



FUNGAL CO-INFECTION IN CRITICALLY ILL COVID-19 PATIENTS

MAJDANDŽIĆ I.³, Budimir A.^{1,3}, Popović F.², Budimir B.², Vukić Dugac A.^{1,2}, Baričević D.², Pevec B.², Nekić A.¹, Šitum I.⁴, Mihaljević S.⁴, Samaržija M.^{1,2}, Pavliša G.^{1,2}

¹ University of Zagreb, Zagreb, Croatia
School of Medicine

² University Hospital Center Zagreb, Zagreb, Croatia
Department for Respiratory Diseases Jordanovac

³ University Hospital Center Zagreb, Zagreb, Croatia
Department of Clinical and Molecular Microbiology

⁴ University Hospital Center Zagreb, Zagreb, Croatia
Department of Intensive Care Unit

Objective:

Fungal infections or mycoses are common co-infections in immunocompromised patients. Invasive types are difficult to treat and can significantly affect the outcome. Since December 2019, when the first case of SARS-CoV-2 infection was reported, most studies only focused on SARS-CoV-2, while the fungal co-infections have been somewhat neglected.



In this retrospective study we investigated the incidence of fungal co-infections in patients with PCR-proven SARS-CoV-2 infection who required invasive mechanical ventilation (IMV). The research was conducted within the ICU of the University Hospital Centre Zagreb in the period from February to November 2021. During this period, a total of 73 COVID-19 patients were mechanically ventilated. In all of them, bronchial aspirate and bronchoalveolar lavage were cultured for fungi once a week. Fungal co-infections were isolated in 59 patients (81%), 36 men (61%) and 23 women (39%). Among the positive cultures, *Candida albicans* was the most commonly detected (43 patients, 74%). The median age of patients was 70 years (range 29 to 89). The most fungal co-infections occurred within 5 days of onset of invasive mechanical ventilation. The most common comorbidities were arterial hypertension (66%), diabetes mellitus (30%) and chronic renal failure (24%).

In this study, we would like to highlight the importance of early detection and treatment of fungal co-infections in critically ill COVID-19 patients. It is crucial for the proper treatment in order to help prevent severe illness and fatal outcome.