

PNEUMOCYSTIS JIROVECI - A THREAT FOR PATIENTS WITH RESPIRATORY DISEASES

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Pneumocystis jirovecii, a unicellular fungal species occurring in human lungs, is a causative agent of *Pneumocystis pneumonia* (PcP) – an opportunistic disease observed mainly in patients with immunosuppression. People with healthy immune system can usually efficiently overcome the development of signs of infection; however, it can be maintained as an asymptomatic colonization, characterized by a low fungal burden, thus requiring sensitive detection methods. It has been demonstrated that patients with a variety of respiratory diseases represent a group of risk for colonization, probably due to the susceptibility of their pulmonary tract for fungal infection. Nonetheless, *Pneumocystis* presence itself can cause lung damage and inflammation, which may develop into various respiratory disorders. Therefore, the objective of our study was the evaluation of the prevalence of *Pneumocystis* colonization in this group of patients in the area of Lower Silesia, followed by genotypic characterization of detected organisms. We have demonstrated the prevalence of 18.8 % and the occurrence of genetic diversity among detected isolates, exhibited by polymorphisms within genes encoding mitochondrial large subunit rRNA and cytochrome b. Our preliminary results testify to the assumption drawn upon previous reports from other countries, suggesting that *Pneumocystis* colonization is a threat for patients with respiratory diseases.