

Anemia in COPD

Anemia în BPOC

Dear Editor

We read with interest the results of doctor Rahimi-Rad MH et al. paper⁽¹⁾ suggesting that anemia is a predictor of mortality in chronic obstructive pulmonary disease (COPD). There is indeed increasing data highlighting the significant burden of anemia in patients with COPD. In our cohort, in Respiratory Department of State University of Medicine and Pharmacy “Nicolae Testemitanu”, Chisinau, Moldova, we found that anemia is also an independent risk factor for worsening dyspnea, reduced functional capacity and more comorbidities in COPD patients.

More specifically, in our cohort, prevalence of anemia was significant in both elderly and middle aged patients with COPD (31% and 28% respectively). Elderly patients with anemia showed a higher dyspnea level, with a MRC scale of 4.04 ± 0.74 versus 3.73 ± 0.59 points in non-anemic patients ($p = 0.04$). In the group of older patients with COPD, as well as in the group of young adult patients, the number of comorbidities and BODE index were increased in patients with anemia: Charlson index was 3.16 ± 1.18 versus 2.76 ± 1.37 ($p < 0.05$) in non-anemic patients; BODE index was higher in anemic patients (7.3 ± 1.5 versus 6.8 ± 1.8) ($p < 0.05$). The traversed distance in the 6-minute walk test was shorter (181.4 ± 69.2 m versus 220.8 ± 85.9 m) ($p < 0.05$). Anemia level was independently associated to high dyspnea level and reduced exercise capacity (assessed by 6-minute walking test), as demonstrated by forward stepwise regression analysis.

Rahimi-Rad MH et al. did not demonstrate any correlation between haemoglobin levels and pulmonary function ($r=0.210$, $p=0.011$) and only found weak correlation with duration of hospitalization ($r=-0.389$, $p=0.000$).

Another study suggests that anemia is independently correlated with noninvasive ventilation (NIV) failure (OR 3.99, 95% CI [1.39-11.40], $p=0.01$) and increased hospital mortality (OR 2.56, 95% CI [1.60-4.09], $p<0.001$) in a cohort of COPD patients with severe exacerbations⁽²⁾. Long-term survival was not assessed in this cohort.

The association of anemia with mortality in stable COPD was also demonstrated in a recent meta-analysis (OR 2.90, 95% CI [1.56-5.40], $p=0.0008$)⁽³⁾. The most frequent cause of anemia in COPD patients is iron deficiency and it is associated with hypoxaemia and excess

of exacerbations⁽⁴⁾. Current data indicates that it is probably linked to the pro-inflammatory state that is common in patients with COPD⁽⁵⁾.

In conclusion, anemia is indeed a common clinical finding, associated with a burden that is more significant than it was earlier presumed. Treatment of anemia might cause major improvement of patients' conditions; however, this remains to be proven in future large scale trials.

Authors declare no conflict of interest

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