

5. Skibchik VA, Bablyak SD. Syndrom ctarechoi astenii (frailty) – suchasna problema herontolohichnoyi medytsyny. 2018;4(60):12–17. doi: 10.22141/2224-1485.4.60.2018.141770 [in Ukrainian]
6. Smetcko DO, Goncharova NM, Teslenko SM, Svirepo PV, Sivozhelizov AV, Sikal MO, et al. Suchasni pohliady shcho do likuvannia perforatyvnykh piloroduodenalnykh vyrazok. Kharkiv surgical school. 2012;2(107):33–6. doi: <https://doi.org/10.37699/2308-7005.2.2021.06>. [in Ukrainian]
7. Kasian VV, Cherkun OYu, Tkachenko OA, Sheiko VD. Efficiency of drainage of ascit-peritonitis in different difficulty of acute pancreatitis. World of medicine and biology. 2020;1(71):69–72. doi: 10.26724/2079-8334-2020-1-71-69-72.
8. Kharchenko AV, Yelinska AM, Shepitko VI, Stetsuk EV. Chronic periodontitis in patients with chronic duodenal ulcer. World of medicine and biology. 2022;1(79):232–236. doi:10.26724/2079-8334-2022-1-79-232-236.
9. Ngulube A, Godfrey I, Muguti, Edwin GM. Validation of POSSUM, P-POSSUM and the surgical risk scale in major general surgical operations in Harare: a prospective observational study. Annals of Medicine and Surgery. 2019; 41:33–39. <https://doi.org/10.1016/j.amsu.2019.03.007>.
10. Sunyoung K, Miji K, Hee-Won J, Chang WW. Development of a frailty phenotype questionnaire for use in screening community-dwelling older adults. Journal of the American Medical Directors Association. 2020;21(5):660–664. <https://doi.org/10.1016/j.jamda.2019.08.028>.
11. Faller JW, Pereira DN, Souza S, Nampo FK, Orlandi FdS, Matumoto S. Instruments for the detection of frailty syndrome in older adults: A systematic review. PLOS One. 2019;14(4):55–64. doi: 10.1371/journal.pone.0216166.
12. Weledij EP. An Overview of Gastroduodenal Perforation. Front Surg. 2020;9(7):5. doi: <https://doi.org/10.3389/fsurg.2020.573901>.

Стаття надійшла 14.12.2022 р.

DOI 10.26724/2079-8334-2023-4-86-44-48

UDC [616-053.5+616.211]:616.314-089.23

I.V. Dedykova, S.A. Shnaider<sup>1</sup>, O.V. Andrieiev, D.O. Kibalchich<sup>1</sup>  
Odesa National Medical University, Odesa, <sup>1</sup>State Establishment “The Institute of stomatology  
and maxilla-facial surgery National academy of medical sciences of Ukraine”, Odesa

## OPTIMIZATION OF TREATMENT OF PATIENTS WITH DENTOALVEOLAR ANOMALIES DEPENDING ON THE CLINICAL AND FUNCTIONAL CHARACTERISTICS OF THE NASOPHARYNGEAL ZONE

e-mail: irshka@ukr.net

The purpose of the study was to improve the results and reduce the treatment time for children with dentoalveolar anomalies with a constantly open mouth. The study involved 69 boys and 51 girls aged 5 to 14 years, divided into two groups (84 patients – main group; 36 patients – comparison group). Adenotomy, in all cases, preceded orthodontic treatment. 82.14 % of patients in the main group showed positive results in the form of a correct bite one year after the end of orthodontic treatment. At the same time, only 36.11 % of patients in the comparison group showed the same treatment results. It also turned out that the factor of deterioration of treatment results is a combination of several reasons on the part of the nasopharyngeal zone in a particular patient (allergic rhinitis, displacement of the nasal membrane), which complicates the course of the disease with less guaranteed correction of bite pathology (42.11 %).

