

ASSOCIATION BETWEEN SARS-COV-2 AND PEDIATRIC APPENDICITIS?

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Background: The impact of the novel SARS-CoV-2 (CoV2) pandemic on human health and disease has yet to be fully realized. Although CoV2 is spread via respiratory droplets and aerosols, the virus has tropism for extra-pulmonary sites like the gastrointestinal tract. In fact, case reports have suggested a connection between CoV2 infection and appendicitis. We hypothesized that acute CoV2 infection of the appendix can cause appendicitis.

Materials/Methods: We extracted epidemiology data about appendicitis cases at TCH and compared it to publicly available Harris County epidemiology data. We also obtained 9 surgical appendicitis specimens from TCH patients who tested positive for CoV2 by nasopharyngeal swab between April 6th and September 2nd, 2021. To detect the presence of CoV2, we performed RT-PCR and co-culture with Vero cells with these appendicitis samples.

Results: The epidemiology data shows a stable incidence of appendicitis at TCH throughout the pandemic. Incidence of appendicitis cases with CoV2 positive nasopharyngeal swabs correlated with CoV2 cases in the community. Presence of virus was not detected in the 9 surgical appendicitis specimens by RT-PCR and co-culture with permissive mammalian cells.

Conclusions: Incidence of appendicitis at TCH did not change during the pandemic, and we did not find evidence of acute CoV2 infection of appendix tissue in our cohort. Our study suggests that acute CoV2 infection of the appendix is likely not a cause of pediatric appendicitis.

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