

ways forward. Environment, including early childhood experiences, has been documented to modulate the risk for the development of psychiatric disorders via epigenetic mechanisms. Key epigenetic regulators, microRNAs (miRNAs, miRs), govern normal neuronal functioning and show altered expression in diverse brain pathologies. We observed significant alterations of exosomal miR-29c levels in prefrontal cortex (Brodmann area 9, BA9) of BD patients. We also demonstrated that exosomes extracted from the anterior cingulate cortex (BA24), a crucial area for modulating emotional expression and affect, have increased levels of miR-149 in BD patients compared to controls. Because miR-149 has been shown to inhibit glial proliferation, we hypothesized that increased miR-149 expression in BA24-derived exosomes may be consistent with the previously reported reduced glial cell numbers in BA24 of patients diagnosed with familial BD. qPCR analysis of laser-microdissected neuronal and glial cells from BA24 cortical samples of BD patients verified that the glial, but not neuronal, population exhibits significantly increased miR-149 expression. These findings support neuron-glia interaction as a possible target mechanism in BD, implicated by others in neuroimaging, postmortem, and in vivo studies of the pathological changes mediated by glial cells.

**Key words:** epigenetic regulation - psychoses - exosomes - human brain

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## THE MANY FACES OF WILSON'S DISEASE

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Wilson's disease (WD) is a rare autosomal recessive hereditary disease caused by a defect in the copper metabolism. Clinical presentation depends on the predominant area of copper accumulation and can thereby primarily be neurological, gastrointestinal, psychiatric, osteo-articular, hematological and other, or the patient can present with a diverse mixture of symptoms. Due to this variable constellation of unspecific possible symptoms, this multisystem disturbance is nicknamed "the disease with many faces".

Left untreated, WD is almost without exception fatal, whereas with timely treatment, the prognosis is excellent. Taking into account the variety in clinical presentation, a high index of suspicion and subsequent early diagnosis is crucial, with the aim of prompt treatment. Furthermore, genetic testing is important not only in symptomatic individuals, but also in asymptomatic patients with a positive family history. Early therapeutic intervention in such cases halts disease progression, and significantly improves the overall survival and the quality of life. The aim of this article is to accentuate the role and importance of a multidisciplinary approach to the diagnostics and treatment of WD.

**Key words:** Wilson's disease - tremor - psychiatric presentation - hereditary disease - multidisciplinary approach

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## SHAME AND COVID-19 PANDEMIC

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Optimal psychic response during the COVID-19 pandemic is the result of many different factors. One of the main factors is the psychodynamic understanding of essential emotions such as shame. Despite the immense effort by health workers to address stress- and trauma-related disorders in the course of the COVID-19 pandemic, a large proportion of the people affected by the disorder do not have information regarding the emotion of shame. Lack of mentalizing capacity implies disturbed shame dynamics. The therapeutic relationship and optimal alliance offer the frame for acceptance of shame as useful for psychological growth. Empathy should be a cure for dysfunctional shame, at the individual or social level. We believe that including a psychodynamic approach in the national public and mental health emergency system will empower national prevention strategies.

**Key words:** shame - COVID-19 pandemic - psychodynamic - mentalization, narcissism

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## OVERVIEW OF SYMPTOMS OF ONGOING SYMPTOMATIC AND POST-COVID-19 PATIENTS WHO WERE REFERRED TO PULMONARY REHABILITATION - FIRST SINGLE-CENTRE EXPERIENCE IN CROATIA

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**Background:** Coronavirus-2 pandemic has changed the functioning of health systems worldwide. It is not yet fully known which symptoms of the disease are most commonly presented in patients referred for pulmonary rehabilitation. Our aim was to investigate the profile of patients referred for pulmonary rehabilitation; what symptoms they had during the acute phase of the disease and what symptoms were still present at the start of pulmonary rehabilitation.

**Subjects and methods:** Study included ongoing symptomatic and post-COVID patients who attended standard, in person pulmonary rehabilitation program. Patients had COVID-19 disease at least four weeks before attending pulmonary rehabilitation. Patients completed questionnaires of self-reported somatic deficits during acute and post-COVID-19 stage as well as questionnaires regarding their psychological symptoms. Pulmonary function test, expiratory and inspiratory muscle strength, hand grip strength and six-minute walk test was performed prior and after pulmonary rehabilitation.

**Results:** Study included 63 patients (32 male, 31 female), with mean age of 52,9 years. During acute COVID-19, majority of patients complained of fatigue, cough, dyspnea, myalgia and headache. More than 85% of patients reported pulmonary deficits during ongoing symptomatic and post-COVID-19 stage. Emotional distress and anxiety levels were significantly elevated in acute stage, while depression, anger and the need for help was not significantly elevated. All reported symptoms were significantly reduced in post-COVID-19 stage. There was statistically significant difference in six-minute walk distance, inspiratory and expiratory muscle strength and hand grip strength between first and final testing.

**Conclusions:** Results of our study are similar with previous studies, the most common symptoms during acute phase were fatigue, cough and dyspnea and fatigue and respiratory problems during ongoing symptomatic and post-COVID stage. Emotional distress diminishes significantly in post-COVID stage. Further larger studies are needed to clarify which acute disease symptoms are predominant in patients referred to pulmonary rehabilitation and cause prolonged discomfort.

**Key words:** COVID-19 - post-acute COVID-19 syndrome - pulmonary rehabilitation

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## DEMENTIA-LIKE SYNDROME - THE UNUSUAL SYMPTOM OF COVID-19: A CASE REPORT

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The current pandemic situation has had a significant impact on the mental health of the entire population and especially on the health of people who have been infected with Coronavirus disease (COVID-19). This paper presents the impact of a history of cured coronavirus infection on the mental health of an 81-year-old person who was healthy at the time of infection and did not use any medication. The mental symptoms in the presented patient started with the appearance of the pandemic itself and worsened when the patient became infected with the virus and did not stop even after the infection was cured. The symptoms had a fluctuating course and were manifested by changes in behavior, thinking, affectivity, and cognitive impairment.

**Key words:** coronavirus - mental health - pandemic - dementia

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