

Clinical characteristics and outcomes in patients with heart failure and reduced ejection fraction and chronic obstructive pulmonary disease: implementation of quadruple therapy in a real-world setting

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KEYWORDS: heart failure, chronic obstructive pulmonary disease, optimal medical therapy.

CITATION: *Cardiol Croat.* 2023;18(11-12):292. | <https://doi.org/10.15836/ccar2023.292>

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Introduction: Patients with heart failure and reduced ejection fraction (HFrEF) and concomitant chronic obstructive pulmonary disease (COPD) have historically been undertreated across the spectrum of care, including medical and device therapy¹. The aim of this study was to evaluate implementation of quadruple therapy in patients with HFrEF and COPD as well as outcomes in terms of hospitalizations in patients with optimal medical therapy in real life conditions.

Results: We identified 525 patients with HFrEF in our Registry, 59 of which also have COPD. Mean age of patients with COPD and HFrEF was 69.89±8.3 years, 81.5% were males, 69.5% had ischemic cardiomyopathy, 30.5% were NYHA II functional class and 67.8% were NYHA III or IV functional classes. Mean age of HFrEF patients but without COPD was 67.8±12 years, 74% were males and 52.3% had ischemic cardiomyopathy, 46.9% were NYHA II functional class and 47.6 were NYHA III or NYHA IV functional classes. 33.9% of patients with COPD and HFrEF were taking optimal medical therapy while 42.1% patients without COPD were taking quadruple medical therapy (OR 0.71, 95% CI 0.4-1.22). Of note is that patients with HFrEF and COPD despite optimal medical therapy were more likely to be hospitalized during follow-up (RR 1.7; 0.9239-2.93, P=0.06) of 743.84 days.

Conclusion: Despite established benefits of quadruple medical therapy, including beta-blockers in COPD patients with HFrEF, data from our Registry suggest that optimal medical therapy, including beta-blockers is still underutilized in this fragile population.

RECEIVED:
September 10, 2023

ACCEPTED:
September 27, 2023



LITERATURE

1. Ehteshami-Afshar S, Mooney L, Dewan P, Desai AS, Lang NN, Lefkowitz MP, et al. Clinical Characteristics and Outcomes of Patients With Heart Failure With Reduced Ejection Fraction and Chronic Obstructive Pulmonary Disease: Insights From PARADIGM-HF. *J Am Heart Assoc.* 2021 Feb 16;10(4):e019238. <https://doi.org/10.1161/JAHA.120.019238>