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#M42 | THE INCIDENCE OF NEW OR WORSENING OAB SYMPTOMS IN PATIENTS WITH PRIOR SARS COV-2 INFECTION

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Introduction: Investigators from our institution were the first US group to identify de novo genitourinary symptoms, such as frequency, urgency, nocturia, and pain/pressure, in individuals with prior COVID-19 infection. They termed this condition COVID-19 associated cystitis (CAC). Our study aims to establish the incidence of worsening or de-novo CAC, and to determine the correlation of CAC with serology status and antibody levels.

Methods: After IRB approval, 19,128 individuals from the largest COVID-19 serology study (BLAST COVID Study Group), were invited to participate in a follow-up study, with 1,895 subsequent respondents. Participants were retrospectively asked to score their OAB symptoms at three different time points: prior to the pandemic, 2 months after COVID-19 infection (if applicable), and at the present time. Genitourinary symptoms were assessed using the ICIQ-OAB.

Results: Of the 1,895 participants, 81.7% (n=1,548) were female, 16.5% male (n=312), 1.9% other/unknown (n=35). Most were Caucasian (85.8%), followed by African American (4.1%), Asian (3.8%), Hispanic (1.4%), and other/unknown (2.1%). A third of participants (n=605) were COVID-19 positive as defined by positive serology or PCR test. Of these, 492 had 2 months post infection data with 36.4% (n=179/492) reporting an increase of ≥ 1 unit in OAB symptom score compared to pre-pandemic. Out of these, the OAB symptoms of 22% (n=40/179) were de novo. Comparing pre-pandemic to present symptoms, 35.7% (n=219) of participants with prior COVID-19 infection had an increase of ≥ 1 unit on the ICIQ-OAB, compared to 15.7% (n=202) of uninfected patients (OR: 2.99, 99.6CI, 2.21, 4.05, $p < 0.001$). The minimal important difference (MID) of ICIQ-OAB of 1 is considered a significant change. For participants who received a positive COVID-19 test using PCR, no correlation was found between OAB symptoms and antibody levels ($r = -0.10$). For participants with COVID-19 positive serology test, symptoms were weakly correlated with antibody levels ($r = 0.14$).

Conclusion: In this study, we demonstrate that patients infected with COVID-19 are at increased risk for developing new or worsening OAB symptoms. No correlation was found between antibody levels and OAB symptoms in patients with prior COVID-19 infection. Participants are being followed prospectively to assess the progression of OAB symptoms in patients with CAC.

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