged from 5 - 54 months old with a mean of 17 months old which is similar to other case reports that described the condition in children rather than infants less than 1 year old [7]. In our case, the patient was 6 months old and presented with moderate croup that necessitates inhaled epinephrine and hospital admission.

Conclusion

SARS-COV-2 is an emerging cause for upper respiratory tract infection and it is recently found to be a cause of croup in children and infants.

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