**Key words:** dentoalveolar abnormalities, mouth breathing, impaired nasal respiratory function, chronic nasopharyngitis, pharyngeal tonsil hypertrophy, displacement of the nasal septum, allergic rhinitis.

І.В. Дєдикова, С.А. Шнайдер, О.В. Андрєєв, Д.О. Кібальчич

## ОПТИМІЗАЦІЯ ЛІКУВАННЯ ПАЦІЄНТІВ ІЗ ЗУБОЩЕЛЕПНИМИ АНОМАЛІЯМИ В ЗАЛЕЖНОСТІ ВІД КЛІНІКО-ФУНКЦІОНАЛЬНИХ ОСОБЛИВОСТЕЙ НАЗОФАРИНГЕАЛЬНОЇ ЗОНИ

Метою цієї роботи було покращення результатів та скорочення термінів лікування дітей з зубощелепними аномаліями з постійно відкритим ротом. У дослідженні взяли участь 69 хлопчиків та 51 дівчинка віком від 5 до 14 років, яких було поділено на дві групи (84 пацієнта – основна група; 36 пацієнтів – група порівняння). Аденотомія у всіх випадках передувала ортодонтичному лікуванню. 82,14 % пацієнтів основної групи через рік після закінчення ортодонтичного лікування фіксувалися позитивні результати у вигляді правильного прикусу. В той же час тільки 36,11 % пацієнтів групи порівняння відмічалися такі ж результати лікування. Також виявилось, що фактором погіршення результатів лікування є поєднання декількох причин з боку назофарингеальної зони у конкретного пацієнта (алергічний риніт, зміщення носової перетинки), що ускладнює перебіг хвороби з менш гарантованим усуненням патології прикусу (42,11 %).

**Ключові слова:** зубощелепні аномалії, ротове дихання, порушення дихальної функції носа, хронічний назофарингіт, гіпертрофія глоткового мигдалика, зміщення носової перетинки, алергічний риніт.

*The work is a fragment of the research project “Development of differential diagnostic criteria and etiopathogenetic methods of treatment of allergic, inflammatory and tumor diseases of the upper respiratory tract and ear”, state registration No. 0121U100260.*

The prevalence of orthodontic pathologies in Ukraine is quite significant and ranges from 67.8 % to 87.5 % in children and from 64.3 % to 84.3 % in adolescents and adults [3, 4, 8], and among some categories, such as children with hearing loss, it is 100 % [9]. Reduced airway patency contributes to malocclusion and temporomandibular dysfunction [11, 13]. Mouth breathing affects respiratory tract and

facial skeleton development, causing maxillary and upper jaw narrowing, gothic palate formation, and tension in buccal muscles, impacting dental arches [2, 10, 12].

The main etiologic factor in the formation of narrowing of the dentition is a violation of the respiratory function of the nose and, as a result, the need to breathe through the mouth. Moreover, the mouth can be constantly open both during persistent nasopharyngeal obstruction (PNO) and after the elimination of the cause of insufficient nasal breathing in the form of an acquired habit of breathing through the mouth or the habit of keeping the mouth open (HOKMO) during nasal breathing. The cause of nasopharyngeal obstruction can be eliminated with or without the formation of HOKMO due to natural mechanisms. An example of a natural mechanism is the age-related involution of the nasopharyngeal tonsil in the period of 8–12 years from birth [1].

Causes that provoke the appearance of purely mouth breathing (MB) in case of persistent impairment of nasal respiratory function: chronic nasopharyngitis (CNF) with pharyngeal tonsil hypertrophy (PTH) and palatine tonsil hypertrophy (PLTH), allergic and vasomotor rhinitis, nasal septal displacement (NSD), chronic rhinosinusitis with polyps (CRPSP), congenital unilateral choanal atresia (CUCA) [12]. A factor in the occurrence of dentoalveolar anomalies (DA) in PNO is a combination of several causes on the part of the nasopharyngeal zone in a particular patient, which complicates the course of the disease with a more guaranteed development of DA. Moreover, PTH is the most common cause of PNO in the age group of 6–12 years, and allergic rhinitis (AR) is the leader accompanying the occurrence of DA in PNO in the category of 13–18 years, but is almost never a mono-cause of this pathology [6].

