

A case of uncontrolled bronchial asthma with generalized anxiety disorder

RAR — научная статья

<https://doi.org/10.53529/2500-1175-2025-4-74-83>

Date of receipt: 08.08.2025

Date of acceptance: 27.09.2025

Date of publication: 20.12.2025


Rezeda M. Fayzullina¹, Natalia V. Samigullina^{1,2}, Vitaly V. Viktorov¹, Rita R. Gafurova¹
¹ Bashkir State Medical University of the Ministry of Health of the Russian Federation, 3 Lenin Str., Ufa, 450008, Russia

² State Budgetary Institution of Healthcare of the Republic of Bashkortostan Clinical Emergency Hospital of Ufa, 39/2 Batyrskaya Str., Ufa, 450092, Russia

Rezeda Mansafonva Fayzullina — Dr. Sci., Professor of the Department of Faculty Pediatrics and Neonatology of Bashkir State Medical University of the Ministry of Health of Russia, eLIBRARY.RU SPIN: 6706-3639, ORCID ID: 0000-0002-9001-1437, e-mail: fayzullina@yandex.ru.

Natalia Vladimirovna Samigullina — Cand. Sci., Associate professor of the Department of Faculty Pediatrics and Neonatology of Bashkir State Medical University of the Ministry of Health of Russia, eLIBRARY.RU SPIN: 7643-3619, ORCID ID: 0000-0003-3415-0595, e-mail: samigullinanw@gmail.com.

Vitaly Vasilyevich Viktorov — Doc. Sci., Professor, Head of the Department of Faculty Pediatrics and Neonatology of Bashkir State Medical University of the Ministry of Health of Russia, eLIBRARY.RU SPIN: 4044-4161, ORCID ID: 0000-0001-5260-2319, e-mail: surgped@mail.ru.

Rita Rinatovna Gafurova — Cand. Sci., Associate professor of the Department of Faculty Pediatrics and Neonatology of Bashkir State Medical University of the Ministry of Health of Russia, eLIBRARY.RU SPIN: 3334-7890, ORCID ID: 0000-0001-9077-9780, e-mail: rita.gafurova2017@yandex.ru.

Abstract

Introduction. Bronchial asthma (BA) is the most common chronic respiratory disease in children, exerting a significant impact on the quality of life of both the child and the family. The development of BA is influenced by both internal and external risk factors. Comorbidity remains a pressing issue in BA, frequently contributing to severe and uncontrolled disease courses. Currently, psychosomatic and psychopathological disorders in patients with severe manifestations of BA are being actively studied.

Presentation of the clinical case. We present a clinical case of uncontrolled BA in a 17-year-old adolescent hospitalized in the pediatric department. A comprehensive clinical and laboratory examination was performed, which confirmed the diagnosis, clarified the sensitization profile, allowed the development of elimination measures, and facilitated the selection of adequate controller therapy. Despite ongoing treatment and adherence on the part of the patient and his family, full control of BA could not be achieved. Given the patient's complaints of sleep disturbances, difficulty falling asleep, shortness of breath associated with emotional stress, and pronounced vegetative symptoms, a psychiatric and psychotherapeutic consultation was deemed necessary. As a result of additional evaluation, a diagnosis of Generalized Anxiety Disorder was established, and antidepressant therapy was initiated, which led to significant clinical improvement and asthma control.

Conclusion. This clinical case illustrates the role of psycho-emotional disorders as a factor contributing to the uncontrolled course of BA.

Keywords: bronchial asthma, children, comorbidity, anxiety disorder

Conflict of interest

The authors declare no conflict of interest.

For citation: Fayzullina R. M., Samigullina N. V., Viktorov V. V., Gafurova R. R. A case of uncontrolled bronchial asthma with generalized anxiety disorder. *Allergology and Immunology in Pediatrics*. 2025; 23 (4): 74–83. <https://doi.org/10.53529/2500-1175-2025-4-74-83>

For correspondence:

Natalia V. Samigullina, Cand. Sci., Associate professor of the Department of Faculty Pediatrics and Neonatology of Bashkir State Medical University of the Ministry of Health of Russia.

Address: 39/2, Batyrskaya Str., Ufa, 450092, Russia.

E-mail: samigullinanw@gmail.com.

Для корреспонденции:

Самигуллина Наталья Владимировна, к. м. н., доцент кафедры факультетской педиатрии и неонатологии ФГБОУ ВО БГМУ Минздрава России.

Адрес: 450092, Российская Федерация, г. Уфа, ул. Батырская, д. 39/2, Россия.

E-mail: samigullinanw@gmail.com.

