



## Editorial

# (COVID-19) and Urinary Problems

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The Coronavirus disease (COVID-19) pandemic has made a significant impact on the population's health and well-being. It is now clear that the coronavirus disease 2019 (COVID-19) pandemic is a challenging and long-standing healthcare problem rather than a temporary condition. Recent reports indicated that patients with coronavirus disease (COVID-19) might experience genitourinary symptoms after discharge. Nevertheless, the causal associations and underlying mechanisms remain unclear. In response to post-COVID-19 symptoms, it is recommended that COVID-19 patients should reinforce the prevention of lower urinary tract stones and the monitoring of sexual function. Meanwhile, the positive effects of COVID-19 on UTIs and bladder cancers should add equal importance. [1] In a study, the current population incidence of UTI in children with private insurance was reported. Using the COVID-19 pandemic as a natural experiment where the activity of health care services decreased and viral respiratory illnesses nearly disappeared for a short period. The study observed a decrease in UTI diagnosis during the early pandemic without statistically significant increases in the short-term measures of UTI severity. These findings may update the discussion around the overdiagnosis and/or misdiagnosis of UTI, optimal diagnostic strategies, and definitions for pediatric UTI. [2] The incidence of cystitis and pyelonephritis during a period of social restrictions was lower than during 2017-2019, especially in children aged 1-6 years. These results raise the possibility of reducing the occurrence of urinary tract infections in children by improving hygiene measures [3].

The first Covid-19 pandemic affected the epidemiology of many diseases. A reduction in Emergency Department (ED) accesses was observed during this period, both in adult and pediatric situations. The first wave of the COVID-19 pandemic had an effect on managing febrile UTIs in the ED, causing a reduction of cases referring to the ED but with higher clinical severity. Children with febrile UTIs were more severely ill than in the previous two years, due to delayed access caused by the fear of potential hospital-acquired Sars-Cov-2 infection. The possible increase in consequent kidney scarring in this population should be considered. [4] In a multicenter, cross-sectional study, it was found peaking prevalence

of UTI and invasive bacterial infection (IBI) in full-term, previously healthy, well-appearing febrile infants 8 to 60 days old in the early pandemic with decreasing prevalence through March 2022, with some association between COVID-19 waves and the unusual of an infant having UTI and bacteremia without meningitis. With the potential for future pandemics, understanding the impact of relief measures on bacterial infection prevalence in febrile infants is a key component to informed decision-making between clinicians and parents [5].

An observation showed a significant increase both in the incidence of stone disease and in the stone sizes in the emergency departments and in clinics, although there was usually a slight decrease in urolithiasis incidence during this season. It may be due to the massive supplementation of the vitamins C and D during the COVID-19 era, as a part of this so-called 'healthier behavior', which could have played a significant role in that 'epidemic' of stone disease. [6] COVID-19 pandemics may change some of the dietary habits of the patients, including lower salt, protein, and fruit and vegetable intake. Although economic issues, restricted access, or sanitation issues may be the reason for the undesirable dietary changes, the importance of a quality diet should be discussed with all patients, as possible. Since the number of patients who visited in the stone clinic was lower during COVID-19, virtual visits could be an excellent alternative to motivate patients with kidney stones. [7] Other reports indicate that COVID-19 poses significant challenges for clinical decision-making and the management of prostate cancer patients. Physicians caring for prostate cancer patients will be expected to mitigate the risks associated with COVID-19 infections while also providing the best clinical care for patients who are dealing with decisions about biopsy, active surveillance, surgery, radiation, hormonal therapy, and chemotherapy. COVID-19-specific treatment guidelines are being developed for prostate cancer patients; nonetheless, many decisions will be left to individual clinicians, especially given the uncertainty that surrounds potential new courses and the likely changes in the delivery of healthcare in the post-pandemic era [8].

It was also proposed that COVID-19 Associate Cystitis (CAC), with presentation of de novo severe urinary symptoms, can occur in COVID-19 and is caused by increased inflammatory cytokines that are released into the urine and/or expressed in the bladder. The most important implications of this hypothesis are: 1) Physicians and other clinicians caring for COVID-19 patients should be aware of CAC; 2) De novo urinary symptoms should be included in the symptoms complex associated with COVID-19; and 3) COVID-19 inflammation may result in bladder dysfunction. It is further hypothesized that chronic COVID-19 Associated Cystitis may occur in COVID-19 patients who do not fully recover and have a chronic inflammatory condition [9] There is now sufficient data to suggest that involvement of the urinary tract and male genital system occurs in certain patients (up to 5%) with COVID-19 hence clinicians should be aware of these manifestations so that timely management is instituted thereby decreasing complications due to COVID-19. More research especially systemic reviews/meta-analyses will help in increasing our knowledge in this connection regarding the long-term effects of novel coronavirus on the genitourinary tract [10].

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