The pharyngeal tonsil, prominent in childhood and often atrophied in adults, is a key immune organ in the nasopharynx. Its significance in treating diseases like DA, especially in children 3–10 years old, necessitates careful assessment by an otorhinolaryngologist [1].

Treatment of otorhinolaryngologic problems leading to DA can be surgical and conservative. Thus, allergic and vasomotor rhinitis are treated conservatively in children and adolescents; NSD, PTH, PLTH and CUCA are mostly surgically treated; CRPSP is usually combined.

The situation forces scientists to propose a more detailed consideration of the differential diagnosis of otorhinolaryngologic pathology for purely MB or HOKMO to improve treatment and prognosis for the patient, especially in the context of a time-limited growth period.

**The purpose** of the study was to improve the results and shorten the treatment time for children with dentoalveolar anomalies with a constantly open mouth.

**Materials and methods.** The study involved 69 boys and 51 girls aged 5 to 14 years ( $9 \pm 1.5$ ). 84 patients in the main group had DA and CNF with PTH grade 2–3 with persistent nasal breathing impairment and a constantly open mouth. 36 patients in the comparison group had DA and CNF with PTH 2–3 degrees without persistent nasal breathing impairment (according to our study), a constantly open mouth (i.e., HOKMO) and persistent secretory otitis media. The study groups were representative in terms of gender and age. Patients with combined otolaryngologic diagnoses in the form of concomitant AR (with complete pharmacologic control of symptoms) or minor NSD were eligible for the study. Exclusion criteria were structural pathology of the nasal cavity in the form of severe NSD or CRPSP. Patients with combined otolaryngologic diagnoses in the form of concomitant AR (with complete pharmacologic control of symptoms) or minor NSD were eligible for the study. Exclusion criteria were structural pathology of the nasal cavity in the form of severe NSD or CRPSP. For the diagnosis and observation during conservative treatment (nasal shower, topical steroids, mucosal vaccines, depending on the etiologic factor of chronic nasopharyngitis with PTH), our study used anamnesis, endoscopic examination of ENT organs (with video recording and assessment of not only the size of the pharyngeal tonsil, but also its ratio to the vestibule and cochlea of the auditory tubes, as well as assessment of the size of the free space between the posterior edge of the lower wall of the nasal cavity and the pharyngeal tonsil during nasal inhalation) rhinomanometry, consultation of an orthodontist (with teleradiography, panoramic radiography of the jaws, palatal suture radiography, hand radiography, cone beam computed tomography (CBCT) – depending on the needs of each specific orthodontic pathology). Endoscopic examination methods were performed with the help of “Stryker” equipment (USA) using a 0° F2.7x174 sinuscope.

Patients of both groups, at a certain stage of treatment, had indications for surgical treatment – adenotomy. The indications for surgical treatment in the main group were persistent mouth breathing (despite conservative treatment) against the background of vertical hypertrophy of the pharyngeal tonsil with the absence of a gap between the tonsil and the vomer, the size of the free lower part of the choana during nasal inspiration less than 5 mm when the endoscope was positioned at the level of the posterior end of the inferior nasal concha. The indices for surgical treatment in the control group were persistent secretory otitis media that did not respond to conservative treatment for 3 months or recurrent secretory otitis media for 1 year and hypertrophy of the pharyngeal tonsil in the horizontal direction with overlapping of the cochlea of the auditory tube, which was detected during video endoscopy. All patients underwent a shaver adenotomy under endoscopic control with or without tympanic membrane bypass under general

anesthesia. Adenotomy in all cases preceded orthodontic treatment. A positive result of DA correction after adenotomy was considered to be the establishment of a physiological bite or close to it 1 year after the end of orthodontic treatment. The period of two-stage treatment (otorhinolaryngological and orthodontic) and follow-up was 2 to 3 years.