Случай неконтролируемого течения бронхиальной астмы на фоне генерализованного тревожного расстройства

<https://doi.org/10.53529/2500-1175-2025-4-74-83>

УДК 616.248-053.2-07

Дата поступления: 08.08.2025

Дата принятия: 27.09.2025

Дата публикации: 20.12.2025

Файзуллина Р. М.¹, Самигуллина Н. В.^{1,2}, Викторов В. В.¹, Гафурова Р. Р.¹

¹ Федеральное государственное бюджетное образовательное учреждение высшего образования «Башкирский государственный медицинский университет» Министерства здравоохранения, Республика Башкортостан, 450008, г. Уфа, ул. Ленина, 3, Россия

² Государственное бюджетное учреждение здравоохранения Республики Башкортостан «Больница скорой медицинской помощи» Министерства здравоохранения Республики Башкортостан, Республика Башкортостан, 450092, г. Уфа, ул. Батырская, 39/2, Россия

Файзуллина Резеда Мансафовна — д. м. н., профессор кафедры факультетской педиатрии и неонатологии ФГБОУ ВО БГМУ Минздрава России, eLIBRARY.RU SPIN: 6706-3639, ORCID ID: 0000-0002-9001-1437, e-mail: fayzullina@yandex.ru.

Самигуллина Наталья Владимировна — к. м. н., доцент кафедры факультетской педиатрии и неонатологии ФГБОУ ВО БГМУ Минздрава России, eLIBRARY.RU SPIN: 7643-3619, ORCID ID: 0000-0003-3415-0595, e-mail: samigullinanw@gmail.com.

Викторов Виталий Васильевич — д. м. н., заведующий кафедрой факультетской педиатрии и неонатологии ФГБОУ ВО БГМУ Минздрава России, eLIBRARY.RU SPIN: 4044-4161, ORCID ID: 0000-0001-5260-2319, e-mail: surgped@mail.ru.

Гафурова Рита Ринатовна — к. м. н., доцент кафедры факультетской педиатрии и неонатологии ФГБОУ ВО БГМУ Минздрава России, eLIBRARY.RU SPIN: 3334-7890, ORCID ID: 0000-0001-9077-9780, e-mail: rita.gafurova2017@yandex.ru.

Аннотация

Введение. Бронхиальная астма (БА) — наиболее распространенное хроническое заболевание органов дыхания у детей, оказывающее существенное влияние на качество жизни ребенка и его семьи. На формирование БА оказывают влияние как внутренние, так и внешние факторы риска. Актуальной проблемой остается коморбидность БА, что нередко является причиной тяжелого, неконтролируемого течения. В настоящее время активно изучаются психосоматические и психопатологические расстройства у больных с тяжелыми проявлениями БА.

Изложение клинического случая. Нами представлен клинический случай неконтролируемого течения БА у подростка 17 лет, госпитализированного в педиатрическое отделение. Проведено комплексное клиничко-лабораторное обследование, позволившее подтвердить диагноз, уточнить спектр сенсibilизации, разработать элиминационные мероприятия и подобрать адекватную базисную терапию. Несмотря на проводимое лечение и комплаенс со стороны пациента и его семьи, достичь полного контроля БА не удалось. Учитывая жалобы подростка на нарушение сна, трудности засыпания, одышки на фоне эмоционального напряжения, выраженной вегетативной симптоматики, было принято решение о необходимости консультации психиатра, психотерапевта. В результате дополнительного обследования был установлен диагноз «Генерализованное тревожное расстройство» и назначена терапия антидепрессантами, что позволило достичь значительного клинического улучшения и контроля БА.

Заключение. В данном клиническом примере показана роль психоэмоциональных синдромов как фактора неконтролируемого течения БА.

Ключевые слова: бронхиальная астма, дети, коморбидность, тревожное расстройство

Конфликт интересов

Авторы декларируют отсутствие явных и потенциальных конфликтов интересов, связанных с публикацией настоящей статьи.

Для цитирования: Файзуллина Р. М., Самигуллина Н. В., Викторов В. В., Гафурова Р. Р. Случай неконтролируемого течения бронхиальной астмы на фоне генерализованного тревожного расстройства. *Аллергология и иммунология в педиатрии*. 2025; 23 (4): 74–83. <https://doi.org/10.53529/2500-1175-2025-4-74-83>

INTRODUCTION

Bronchial asthma (BA) remains the most common chronic respiratory disease in children today [1, 2]. Uncontrolled BA significantly affects the quality of life of patients and their families, leading to frequent visits to the doctor, disability, and limitations in choosing a future profession [3]. It has been proven that BA is a multifactorial disease, and its development is influenced by both environmental factors (smoking, air pollutants, antigenic load)

and internal constitutional and personal characteristics (genetic, immunological, psychological) [4]. The comorbidity of BA remains a pressing issue, often causing severe, uncontrollable progression [1, 4]. Comorbidity, i.e., the presence of two or more pathological processes in a patient, a combination of two or more chronic diseases in one patient that are pathogenetically interrelated (with an unconditional understanding of the diversity of these relationships) [5].

A number of scientists have studied the role of neuropsychological factors in the pathogenesis of asthma [6, 7]. It has been proven that the presence of psychopathological manifestations in the clinical picture can significantly aggravate the course of the disease, disrupt the formation of compliance with the patient, reduce the quality of life, and lead to the progression of the disease [8, 9].

