and the Visual Analogue Scale (VAS). Their medical data were retrieved from medical records. Data was analyzed using the SPSS 23.0 (IBM Corp., Armonk, NY).

Results: Of all the patients evaluated in our study, 44.3% presented depressive symptoms and 25.3% presented anxiety, while 31.7% reported stress symptoms. Moderate correlations were found between results on EHP-5 and depression (r=0.515), stress (r=0.558) and VAS score (r=0.565). Furthermore, weak positive relationship was observed between EHP-5 and anxiety (r=0.295) and infertility (r=0.267). Additionally, moderate correlation was found between depression and infertility (r=0.519), while there was weak association between VAS score and stress (r=0.236).

Conclusions: This study showed complex relationships between symptoms and conditions manifesting in patients with endometriosis. Due to diversity of symptoms, potentially including mental health issues, it is important to emphasize the need for combined personalized treatment for these patients, taking into account both physical and psychological aspect of the disease.

Key words: endometriosis - pain - mental health

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BIOMARKERS OF DEPRESSION ASSOCIATED WITH COMORBID SOMATIC DISEASES: A MINI-REVIEW

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Depression is heterogeneous clinical entity with different clinical symptoms, that imply diverse biological underpinning, different molecular substrates and pathways. Besides different psychiatric comorbidities, depression is frequently interrelated with somatic diseases. Multi-morbidities, i.e. somatic diseases associated with depression, reduce quality of life, worsen clinical picture and increase mortality. The most frequent somatic diseases co-occurring with depression are cardiovascular and metabolic diseases. Vulnerable individuals will develop depression, and the goal in modern research and in precision/personalized medicine is to determine vulnerability factors associated with development of depression and to find easy available biomarkers of depression, especially comorbid with somatic diseases. This mini-review aimed to describe the latest published data (from 2015-2012) considering biomarkers of depression related to somatic diseases. Biomarkers related to inflammatory processes, atherosclerosis, imbalance of the hypothalamic-pituitary-adrenal axis, autonomic nerve system, sympathetic and parasympathetic nervous system, heart rate variability and endothelial dysfunction could improve the understanding of the underlying biological mechanisms of the common pathways of depression comorbid with somatic diseases. These targeted biomarkers might be used to reduce the symptoms, improve the treatment of these interrelated diseases, and decrease the morbidity and mortality.

Key words: biomarkers - depression - comorbid somatic disorders - HPA axis - inflammatory response - endothelial dysfunction

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MICRORNAS AS CANDIDATES FOR BIPOLAR DISORDER BIOMARKERS

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Bipolar disorder (BD) is a common, recurring psychiatric illness with unknown pathogenesis. Much like other psychiatric diseases, BD suffers from the chronic lack of reliable biomarkers and innovative pharmacological interventions. Better characterization of clinical profiles, experimental medicine, genomic data mining, and the utilization of experimental models, including stem cell and genetically modified mice, are suggested

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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