The results were processed by variational statistical methods of analysis using the Microsoft Office Excel 2016 software. Statistical processing of the experimental study results was carried out by the methods of variation analysis using the Student's test. The difference was considered statistically significant at  $p < 0.01$  [7]

**Results of the study and their discussion.** The outcomes of the two-stage treatment process, which varied based on the specific diagnosis of each individual patient, are comprehensively detailed and tabulated in Table 1. This table provides an in-depth breakdown of the treatment effectiveness, categorizing patients according to their unique medical diagnoses and illustrating the differential response to the treatment across these varied diagnostic categories.

Table 1

**Positive results of DA treatment depending on the diagnosis of the otorhinolaryngologist**

| PTH          | PTH+AR      | PTH+NSD      | PTH+AR+NSD  | Control group |
|--------------|-------------|--------------|-------------|---------------|
| n=24         | n=27        | n=14         | n=19        | n=36          |
| 23 (95.83 %) | 26 (96.3 %) | 12 (85.71 %) | 8 (42.11 %) | 13 (36.11 %)  |

In our comprehensive study, we examined the orthodontic treatment outcomes of a main group consisting of 84 patients. The findings revealed a remarkable level of success, with 82.14 % (69 patients) achieving a correct bite just one year after completing their orthodontic treatment. This high percentage of successful treatments serves as a testament to the efficacy of the orthodontic procedures employed. It demonstrates that when correctly applied, orthodontic treatments can significantly and positively affect dental alignment and bite correction within a relatively short period.

Comparatively, when we assessed the results of a control group comprising 36 patients, the success rate was markedly lower. Only 36.11 % of these patients (13 out of 36) showed similar positive outcomes in achieving a correct bite post-treatment.

Our comprehensive analysis of treatment outcomes, segmented by specific medical diagnoses, revealed intricate patterns in patient response to treatments. Focusing initially on patients diagnosed exclusively with pharyngeal tonsil hypertrophy, we noted a highly encouraging success rate of 95.83 % (23 out of 24 patients). This finding is significant as it emphasizes the efficacy of treatments specifically tailored for PTH without the interference of other complicating factors.

When we examined the group suffering from both PTH and allergic rhinitis, the success rate was marginally higher, standing at 96.3 % among 27 patients. This result is particularly noteworthy as it suggests that the simultaneous presence of AR alongside PTH does not detrimentally affect the treatment outcomes. Instead, it may imply that the combined medical approaches targeting both conditions can work synergistically, enhancing the overall effectiveness of the treatment plan.

The picture began to change with the inclusion of nasal septum deviation in the diagnostic mix. In patients diagnosed with both PTH and NSD, the success rate dipped to 85.71 % among 14 patients. This reduction, compared to the higher success rates observed in PTH-only cases, signals that NSD, even in less severe forms, can introduce complexities in the treatment of dental anomalies. However, our statistical analysis indicated that this impact, although significant, did not reach a level of critical determinance in the overall success of DA correction, as evidenced by a p-value greater than 0.05.

The treatment outcomes became considerably more challenging when dealing with patients diagnosed with a combination of PTH, AR, and NSD. In this group, there was a pronounced drop in the success rate to 42.11 % among 19 patients, only slightly surpassing the control group's success rate of 36.11 %. This substantial decrease in treatment efficacy underscores the difficulties inherent in managing cases with multiple overlapping medical conditions. The statistical significance of this finding, with a p-value exceeding 0.01, strongly points to the necessity for more intricate and individualized treatment strategies for patients presenting with this triad of conditions.

Furthermore, our findings suggest that the interaction between these conditions – PTH, AR, and NSD – can create a complex medical scenario where the usual treatment protocols may not be as effective. This complexity necessitates a re-evaluation of current treatment methodologies, possibly advocating for a more integrated approach that addresses each condition's unique impact on DA. The lower success rate in this specific group also raises questions about the potential need for developing new therapeutic interventions or modifying existing ones to better cater to the nuanced needs of patients with multiple concurrent diagnoses.