The introduction of modern standards in the treatment of asthma patients, based on the results of evidence-based medicine, has made it possible to achieve control over the symptoms of the disease in most patients and reduce modifiable risk factors for its exacerbation [1, 4]. At the same time, standard approaches to treatment do not achieve the desired results in some asthma patients, prompting researchers to search for new mechanisms underlying the formation of endotypes of this disease and diverse clinical phenotypes in order to develop new approaches to personalized asthma therapy [1, 3, 10].

Many researchers emphasize the significant role of psychosomatic factors in the pathogenesis of BA [11, 12], as they are accompanied by regular shifts in immunological homeostasis towards impaired immunological reactivity to antigens and increased activity of autoimmune processes. Like other chronic somatic diseases, asthma is often comorbid with anxiety and depressive disorders [6, 7, 9]. The relationship between bronchial asthma and anxiety-depressive disorders is an obvious clinical fact, prompting researchers and clinicians to once again attempt to solve the problem of comorbidity and identify the most accessible link in this chain for therapeutic correction. In terms of its pathogenetic mechanisms, bronchial asthma is considered in modern literature to be a multifactorial disease involving complex interactions between the respiratory, nervous, endocrine, and immune systems; in one form or another, even the first asthma attacks are accompanied by anxiety reactions [13].

A genome-wide association study (GWAS) revealed common pathogenic links between bronchial asthma and anxiety disorders, as well as depression.

A cross-over meta-analysis identified one locus that is jointly associated with asthma and anxiety dis-

orders. The variants found are responsible for regulating gene expression in tissues related to the exocrine, endocrine, digestive, respiratory, hematopoietic, and immune systems [14]. In addition, anxiety disorders are associated with a decrease in the functional activity of the immune system, with a decrease in the activation of natural killer cells and lymphocyte proliferation [7].

According to epidemiological studies, the prevalence of anxiety disorders among patients with bronchial asthma is significantly higher than in the general population [1, 7, 13].

Bronchial asthma can serve as an example of the ambiguous relationship between the somatopsychic and psychosomatic contexts of the disease, with difficulties in identifying the primary pathogenic nature of the disease. With a certain degree of convention, somatogenic mechanisms can be recognized as primary, given the formation of the disease from an early age. The addition of an anxiety response accompanying respiratory disorders can be considered a comorbid phenomenon. The further course of the disease corresponds to the patterns of psychosomatic pathology [15].

One possible manifestation of these comorbid relationships is the development of somatogenic mental disorders in patients with severe manifestations of BA with pronounced signs of respiratory failure, hypoxemia, and hypercapnia. The syndromal manifestation of comorbid anxiety-depressive disorders depends to some extent on the characteristics of the clinical manifestations of BA [16, 17]. The formation of persistent disorders of external respiration in patients with uncontrolled BA contributes to the development of anxiety symptoms, mainly in the form of generalized anxiety [7, 18].

Psychopathological manifestations in BA are primarily represented by affective spectrum disorders, psychovegetative disorders, anxiety disorders, and, as the disease progresses, the onset of depression with the formation of cognitive and behavioral disorders. Dominant anxiety disorder, anticipation of an asthma attack, lead to autonomic dysregulation, predominantly of the sympathicotonic type, which

in turn exacerbates respiratory distress syndrome and the course of the disease as a whole. Given the interrelationship between immune, hormonal, and nervous processes in the body, it is logical to assume that psychovegetative disorders also play a role in the development of the chronic inflammatory component of asthma [1, 6, 16].

Based on the literature, the presence of anxiety disorders in patients with asthma often becomes dominant [6, 8]. In turn, this causes dysfunction of vegetative regulation with a predominance of the sympathetic type in the efferent link. In addition, patients with uncontrolled BA and comorbid anxiety disorders tend to repeatedly use short-acting bronchodilators to relieve symptoms [6, 9, 17]. Emotional stress leads to changes in many body systems, including the immune system: sensitivity to viral and bacterial infections increases, which is manifested in a decrease in cellular functional activity, decreased activation and proliferation in response to antigenic stimulation [7, 20].

The aim of this study is to present a clinical case of a 17-year-old adolescent, F., who was observed with uncontrolled asthma against the background of generalized anxiety disorder.

CLINICAL CASE

The boy was admitted to the pediatric ward with complaints of episodes of shortness of breath, dry cough, and wheezing.

The medical history indicates that the child was born from the first pregnancy, which was complicated by gestational anemia and threatened miscarriage in the first trimester. The delivery was timely and performed by cesarean section due to weak labor and umbilical cord entanglement around the fetus's neck. Apgar score: 6/9 points; asphyxia during delivery due to tight entanglement. The child's early psychomotor and physical development proceeded without any particularities; acute respiratory viral infections — 3–4 times a year; was hospitalized once for acute stenosing laryngotracheitis. Past infectious diseases include chickenpox at age 4. No family history of somatic pathology. Allergy history is complicated: on

the mother's side, intolerance to citrus fruits and hay fever; on the father's side, intolerance to penicillin antibiotics.

