CLINICAL COURSE OF BRONCHIAL ASTHMA IN PATIENTS WITH THYROID DISEASES

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ABSTRACT

Bronchial asthma (BA) is one of the most common chronic lung diseases. The incidence of In Uzbekistan, it varies from 2.6 to 20.3%. This disease is more common among the urban population and has a more severe course in patients with combined pathology. Along with AD, thyroid pathology is also a widespread disease. Taking into account the fact that 20% of the population live in iodine-endemic regions in which iodine prophylaxis is insufficiently effectively carried out a large part of the population has an increase in the volume of the thyroid gland. The study assessed the clinical picture of bronchial asthma by the presence of shortness of breath, attacks of suffocation, seases. It was noted that the course of bronchial asthma is affected by both dysfunction and a change in the structure of the thyroid gland, leading to a more severe course of asthma.

Key words: bronchial asthma, compensated hypothyroidism, compensated thyrotoxicosis, diffuse nodular goiter.

INTRODUCTION

With a change in the structure of the thyroid gland, its function also begins to change. BA has been studied quite comprehensively, but to this day there is no consensus in the literature about the clinic and treatment of BA in combination with various thyroid diseases. It is well known that an enlarged thyroid gland in various forms of goiter, squeezing the trachea and bronchi, contributes to the development of the clinic of obstructive pulmonary diseases. Contradictory data on the effect of thyroid hormone levels and their correction on the course of asthma have been noted in the literature. In patients with a significant deterioration in the course of AD, the frequency of thyrotoxicosis It was higher than in the population, and the authors note an improvement in the condition after the start of antithyroid therapy and radioactive iodine therapy. Other researchers have shown that correction of thyroid hyperfunction does not lead to an improvement in AD in all patients, and dash otoxicosis does not have the same effect on the course of the disease in patients with different

pathophysiological variants. Against the background of subclinical hypothyroidism, a number of authors note an improvement in control over BA. At the same time, the observation of other researchers about it has been demonstrated that in patients with hypothyroidism, a slow transition to euthyroidism led to a worsening of asthma. Taking into account the contradictory data from literary sources, it is necessary to conduct additional studies in order to identify the features of the clinical course of asthma in patients with diseases the thyroid gland.

MATERIALS AND METHODS OF RESEARCH

129 patients with asthma were examined in the research work. Criteria for inclusion in the study: established diagnosis of AD in patients aged 18 to 75 years in accordance with GINA criteria. In all cases AD was with an uncontrolled course in the acute phase. In addition to patients with isolated AD, the study recruited a group of patients with AD in combination with thyroid diseases. The diagnosis of thyroid pathology was established in accordance with the functional (syndromic) classification proposed by Dedov I.I. (2007). The criteria are excluded conclusions from the study: the patient's age is under 18 years and older than 75 years; the patient's unwillingness to participate in the study; the presence of severe concomitant pathology; the presence of oncological diseases, including thyroid cancer; diseases of the thyroid gland in a decompensated state according to thyroid function and complicated by cardiovascular pathology, ophthalmopathy, cachexia, dermopathy. All patients with AD were divided into two groups: the main group (group 1) and the comparison group (group 2). The patients of the main group had BA in combination research institutes with thyroid diseases. The age of patients in group 1 was 55.24±9 years, of whom there were 2 men and 64 women. 9 patients (13.6% of cases) had newly diagnosed AD, and 11 patients (16.7%) had a hormone –dependent course of AD. The duration of AD was on average 13.4±11.9 years. BA of mild severity was in 2 patients (3%), moderate severity – in 31 patients (47%) and severe severity – in 33 patients (50%). The comparison group (group 2) onsisted of 63 patients aged 18 to 74 years with only bronchial asthma, average age – 52.22±9.68 years. Of these, 8 are men and 55 are women. The duration of AD in such patients was 8.23±9.9 years. 2 (3%) patients were diagnosed with newly diagnosed BA, 9 (14%) patients had a hormone –dependent course of BA. The BA was of mild severity in 2% of cases; moderate severity – in 55% of patients and severe severity – in 42% of patients. In the main group, depending on the pathology of the thyroid gland, subgroups of patients with either hypothyroidism, thyrotoxicosis, or goiter without functional disorders of the thyroid gland were distinguished. The hypothyroidism subgroup (subgroup 1A) consisted of 34 people aged 56.65±8.14 years. The subgroup with thyrotoxicosis (subgroup 1B) consisted of 9 people of average age 50.22±13.26 years. The subgroup with diffuse or diffusely nodular goiter without thyroid dysfunction (subgroup 1C) consisted of 23 patients aged 55.13±8.01

years. The indicators of the hormonal state of the thyroid gland at the time of the study did not exceed the norm and indicated a drug-compensated euthyroid state of thyroid function. To identify the features of the course of asthma in all patients, the presence and number of daytime and nighttime attacks of suffocation, the severity of shortness of breath, the presence of cough, sputum and its nature, weakness, sweating, wheezing, tremor of the hands and whole body, hoarseness of voice, dysphagia were evaluated. The clinical picture was assessed by changing the total value of subjective criteria, for which a point scale for evaluating clinical indicators was developed. The data obtained are presented in the form of an arithmetic mean (M) and a standard deviation (SD), in absolute terms. Statistical processing of the results was carried out using the software package “SPSS STATISTICS 17.0" and ”Biostat". The critical significance level (p) was assumed to be less than or equal to 0.05 when checking statistical hypotheses.

