Original article **UDC: 159.944.4:616.831**
doi: 10.5633/amm.2020.0210

"BRAIN PLASTICITY" AND STRESS

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The analysis of stress consequences, regarding its quality and intensity, is being done in a wide range, enveloping a spectrum of psycho-neuro-endocrinological, i.e., organic, cognitive, emotional and behavioral organism's response to the impact of stress. All the categories of organism's response occur due to an imbalance among the stressor on one side, and organism's resources available in the fight for overcoming stress, on the other. If psychological stability is not optimal, the disorder of organism's homeostasis will occur, physiological stability will be disturbed, psychosomatic symptoms and illnesses will appear as a result of ill health caused by stress, when "the target" can be any organ, system of organs or more systems in an organism. Human brain – the organ that differentiates us from all the other living beings by its complexity, monitors the whole organism as well as functions in all the fundamental fields: physical, physiological, psychological and cognitive, is considered to impact the response of the immune system to illness, and partly to a person's response to a medical treatment.

The aim of this paper was the analysis of the impact of stress on the brain as well as the consequences of stress, with the accent on the ability of brain known as "plasticity", and the possibilities of regeneration of damaged brain cells.

The paper describes the case of 36 year old patient, who, as a consequence of long lasting, chronic, intense stress, was diagnosed focal lesions in the white mass, during her first MRI scan of endocranium (in 2013). The patient was withdrawn from the stressful environ-ment, and with the help of psychiatrist her psycho-social rehabilitation treatment started. By the check-ups in the following years, during medical monitoring, (2014, 2016) NAD reports of her MRI scan were found, taken on the same scanner and checked by the qualified radiologists.

The before mentioned medical case study supports the theory of brain plasticity, whereas it has to be pointed out that the findings about the embryonic development of the brain is of vital importance for understanding its ability to reorganize in response to outer stimuli, especially in the case of long lasting chronic stress or post traumatic states.

Acta Medica Medianae 2020;59(2):72-80.

Key words: *stress, brain, brain plasticity, regeneration*