

Possibilities for the internal use of NATURAL mineral waters in the correction of Renal compensation mechanisms at COPD patients

LEMKO Ivan S., HAYSAK Margarita O., KUDYK Viktoriya H.

Government Institution "The Scientific-practical Medical Centre "Rehabilitation" Health Ministry of Ukraine", Uzhgorod, Ukraine, e-mail: rehab_uzh@ukr.net

Editor: Constantin MUNTEANU, E-mail: office@bioclima.ro



Abstract

Introduction: Results of recent researches revealed high frequency of renal dysfunctions in COPD patients. Such association and insufficiency of renal compensatory reserve leads to formation of chronic acidosis, which is present already in the early stages of the disease. On the other hand, chronic acidosis is the background for comorbidity. That is why early correction of renal dysfunctions is of high importance in the management of COPD patients.

Materials and Methods: 62 patients with respiratory diseases beyond the acute period of COVID-19 were examined, among them 23 patients had COPD. Renal compensative mechanisms were evaluated by urine pH level, rate of diuresis, titratable acid and ammonium excretion, levels of renal metabolic markers in blood. Diuretic, alkalinizing influence of different balneological types of mineral waters were compared.

Results: Functional and metabolic renal disturbances were found at more than 50% of patients and manifested in mild elevation of uric acid, urea and creatinine concentrations. Decrease of glomerular filtration rate was found in 56,5%, more frequently in COPD patients. In 13% of them, it was 60 ml/min and lower. Almost all patients demonstrated disorders of renal compensation mechanisms of chronic metabolic acidosis - activation of ammonium and titratable acid excretion, acidic urinary pH, disturbances in partial functions of kidneys. These changes were found in more than 1/3 of COPD patients. Ultrasound investigation revealed urosthesis (37.3%), nephrolithiasis (27,1 %) and other pathological conditions. It should be noted that these findings were associated with poor clinical manifestations.

Conclusions: Obtained results determine the expediency of supplementing the complex of COPD patient's treatment with drinking natural mineral waters, which have systemic alkalizing and pronounced diuretic features. These waters represent an inexpensive and simple way of alkalizing therapy and method of early correction that could hasten the progression of kidney disease and chronic acidosis at patients with COPD.