The patient's medical history since the age of 7 included manifestations of pollinosis in the form of rhinoconjunctivitis caused by sensitization to tree and grass pollen allergens. At the age of 10, episodes of wheezing, dry paroxysmal cough, and difficulty breathing appeared; During this period, asthma was diagnosed with an expanded range of sensitization—to pollen (birch, alder, goat willow, quinoa, bluegrass, timothy grass, and fireweed) and household (house dust, house dust mites) allergens. Attacks occurred mainly during the flowering season of causative plants, in dusty rooms, and during intense physical activity. He received basic therapy (salmeterol 25 mcg + fluticasone propionate 125 mcg) for 3 months, during which the frequency and severity of attacks decreased significantly: they took a milder clinical form and were relieved independently or after taking inhaled bronchodilators. Allergen-specific therapy was not performed due to the parents' informed refusal of this type of treatment. Over the next two years, there were no exacerbations of asthma requiring medical attention. At the age of 13, an attack of shortness of breath was observed upon contact with a cat, which was relieved by the use of a bronchodilator; requiring an ambulance call and subsequent hospitalization for inpatient treatment. Subsequently, there were annual exacerbations of rhinoconjunctivitis in the spring and summer, as well as upon contact with cats and staying in dusty rooms. The next episode of shortness of breath was noted at the age of 15, occurring in May during a trip to the countryside. Antihistamines and bronchodilators had insufficient effect; an ambulance had to be called, and the boy was hospitalized. After discharge, the patient's condition remained stable. Two months later, against the background of a viral infection, an episode of shortness of breath recurred, which was partially relieved after inhalation of salbutamol; treatment of the exacerbation was carried out on an outpatient basis. One and a half months after the start of the school year, a dry cough appeared after school, and shortness of

breath developed at night. The condition required hospitalization. The teenager described his condition as stressful, noting increased stress at school related to preparing for exams after 9th grade. After discharge, recommendations were given for basic therapy: budesonide 160 mcg + formoterol 4.5 mcg, 1 inhalation twice a day for 3 months, with the possibility of additional use in a single inhaler as needed. Daily peak flow measurement was also recommended to monitor external respiratory function. Against the background of ongoing treatment, the condition was stable, with nighttime symptoms and slight limitation of physical activity noted twice. At follow-up appointments with an allergist-immunologist, the boy admitted that he periodically forgot to perform inhalations; according to the dose counter, therapy compliance was 85%. Peak flow measurements averaged 75–80% of normal, with a daily variability in peak expiratory flow (PEF) averaging 18%.

After 3 months of treatment, daytime and nighttime asthma symptoms were not observed, and physical activity was tolerated satisfactorily. The allergist-immunologist discontinued basic therapy and recommended adherence to an elimination regimen using a combination of budesonide 160 mcg + formoterol 4.5 mcg as needed. After 2 months, the condition worsened again: an attack of shortness of breath occurred without an established trigger factor, requiring hospitalization. After discharge, daily use of a combination of budesonide 160 mcg + formoterol 4.5 mcg, one inhalation twice a day, with the possibility of additional use as needed in a single inhaler, was recommended. During treatment, daytime and nighttime symptoms persisted, with slight limitation of physical activity. At the same time, the patient and his family demonstrated high compliance with treatment, but symptoms bothered them on average 1–2 times every two weeks.

According to the parents, the attacks were similar in nature and accompanied by pronounced vegetative

symptoms: hand tremors, shortness of breath, palpitations, sweaty palms, dizziness, and feelings of fear.

After using the inhaler for 10 minutes, improvement occurred and the symptoms subsided. Despite adequate compliance, episodes of shortness of breath and clinical manifestations from the autonomic nervous system persisted. The parents also noted that the teenager had sleep disturbances, decreased appetite, a tendency toward negative thoughts, anxiety, fear of death, and decreased academic performance, which they considered to be a consequence of the underlying disease.

Given the ineffectiveness of outpatient therapy, and in order to consider the possibility of prescribing biological therapy, the boy was referred for inpatient examination and treatment.

Objective status upon admission: general condition—moderate severity. Consciousness clear, position active. Skin of normal color, clean. Mucous membranes pink, clean, moist. Body temperature — 36.5 °C. Subcutaneous adipose tissue is satisfactorily developed in all areas, turgor is preserved. Lymph nodes in all groups are not enlarged. Musculoskeletal system without visible pathology. Nasal breathing is free. Voice is clear. Chest is cylindrical in shape, moderately elastic. Percussion reveals a box-like tone of pulmonary sound over symmetrical areas. Auscultation reveals weakened breathing, conducted in all areas, with dry wheezing heard on both sides. Moderate expiratory dyspnea is noted. RR — 18 per minute. SpO₂ — 93%. Heart sounds are clear, rhythm is regular. Heart rate is 74 beats per minute. Pulse is regular, with satisfactory filling. Blood pressure is 112/76 mmHg. The abdomen is normal in shape and participates in the act of breathing. It is not tense on palpation and is accessible to palpation in all areas. The edge of the liver is palpable, elastic, painless, along the edge of the costal arch. The spleen is not palpable. Stool is daily, formed. Urination is free, painless, urine is light yellow.

