

RELATIONSHIP BETWEEN ENDOSCOPIC MANIFESTATIONS OF GASTROESOPHAGEAL REFLUX DISEASE, LEVEL OF MELATONIN AND SEVERITY OF OBSTRUCTIVE SLEEP APNEA

E. O. Krakhmalova, G. D. Fadiienko, E. V. Izmailova

Abstract

The aim of the study: to examine the relationship between level of melatonin, the severity of obstructive sleep apnea / hypopnea syndrome (OSAH) and various forms of gastro-esophageal reflux disease (GERD) in patients with concomitant coronary heart disease (CHD).

Materials and methods. The major parameters, reflecting a severity of OSAH, patient reported questionnaire data of subjective characteristics of sleep (SCS), Epworth sleepiness scale (ESS), Beck Depression Inventory (BDI) and the level of melatonin metabolite, 6-sulfatoximelatonin (6-COM), were compared in two subgroups of patients with GERD and concomitant CHD. The IA group included 21 patients with non-erosive GERD (NERD). IB group consisted of 44 patients with erosive GERD and different degrees of endoscopic reflux esophagitis.

Results. It was established that in patients with GERD and CHD the level of 6 COM correlated with age ($p = 0,011$), CHD duration ($p = 0,018$), the severity of insomnia and depressive disorders: CXC ($p < 0,01$), ESW ($p < 0,01$), CAE ($p < 0,01$). In patients with erosive GERD the level of 6 COM was significantly lower than in patients with NERD ($p < 0,01$). The average values of 6 COM significantly varied between patients with different stages of endoscopic erosive GERD, ($p = 0,023$). The relationship between GERD and the level of 6 COM ($p = 0,0011$) was revealed. OSAH syndrome was diagnosed in 72,3 % of patients with GERD and concomitant CHD. The correlation between apnea/hypopnea index (AHI) and the duration of coronary artery disease ($p = 0,015$), cardiac risk index (CRI) and coronary artery disease duration ($p < 0,01$), AHI, and body mass index (BMI), ($p = 0,0014$), the index of obstructive events (OAH) and BMI ($p = 0,006$), SRI and age ($p = 0,039$) were revealed. In the group of NERD, OSAH was diagnosed in 34.5%, while in the group of erosive GERD — in 84,1 % of study patients. OSAH syndrome was more severe in patients with erosive form of the disease ($p < 0,01$). In patients from both groups a severity of OSAH inversely correlated with 6-COM and directly correlated with BMI, age, duration of CHD and GERD. The relationship between the severity of depression and sleep disorders, and the severity of OSAH was revealed. There was found significant correlation between the OSAH and functional classes of angina pectoris, NYHA heart failure, and sex of the patient. There was a correlation between a stage of endoscopic esophagitis in GERD patients and AHI ($p = 0,170$), AAI ($p = 0,078$), CRI ($p = 0,080$).

Key words: gastro-esophageal reflux disease, endoscopic forms, coronary heart disease, a syndrome of obstructive hypopnea/sleep apnea, melatonin, sleep disorders, depressive disorders.

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Olena O. Krakhmalova

Institute of Therapy named after L.T. Malaya,

National Academy of Medical Science of Ukraine

Head of Cardiopulmonology department

MD, Professor

2-A, Postysheva Av., Kharkiv, 61039, Ukraine

Tel./fax: 380573739017, womanl@bigmir.net