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## **ECHOCARDIOGRAPHIC ABNORMALITIES IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AND THEIR CORRELATION WITH THE SEVERITY OF THE DISEASE**

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**Introduction:** Cardiovascular comorbidity is the main reason for hospital admission and mortality in COPD patients, especially in mild-moderate stage of the disease.

**Aim:** To evaluate both right ventricle (RV) and left ventricular (LV) function in patient with COPD by echocardiography and its correlation with the severity of the disease.

**Material & Method:** 60 patients with COPD and thirty healthy subjects were assessed by echocardiography and pulmonary function test.

**Results:** LV parameters were similar in both groups, while RV parameters were significantly higher in COPD patients. Mild, moderate, severe and very severe COPD were seen in 6.66%, 35%, 36.67%, 21.67% respectively, with mean forced expiratory volume in 1s (FEV1%pred) 47.52±17.92%. RV systolic dysfunction in moderate, severe and very severe COPD was present in 47.61%, 59.09%, 53.84% to the number of patients in that stage accordingly. Pulmonary hypertension (PH) was observed in 33.33% of all patients. The presence in different stages was 23.8%, 41%, 46.15%, in moderate, severe and very severe COPD respectively. Impairment of LV diastolic function in moderate, severe and very severe COPD was present in 14.28%, 54.54%, 23.07%, according to the number of patients in that stage. Enlarged left atrium was measured in 42%. Tricuspid regurgitation was the most frequent valvular abnormality, observed in 66.67%. LV systolic function was significantly higher in healthy subjects compared to COPD patients 63.73±1.90% vs. 57.43±6.93%. PH was not detected in the healthy subjects.

**Conclusion:** There is high prevalence of PH, RV systolic dysfunction and tricuspid regurgitation in COPD patients and severity increases with level of severity of COPD.

## **BIOGRAPHY**

Daniela Buklioska Ilievska is currently working in the Department of Pulmonology and Medicine at General Hospital, Skopje. She has completed her graduation from Medical Faculty at University "Ss. Cyril and Methodius" and a specialist of internal medicine. She is pursuing PhD with the ongoing research about "cardiovascular comorbidity at patients with chronic impeding respiratory organ disease". She has the skills in the field of diagnostic and therapeutic bronchoscopy, Chest ultrasound, diagnostic and therapeutic thoracentesis.

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