During inpatient treatment, a comprehensive laboratory and instrumental examination was performed to review/confirm the allergic pathology and conduct a differential diagnosis.

A general blood test revealed moderate relative and absolute eosinophilia (5.6% and 1.2 thousand/ μ l, respectively). Biochemical blood test and general urine test results were within reference ranges. Total immunoglobulin E (IgE) — 752 IU/ml. Specific I testing revealed high reactivity to cat dander, birch pollen, alder pollen, timothy grass pollen, common ragweed pollen, and mint pollen; moderate reactivity to household allergens (house dust, house dust mites) was detected. Immunogram indicators were within reference values. Thyroid hormone profile (T3, T4, TSH) — indicators within reference values.

According to spirometry data: FEV1 — 84%, FEV₁/FVC — 87%, Tiffeneau index — 57%, bronchodilator test positive (increase in indicator was 14%). Peak flow measurement — 81% of the expected value with daily variability — 17%. Computed tomography of the chest — no focal infiltrative changes. ECG — age-related norm.

The patient was consulted by a pulmonologist, phthisiatrician, geneticist, and neurologist—concomitant pathology was ruled out.

During the diagnostic search phase, the correctness of the inhalation therapy technique was assessed and modifiable risk factors were analyzed.

Given the adolescent's complaints of sleep disturbances, difficulty falling asleep, shortness of breath against the background of emotional tension, and pronounced vegetative symptoms, a decision was made to consult a psychiatrist and psychotherapist (with the consent of the adolescent and his legal representative) [21, 22]. The severity of anxiety and depressive symptoms was assessed using a screening method based on an adapted Russian version of the Hospital Anxiety and Depression Scale (HADS), developed to identify and assess the severity of anxiety and depressive disorders in general medical practice. The HADS psychometric scale has high sensitivity, specificity, and discriminant validity in determining the risk of anxiety and depression, and is therefore widely used in practice. The advantages of this method are its conciseness, ease of use, and ease of processing results.

The scale consists of 14 statements, each with four response options reflecting the severity of the symp-

tom, coded according to the increasing severity of the symptom from 0 points (no symptoms) to 4 (maximum severity). The results are interpreted based on the total score: 0–7 points indicate no significant symptoms of anxiety/depression; 8–10 points indicate subclinical anxiety/depression; 11 points or more indicate clinically significant anxiety/depression. The score on the Hospital Anxiety and Depression Scale (HADS) was 20 points — clinically significant anxiety and 8 points — subclinical depression [21].

Analysis of the adolescent's clinical symptoms revealed syndromic manifestations in the form of asthenic syndrome — general weakness, difficulty falling asleep, lack of energy, and rapid fatigue; anxiety-phobic syndrome — periodic premonitions of trouble, excessive anxiety, fear of suffocation, fear of death, helplessness, tendency toward internal tension, obsessive thoughts and actions (frequent checking of the inhaler and its fill level); Hypochondriacal syndrome — fear of discovering an incurable disease (lung cancer, tuberculosis). These manifestations were often accompanied by somatic symptoms: muscle tension, tremors, shortness of breath, palpitations, sweaty palms, dry mouth, and dizziness. Based on the results of the examination, the psychotherapist diagnosed generalized anxiety disorder. First-line therapy was prescribed: escitalopram 10 mg/day and a course of individual psychotherapy [6, 16, 22, 23].

Final clinical diagnosis: bronchial asthma, atopic form, moderate severity, uncontrolled, period of incomplete remission. Concomitant diagnosis: generalized anxiety disorder. Allergic rhinoconjunctivitis, seasonal and perennial, without exacerbation. The adolescent was prescribed basic asthma therapy in accordance with the severity of the disease: a combination of budesonide 160 mcg + formoterol 4.5 mcg, 1 inhalation twice a day, as well as as needed using a single inhaler. During the flowering season of causative plants, basic therapy for allergic rhinoconjunctivitis was prescribed: second-generation antihistamines and topical intranasal glucocorticoids.

Treatment for comorbid conditions was also provided: antidepressants and individual psychotherapy sessions. Against the background of treatment for two weeks, the adolescent showed noticeable clinical improvement: normalization of sleep, reduction of symptoms from the autonomic nervous system, improved emotional background and appetite. No respiratory symptoms were recorded during the following month of treatment. The score on the Hos-

pital Anxiety and Depression Scale (HADS) was 6 points, which corresponds to the absence of significant symptoms of anxiety/depression.

The teenager was discharged with improvement in primary and secondary nosology, with recommendations to continue basic asthma therapy and treatment prescribed by a psychotherapist.

