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INCREASED INCIDENCE OF PEDIATRIC UVEITIS ASSOCIATED WITH THE COVID-19 PANDEMIC OCCURRING BEFORE COVID-19 VACCINE IMPLEMENTATION - A TIME-SERIES ANALYSIS.

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Introduction: Viral infections have been suggested as a potential trigger in pediatric uveitis, a rare disease. This led us to suggest that the coronavirus disease 2019 (COVID-19) pandemic could have been a potential cause for the emergence of newly diagnosed uveitis.

Objectives: We sought to examine whether the COVID-19 pandemic was associated with an increased incidence of uveitis in children and if this increased incidence was correlated with the beginning of the campaign vaccination in June 2021. We then studied children with newly diagnosed uveitis prior to the COVID-19 pandemic to those who were diagnosed after March 2020, to see if there were any clinical or biological differences.

Methods: We performed a time-series analysis of patient records from a national hospital-based French surveillance system. All children younger than 18 years hospitalized for uveitis in France between January 2012 and March 2022 were included. The incidence of newly diagnosed uveitis per 100,000 children per trimester in France was analyzed by a quasi-Poisson regression. The incidence of sarcoidosis and acute tubulo-interstitial nephritis over the same period were used as control outcomes. A cohort of children diagnosed with uveitis at Robert-Debré Hospital was described to evaluate whether one specific type of uveitis increased and to compare the clinical and biological characteristics of uveitis diagnosed before and after the onset of the pandemic.

Results: During the study period, 2492 children were hospitalized for uveitis in France. The COVID-19 pandemic, which started in March 2020, was associated with a significant increase in the occurrence of uveitis (estimated cumulative change, 44.9%; 95% CI 11.4 to 78.4; $P < .001$). The increase in the incidence of pediatric uveitis started in October 2020, while the national immunization program targeting children aged less than 18 years began in June 2021. This increase involved all forms of uveitis, regardless of location, and their characteristics were similar to those diagnosed before the pandemic.

Conclusion: Our study evidenced a significant increase in the incidence of pediatric uveitis following the COVID-19 pandemic. This increase, occurring 6 months before the implementation of the COVID-19 national immunization program in children, suggests the independence of the vaccine regarding the resurgence of this rare disease.

Patient Consent: Yes, I received consent

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