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COVID-19 ASSOCIATED INCRUSTING CYSTITIS: A CASE REPORT

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ABSTRACT

On 11.03.2020, the World Health Organization declared the coronavirus disease (COVID-19) caused by the novel coronavirus (SARS CoV-2) a global pandemic. COVID-19 is a potentially severe respiratory infection caused by the SARS CoV-2 pathogen. SARS CoV-2 is an RNA-containing beta coronavirus. SARS-CoV-2 has a unique three-dimensional protein structure characterized by a strong binding affinity for angiotensin-converting enzyme 2 (ACE2) receptors. Under these conditions, human ACE2-producing organs may act as target cells for SARS-CoV-2.

Incrustation cystitis is believed to be a relatively rare complication in COVID-19 patients. The development of bladder lesions may be due to the disruption of blood flow to the bladder wall caused by SARS CoV-2. It is known that COVID-19 infection often causes hypercoagulation, which is accompanied by an increase in blood coagulation factors and endothelial dysfunction. Microcirculatory disturbances probably also play an important role in the pathogenesis of COVID-19-induced incrustation cystitis. The causes of hemodynamic disturbances are not fully understood and may be due to direct viral effects, immune-mediated mechanisms, or a combination of these. It is possible that bladder inflammation is caused by local endopheliitis, which is complicated by thrombosis of vessels of various calibers and increases ischemia of the bladder wall.

This case report of a 76-years-old woman who was hospitalized to the urology department complaining of painful, frequent urination, and blood in the urine. The case report describes the medical history, laboratory and instrumental examinations, surgical intervention, histological examination results, and follow-up of the patient.

Only urine acidification and endoscopic resection of the affected mucosa are considered effective in the treatment of encrusted cystitis. According to the literature, it is desirable that after resection, patients be treated with antibiotics against *C. urealyticum*. It has been established that *C. urealyticum* is sensitive to ofloxacin, norfloxacin and ciprofloxacin, fluoroquinolones, clinafloxacin, gemifloxacin, levofloxacin. Because newer antibiotics such as linezolid and quinupristin-dalfopristin have been shown to be effective in vitro against *C. urealyticum* strains, these antibiotics may prove to be useful alternative glycopeptides in the treatment of *C. urealyticum* infection caused by multidrug-resistant strains.

In conclusion in patients infected with Covid-19, with concomitant signs of urogenital tract infection, in addition to instrumental methods for detecting Incrustation cystitis, bacteriological studies were carried out to determine *C. urealyticum*. After endoscopic resection of the affected mucous membrane, it is advisable to choose a more targeted treatment tactic for *C. urealyticum* infection.

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