Over the next few months, asthma symptoms remained completely under control, and psychological status and autonomic nervous system function normalized.

CONCLUSION

Thus, the presented clinical case clearly demonstrates the key role of psychoemotional disorders in the pathogenesis of uncontrolled asthma. A comprehensive clinical and instrumental examination revealed the leading triggers of persistent symptoms, which remained despite adequately selected basic therapy and modification of environmental factors. The established comorbid generalized anxiety disorder determined the characteristics of the clinical picture and necessitated targeted psychopharmacological and psychotherapeutic correction.

The results obtained confirm that optimizing the management of patients with severe forms of asthma is impossible without a multidisciplinary comprehensive approach to diagnosis and treatment, which requires the mandatory use of personalized therapy. The implementation of such a strategy, which takes

into account the biopsychosocial aspects of the disease, not only stabilizes respiratory symptoms but also significantly improves long-term prognosis and quality of life for patients.

Thus, this clinical example demonstrates the role of psychoemotional syndromes as a risk factor for uncontrolled asthma. It was the presence of anxiety disorder that served as a trigger in the pathogenesis of severe uncontrolled disease progression. Correction of the comorbid pathology made it possible to achieve control over bronchial asthma in the child, which subsequently allows us to predict a favorable course of the disease.

The survey identified triggers for the lack of control of asthma symptoms despite adequate treatment and modification of environmental factors in the form of a comorbid condition—generalized anxiety disorder.

It is important to remember that at each stage of treatment for a patient with bronchial asthma, when moving on to the next step of stepwise therapy, as well as when determining the indications for biological therapy, it is important to assess all risk factors that can be effectively influenced, the patient's and their family's commitment to treatment, and the correctness of the inhalation technique.

The success of treatment for this patient directly depends on a multidisciplinary comprehensive approach to diagnosis and treatment, and the selection of comprehensive personalized therapy.

REFERENCES

1. National program "Bronchial asthma in children. Treatment strategy and prevention". 7th edition, revised. and add.). Russian Respiratory Society. Moscow: MedCom — Pro, 2025. 294 p. (In Russ.)
2. Bronchial asthma. Clinical recommendations. 2024; 199 p. URL: <https://diseases.medelement.com/disease/%D0%B1%D1%80%D0%BE%D0%BD%D1%85%D0%B8%D0%B0%D0%BB%D1%8C%D0%BD%D0%B0%D1%8F-%D0%B0%D1%81%D1%82%D0%BC%D0%B0-%D0%BA%D0%BF-%D1%80%D1%84-2024/18317> (date of request — 04.08.2025). (In Russ.)
3. Namazova-Baranova L.S. Allergy in children: from theory to practice. Moscow: Pediatrician, 2011. — 668 p. (In Russ.)
4. Global Strategy for Asthma Management and Prevention. Updated May 2024. https://ginasthma.org/wp-content/uploads/2024/05/GINA-2024-Strategy-Report-24_05_22_WMS.pdf.
5. Vertkin A.L., Zairatyants O.V., Kebina A.L., Shamuilova M.M., Knorrning G.Yu. Modern understanding of comorbidity and approaches to formulating the diagnosis of comorbid patients. Attending physician. 2024; 6 (27): 64–70. (In Russ.) <https://doi.org/10.51793/OS.2024.27.6.009>.
6. Monogarova N.E., Boyko E.Y., Borodiy K.N. and others. Anxiety — depressive disorders in patients with bronchial asthma in the presence of comorbid pathology. Medical and social problems of the family. 2022; 27: 53–58. (In Russ.)
7. Bogovin L.V., Otradnova A.A., Monakhova V.V. et al. The effect of anxiety-depressive disorders on the course of bronchial asthma. The Bulletin of Physiology and Pathology of Respiration. 2014; 52: 29–33. (In Russ.)
8. Pertseva T.A., Gashinova E.Yu., Guba Yu.V. Psychological disorders in patients with bronchial obstruction syndrome. Pulmonology. 2013; 2: 81–84. (In Russ.)