In conclusion, the comprehensive findings of our research offer crucial insights into the complex and multifaceted nature of treating dental anomalies in patients who present with a combination of

conditions like pharyngeal tonsil hypertrophy, allergic rhinitis, and nasal septum deviation. Our study underscores the critical importance of adopting a highly personalized and nuanced treatment approach. This approach necessitates a thorough consideration of each patient's unique medical history and current health profile, ensuring that the treatment plan is precisely tailored to address the specific combination of conditions they present with. By doing so, the study suggests that treatment outcomes can be significantly optimized, leading to more effective management of DA in these complex cases.

In our control group, we observed lower-than-expected results in terms of DA correction, especially in patients with a consistently open mouth. This outcome was not surprising, given that the indications for adenotomy in this group did not address persistent nasal breathing disorders associated with HOKMO. This observation is crucial as it highlights the need for a more targeted approach in treating DA, particularly when it coexists with HOKMO. The considerable disparity in the outcomes between the two-stage treatment of the main and control groups indicates that the presence of the pharyngeal tonsil in patients with DA and a constantly open mouth is not a definitive cause of malocclusion. This insight is significant, suggesting that each case of DA accompanied by HOKMO warrants a thorough examination of airway and pharyngeal pathology. Utilizing modern diagnostic tools that focus on function rather than just the structure and size of the pharyngeal tonsil is essential [4–7]. The otorhinolaryngologic follow-up in these patients is of paramount importance. It allows for an accurate differentiation between MB and HOKMO. This differentiation is crucial and should be made before considering surgical treatment, particularly adenotomy. The need for such differentiation becomes even more pronounced when considering the broader context of craniofacial development. This includes factors like brain growth and development, the development of visual pathways, speech and swallowing mechanisms, muscle development, and the development and eruption of teeth [14]. These factors can influence the treatment approach and outcomes significantly, underlining the importance of a comprehensive and individualized treatment plan. Furthermore, improving treatment outcomes in DA patients requires a careful balance. This involves not only enhancing the effectiveness of treatments like adenotomy but also minimizing their potential iatrogenic effects, especially when performed under general anesthesia. The focus should not merely be on the fact of an open mouth but should extend to ensuring the sufficiency of nasal breathing. This approach is critical, particularly in light of the pre-evolutionary state of the pharyngeal tonsil in DA patients. It implies that treatment decisions should not be based solely on the structural aspects of the pharyngeal tonsil but should also consider its functional role in the patient's overall craniofacial development and respiratory health. In conclusion, our findings suggest that a holistic approach is necessary when addressing DA in patients, particularly those with HOKMO. This approach should integrate advanced diagnostic methods, a thorough understanding of the patient's craniofacial development, and a careful consideration of the functional aspects of the pharyngeal tonsil. Such an approach can lead to more effective, individualized treatments, ensuring better outcomes for patients while minimizing potential complications from procedures like adenotomy.

### Conclusions

1. Improvement of nasal breathing in children with HOKMO in DA leads to positive results of orthodontic treatment in only 36.11 % of cases, in contrast to children with MB against PNO in DA, in whom the treatment efficacy reaches 82.14 %.
2. 63.89 % of patients with DA in the setting of HOKMO risk being unnecessarily operated on and prolonging the treatment period in the conditions of a time-limited growth period, unless they have other indices for adenotomy.
3. A factor in the deterioration of PNO treatment results in MB with DA is the combination of several causes on the part of the nasopharyngeal zone in a particular patient, which complicates the course of the disease with less guaranteed elimination of malocclusion pathology: thus, in the combination of PTH, AR and even minor NSD, the percentage of positive treatment results is 42.11 %, while in patients with PTH alone with DA – 95.83 %.

