عنوان مقاله:

Association of SARS-COV-۲ Cycle Threshold Values with Clinical and Epidemiological Features of Children and Adolescents in Iran

محل انتشار:

مجله بین المللی کودکان, دوره 10, شماره 6 (سال: 1401)

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خلاصه مقاله:

Background: The associations between the epidemiological, clinical, and serological features of coronavirus disease ۲۰۱۹ (COVID-۱۹) and the nasopharyngeal viral load have not, yet, been understood completely. Methods: This cross-sectional single center study of outpatient children and adolescents was conducted between January and March ۲۰۲۱. Reverse transcriptase polymerase chain reaction (RT-PCR) of nasopharyngeal swab specimens was positive for SARS-CoV-۲. Nasopharyngeal Cycle threshold (Ct) values were measured for all patients considering different clinical features, age, and sex, in presence of covid-۱۹ specific serum antibody. Results: The data of ۷۰ individuals with confirmed COVID-۱۹ were analyzed (mean (range) age: ۹.۶ (۵-۱۴) years; ۲۹ females (۴۱%)). Sixty-four children (۹۱.۴%) were symptomatic at the time of sampling (mean time of symptom onset, ۳.۹ days). There were no differences in mean Ct values between the symptomatic and asymptomatic patients (۳۱.۴ vs ۲۸.۸, p=۰.۲۴۷). Ct values were significantly lower in cases with diarrhea (p=۰.۰۴۴) and younger children (p=۰.۰۰۳). No correlation was found between Ct values and gender (p=۰.۴۱۵). Serum antibody was measured in ۲۵ (۳۶%) patients. Presence of antibody was not associated with Ct values (p=۰.۱۲۱). Fifty-nine cases (۸۴.۳%) reported exposure to a SARS-CoV-۲ positive household. Conclusions: Higher nasopharyngeal Ct values, suggesting lower virus load, are related to older age, but there is no difference in Ct values between genders. Considering that diarrhea may predict lower Ct values in the respiratory system, the importance of early quarantine of children with atypical symptoms (such as gastrointestinal symptoms) or children in contact with a confirmed COVID-۱۹ family member is highlighted

کلمات کلیدی:

Children, viral load, COVID-۱۹, SARS-CoV-۲, cycle threshold, Diarrhea