9. Garcia-Sanchez D., Darssan D., Lawler S.P. et al. Asthma and anxiety development in Australian children and adolescents. *Pediatr Allergy Immunol.* 2023 Mar; 34 (3): e13941. <https://doi.org/10.1111/pai.13941>.
10. Mokasheva E.N. Anxiety-depressive disorders in pulmonological pathology. *Smolensk medical Almanac.* 2022; 1 (1): 218–222. (In Russ.)
11. Bogovin L.V. Psychosomatic interactions in patients with bronchial asthma (literature review). *Bulletin of physiology and pathology of respiration.* 2010; 37: 65–71. (In Russ.)
12. Dudeney J., Sharpe L., Jaffe A. et al. Anxiety in youth with asthma: A meta-analysis. *Pediatr Pulmonol.* 2017 Sep; 52 (9): 1121–1129. <https://doi.org/10.1002/ppul.23689>.
13. Ye G., Baldwin D.S., Hou R. Anxiety in asthma: a systematic review and metaanalysis. *Psychol Med.* 2021; 51 (1): 11–20. doi: 10.1017/S0033291720005097.
14. Zhu Z., Zhu X., Liu C.I., et al. Shared genetics of asthma and mental health disorders: a large-scale genome-wide cross-trait analysis. *Eur Respir J.* 2019; 54 (6): 1901507. doi: 10.1183/13993003.01507-2019.
15. Ivanyuta M.V., Krasnov V.N. Depression and anxiety disorders in patients with bronchial asthma. *Psychiatry and psychopharmacotherapy.* 2025; 3: 39–45. doi: 10.62202/2075-1761-2025-27-3-39-45. (In Russ.)
16. Touilloux B., Strippoli C.A., Lenoir A. et al. Associations of Depressive and Anxiety Disorders with Pulmonary Disorders in the Community: The PneumoLaus and PsyCoLaus Studies. *Respiration.* 2024; 103 (8): 503–512. <https://doi.org/10.1159/000537918>.
17. Krasnov V.N., Paleev N.R., Martynova N.V. and others. Affective spectrum disorders in bronchial asthma and their therapeutic correction. *Psychiatry.* 2010; 4 (55): 34–38. (In Russ.)
18. Kutashov V.A., Popov D.V. Features of the course of anxiety-depressive disorders in patients with bronchial asthma. 15th Interregional Scientific and Practical Conference “Topical issues of Psychiatry, Narcology and medical Psychology”, Voronezh. 2013: 72–75. (In Russ.)
19. 19. Fleischer N.J., Gosch E., Roberts M.B. et al. Asthma and anxiety in children and adolescents: characteristics and treatment outcomes. *J Asthma.* 2024 May; 61(5): 396–404. <https://doi.org/10.1080/02770903.2023.2280906>.
20. Griffiths D., Giancola L.M., Welsh K. et al. Asthma control and psychological health in pediatric severe asthma. *Pediatr Pulmonol.* 2021 Jan; 56 (1): 42–48. <https://doi.org/10.1002/ppul.25120>.
21. Batarshev A.V. Basic psychological properties and self-determination of personality. A practical guide to psychological diagnosis. St. Petersburg: Speech, 2005. — 208 p. (In Russ.)
22. Clinical guidelines “Generalized anxiety disorder”, approved by Ministry of Health of Russia (Russian Society of Psychiatrists), revision. 2021. — 84 p.
23. Lugachev B.I., Beloglazov V.A., Verbenko V.A. Psychopharmacological correction of anxiety disorders in complex therapy of patients with bronchial asthma. *Crimean therapeutic Journal.* 2020; 1: 71–77.

ЛИТЕРАТУРА

24. Национальная программа «Бронхиальная астма у детей. Стратегия лечения и профилактика». (7-е издание, перераб. и доп.). Российское респираторное общество. Москва: МедКом — Про, 2025. — 294 с.
25. Бронхиальная астма. Клинические рекомендации. 2024; 199 с. URL: <https://diseases.medelement.com/disease/%D0%B1%D1%80%D0%BE%D0%BD%D1%85%D0%B8%D0%B0%D0%BB%D1%8C%D0%BD%D0%B0%D1%8F-%D0%B0%D1%81%D1%82%D0%BC%D0%B0-%D0%BA%D0%BF-%D1%80%D1%84-2024/18317> (дата обращения — 04.08.2025).
26. Намазова-Баранова Л.С. Аллергия у детей: от теории к практике. Москва: ПедиатрЪ, 2011. — 668 с.
27. Global Strategy for Asthma Management and Prevention. Updated May 2024. https://ginasthma.org/wp-content/uploads/2024/05/GINA-2024-Strategy-Report-24_05_22_WMS.pdf.
28. Вёрткин А.Л., Зайратьянц О.В., Кебина А.Л., Шамуилова М.М., Кнорринг Г.Ю. Современное понимание коморбидности и подходы к формулированию диагноза коморбидных пациентов. *Лечащий Врач.* 2024; 6 (27): 64–70. <https://doi.org/10.51793/OS.2024.27.6.009>.
29. Моногарова Н.Е., Бойко Е.Ю., Бородий К.Н. и др. Тревожно-депрессивные расстройства у больных бронхиальной астмой при наличии коморбидной патологии. *Медико-социальные проблемы семьи.* 2022; 27: 53–58.
30. Боговин Л.В., Отраднава А.А., Монахова В.В. и др. Влияние тревожно-депрессивных расстройств на течение бронхиальной астмы. *Бюллетень физиологии и патологии дыхания.* 2014; 52: 29–33.

