

(٥)

عنوان البحث

**Study of left ventricular diastolic dysfunction in critically chronic obstructive pulmonary disease patients with and without cor pulmonale**

الملخص الانجليزي

**Background:** There is growing data reporting increased risk of developing left ventricular diastolic dysfunction (LVDD) in patients with COPD though classically linked to presence and severity of cor pulmonale. Objective: to evaluate the possible burden of left ventricular diastolic dysfunction and other left sided cardiac changes associated with COPD with and without cor pulmonale. and their relation to COPD severity and right sided cardiac affection. **Patients and methods:** This study included 35 patients with severe and very severe COPD admitted to the medical ICU and 25 selected healthy volunteers. Pulmonary function tests (PFTs), echocardiography and tissue Doppler imaging (TDI) studies were performed for patients and control to obtain comparative data. **Results:** LVDD was detected in 31(88.6%) COPD patients compared to 6(24%) control patients with risk ratio 24.5. There was significant increase in left atrial diameter and LVDD parameters among COPD patients. Increased PASP was encountered in 23(65.7%) of the COPD patients; 20(86.9%) patients had LVDD whereas 64.5% of LVDD patients had increased PASP. There were negative correlations between PASP and LVEDD, LVESD and E/e' ratio. PASP at 31 mmHg and different PFTs' parameters were predictive of LVDD. **Conclusion:** COPD patients have higher risk of LVDD, proportional to the disease severity and usually occurs earlier than evident RV dysfunction. We recommend the routine use of echocardiography and TDI in ICU-COPD admitted patients for focusing LVDD and selecting patients for optimizing heart failure therapy.