

## **HEART RATE VARIABILITY CHANGES IN ASTHMA PATIENTS**

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**Background:** Heart rate variability seems to be reduced in asthma patients. Aim of our study was to compare autonomic modulation between asthma individuals and control group.

**Methods:** 21 asthma patients (8 with mild-to moderate and 13 with severe asthma) and 28 controls were enrolled to the study. All study participants underwent ambulatory 24-hour Holter electrocardiography for heart rate variability assessment.

**Results:** A frequency-domain analysis showed significant decreases in very low (VLF) and low frequency (LF), low frequency/high frequency ratio (LF/HF) and total power (TP) in asthma vs. control group ( $p < 0.05$ ). The lowest values of the above parameters were assessed in severe asthma. A tendency towards increased heart rate and reduced time-domain variables was observed in severe asthma compared to the control. No relevant arrhythmic events were documented across the groups.

**Conclusions:** Asthma is characterized by an impaired pattern of autonomic modulation. Severity of asthma determines the intensity of the heart rate variability changes.