31. Перцева Т.А., Гашинова Е.Ю., Губа Ю.В. Психологические расстройства у пациентов с синдромом бронхиальной обструкции. Пульмонология. 2013; 2: 81–84.
32. Garcia-Sanchez D., Darssan D., Lawler S.P. et al. Asthma and anxiety development in Australian children and adolescents. *Pediatr Allergy Immunol.* 2023 Mar; 34 (3): e13941. <https://doi.org/10.1111/pai.13941>.
33. Мокашева Е.Н. Тревожно-депрессивные расстройства при пульмонологической патологии. Смоленский медицинский альманах. 2022; 1 (1): 218–222.
34. Боговин Л.В. Психосоматические взаимодействия у больных бронхиальной астмой (обзор литературы). Бюллетень физиологии и патологии дыхания. 2010; 37: 65–71.
35. Dudeney J., Sharpe L., Jaffe A. et al. Anxiety in youth with asthma: a meta-analysis. *Pediatr Pulmonol.* 2017 Sep; 52 (9): 1121–1129. <https://doi.org/10.1002/ppul.23689>.
36. Ye G., Baldwin D.S., Hou R. Anxiety in asthma: a systematic review and metaanalysis. *Psychol Med.* 2021; 51 (1): 11–20. doi: 10.1017/S0033291720005097.
37. Zhu Z., Zhu X., Liu C.I., et al. Shared genetics of asthma and mental health disorders: a large-scale genome-wide cross-trait analysis. *Eur Respir J.* 2019; 54 (6): 1901507. doi: 10.1183/13993003.01507-2019.
38. Иванюта М.В., Краснов В.Н. Депрессия и тревожные расстройства у больных бронхиальной астмой. Психиатрия и психофармакотерапия. 2025; 3: 39–45. doi: 10.62202/2075-1761-2025-27-3-39-45.
39. Touilloux B., Strippoli C.A., Lenoir A. et al. Associations of Depressive and Anxiety Disorders with Pulmonary Disorders in the Community: The PneumoLaus and PsyCoLaus Studies. *Respiration.* 2024; 103 (8): 503–512. <https://doi.org/10.1159/000537918>.
40. Краснов В.Н., Палеев Н.Р., Мартынова Н.В. и др. Расстройства аффективного спектра при бронхиальной астме и их терапевтическая коррекция. Психиатрия. 2010; 4 (55): 34–38.
41. Куташов В.А., Попов Д.В. Особенности течения тревожно-депрессивных расстройств у больных бронхиальной астмой. 15-я межрегиональная научно-практическая конференция «Актуальные вопросы психиатрии, наркологии и медицинской психологии», Воронеж. 2013: 72–75.
42. Fleischer N.J., Gosch E., Roberts M.B. et al. Asthma and anxiety in children and adolescents: characteristics and treatment outcomes. *J Asthma.* 2024 May; 61 (5): 396–404. <https://doi.org/10.1080/02770903.2023.2280906>.
43. Griffiths D., Giancola L.M., Welsh K. et al. Asthma control and psychological health in pediatric severe asthma. *Pediatr Pulmonol.* 2021 Jan; 56 (1): 42–48. <https://doi.org/10.1002/ppul.25120>.
44. Батаршев А.В. Базовые психологические свойства и самоопределение личности. Практическое руководство по психологической диагностике. СПб.: Речь, 2005. — 208 с.
45. Клинические рекомендации «Генерализованное тревожное расстройство», утв. Минздравом России (Российское общество психиатров), пересмотр. 2021. — 84 с.
46. Лугачев Б.И., Белоглазов В.А., Вербенко В.А. Психофармакологическая коррекция тревожных расстройств в комплексной терапии пациентов с бронхиальной астмой. Крымский терапевтический журнал. 2020; 1: 71–77.

FUNDING SOURCES

This study was not sponsored.

ИСТОЧНИКИ ФИНАНСИРОВАНИЯ

Исследование проводилось без участия спонсоров.

THE AUTHORS' CONTRIBUTION TO THE WORK

Rezeda M. Fayzullina — patient examination, treatment, counseling, manuscript editing and final approval of the manuscript.

Natalia V. Samigullina — patient examination and treatment, collection of clinical data and manuscript writing.

Vitaly V. Viktorov — supervisory oversight of the planning and implementation of the research activities.

Rita R. Gafurova — literature review on the topic of the article.

ВКЛАД АВТОРОВ В РАБОТУ

Файзуллина Р. М. — обследование, лечение, консультирование пациента, редактирование текста, утверждение рукописи.

Самигуллина Н. В. — обследование и лечение пациента, сбор клинического материала, написание рукописи.

Викторов В. В. — контроль руководства за планированием и проведением научной деятельности.

Гафурова Р. Р. — обзор публикаций по теме статьи.

CONSENT FOR PUBLICATION

Written voluntary informed consent has been obtained from the patient's parents to publish the description of the clinical case, as well as to use its clinical and medical data (examination results, observation and therapy) exclusively for scientific purposes.

ИНФОРМИРОВАННОЕ СОГЛАСИЕ НА ПУБЛИКАЦИЮ

От родителей пациента получено письменное добровольное информированное согласие на публикацию описания клинического случая, а также на использование его клинических и медицинских данных (результатов обследования, наблюдения и терапии) исключительно в научных целях.