THE RESULTS AND THEIR DISCUSSION

In the main group patients complained more often of shortness of breath during normal physical activity and at rest, more frequent nocturnal attacks of suffocation, hoarseness of voice, sweating and tremor, body weight changes over the past few years than in the comparison group ($p<0.05$). In patients with asthma in combination with thyroid pathology paroxysmal cough, mucopurulent sputum, dysphagia, binge drinking and insomnia were observed, but these clinical data did not assess the clinical picture in patients by subgroups. In the subgroup of patients with asthma in combination with hypothyroidism, patients significantly more often complained of shortness of breath at rest and with little physical exertion, frequent paroxysmal or persistent cough, scanty amount of sputum (up to 50 ml/day) or acrenia, frequent nocturnal attacks of suffocation, the presence of hoarseness of voice or complete loss of it, the presence of dysphagia, eyelid strain, sweating, rarely the presence of sweating ($p<0.05$ compared to group 2). In the subgroup of AD patients with thyrotoxicosis, patients noted shortness of breath at rest and with minor physical physical exertion, paroxysmal or permanent cough with mucous sputum. At the same time, patients with asthma with thyrotoxicosis more often than other patients noted more than 2 night attacks of suffocation, heaviness in the chest, dysphagia, hand tremor ($p<0.05$ compared to group 2), palpitations, weight loss ($p<0.05$ compared to group 2) and insomnia. In a subgroup of BA patients with goiter without thyroid dysfunction, patients complained of shortness of breath at rest and with little physical exertion ($p<0.05$ compared to group 2), seizures are less frequent different or constant cough with mucopurulent sputum, more frequent and pronounced daytime and nighttime attacks of suffocation, the presence of wheezing, chest pain. Patients of subgroup 1C more often noted hoarseness of voice and the presence of sweating ($p<0.05$ compared with group 2).In general, patients with asthma in combination with thyroid pathology had frequent nocturnal attacks of suffocation (2 or more attacks of suffocation at night), whereas in the

comparison group, nocturnal attacks of suffocation were up to the 1st nocturnal attack per night. According to some authors, thyroid hormones are stressful. However, in patients with a combination of asthma and thyroid pathology, nocturnal attacks of suffocation are observed more often and are protracted. The most frequent daytime attacks of suffocation were in patients in the subgroup with goiter without thyroid dysfunction (4-6 or more than 6 attacks during the day); less frequent daytime attacks of suffocation were in patients in the subgroup with hypothyroidism and in the subgroup with thyrotoxicosis. The most pronounced dyspnea occurred in patients with asthma with goiter without thyroid function impairment: 2.43±0.896 points, which is significantly higher than in patients of the comparable group (1.98±0.813 points, p=0.03). The presence of an attack-like cough was more often noted by patients of the subgroup with hypothyroidism, hile their cough was with a meager amount of sputum (0.91±0.514 points), which significantly differs from the comparison group (1.32±0.858 points, p=0.012) and is explained by the predominance of atrophic changes in the bronchial mucosa in patients with thyroid hypofunction glands. Hoarseness of voice and sweating were noted by all patients with asthma, but they were more pronounced in a subgroup of patients with goiter without thyroid dysfunction: such patients had periodic hoarseness or loss of voice and pronounced sweating, which significantly differed from the patients in the comparison group. Palpitations, weight loss, insomnia and dysphagia were most pronounced in the subgroup with thyrotoxicosis, and constipation, weight gain were in patients in the subgroup with hypothyroidism, which corresponds to the classical descriptions of the clinical picture of diseases thyroid gland. In the group with isolated BA (comparison group), symptoms such as dysphagia, palpitations and constipation were not observed in patients. The data obtained confirm the opinion of those cars researchers who claimed that changes in thyroid hormone levels and the presence of goiter worsen the course of ast we, which causes severity and difficult control BA in patients with thyroid diseases.

CONCLUSIONS

BA has clinical features depending on the structural and functional state of the thyroid gland. In patients with goiter without impaired function thyroid gland in the presence of asthma, frequent and severe attacks of suffocation, shortness of breath at rest and paroxysmal cough were noted. In patients with thyroid dysfunction, frequent attacks of suffocation at night , shortness of breath at rest and also paroxysmal cough were noted, while in patients with hypothyroidism, a cough with a scant amount of sputum was detected. The results show the need for additional studies of BA in combination with thyroid diseases to develop approaches in the treatment of such patients.

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