### References

1. Bezshapochnyy SB, Gasyuk YuA, Smeyanov YEV. Giperplaziya i vospaleniye glotochnoy mindaliny. Kyiv: Logos; 2017. [in Russian]
2. Vysheymyrska TA. Vzayemozvyazok vynyknennya sahitalnykh anomalii prykusy z porushennyam nosovoho dykhannya. Actual Dentistry. 2019; 5:92–95. doi: 10.33295/1992-576X-2019-5-92 [in Ukrainian]
3. Melnyk VS, Zombor KV, Bilyshchuk LM, Melnyk SV. Poshyrenist zuboshchelepnykh anomalii u ditey doshkilnoho viku. Innovatsiyi v stomatolohiyi. 2023; 1:52–57. doi: 10.35220/2523-420X/2023.1.9 [in Ukrainian]
4. Nomerovska OE, Karman AA, Gorokhivsky VN, Diieva TV, Diiev EV, Shnaider SA. Pro neobkhdnist provedennya naukovykh doslidzhen tryvalosti suchasnykh vydiv ortodontychnoho likuvannya zuboshchelepnykh anomalii ta deformatsiy. Innovatsiyi v stomatolohiyi. 2022; 1:32–38. doi: 10.35220/2523-420X/2022.1.5 [in Ukrainian]
5. Nosova YaV, Avrunin OH, Shushlyapyna NO, Ibrahim Yunuss Abdelkhamid, Alofy Bender Aly Salekh. Diahnostychna znachymist metodiv vyznachennya porushen nosovoho dykhannya. Biomedychni opto-elektronni systemy ta prylady. 2021;41(1):47–58. doi: 10.31649/1681-7893-2021-41-1-47-58 [in Ukrainian]
6. Pukhlyk SM, Diedykova IV, Kibalchich DO. Vyvchennya vplyvu variantiv stiykoyi nazofarynhealnoyi obstruktsiyi u ditey ta pidlitkiv z zuboshchelepnyimi anomaliiamy na vybir rezul'tatyvnoyi taktyky likuvannya. Visnyk stomatolohiyi. 2023;123(2):128–133. doi: 10.35220/2078-8916-2023-48-2.23 [in Ukrainian]

7. Repetska OM. Dynamika pokaznykiv bilkovoho obminu rotovoyi ridyny pislya kompleksnoho likuvannya heneralizovanoho parodontytu u osib molodoho viku na tli pervynnoho hipotyreozu. JMBS. 2022;7(4):95–99. doi: 10.26693/jmbs07.04.095 [in Ukrainian]
8. Smolyar NI, Lesytskyi MY. Poshyrenist anomalii zubnykh ryadiv u ditey 6–16 rokiv. Klinichna stomatolohiya. 2021; 2:63–70. doi: 10.11603/2311-9624.2021.2.12044 [in Ukrainian]
9. Sokolohorska-Nykina YuK, Kuroyedova VD. Rezultaty kompleksnoho stomatolohichnoho obstezhennya porozhnyny rota ditey z vadamy slukhu. Aktualni problemy suchasnoyi medytsyny. 2017;17(3):246–249. [in Ukrainian]
10. Stasiuk OA, Vyzhenko EE, Sokolohorska-Nykina YuK, Kuroyedova VD. Vzayemozvyazok patolohiyi prykusu I-II klasu ta verkhnikh dykhalnykh shlyakhiv. Aktualni problemy suchasnoyi medytsyny. Actual Problems of the Modern Medicine: Bulletin of Ukrainian Medical Stomatological Academy. 2021;21(3):173–177. doi: 10.31718/2077-1096.21.3.173 [in Ukrainian]
11. Stasiuk OA. Vzayemozvyazok polozhennya holivok skronevonyzhnoshchelepnoho suhloba ta verkhnikh dykhalnykh shlyakhiv pry patolohiyi prykusu I-II klasu. Actual Problems of the Modern Medicine: Bulletin of Ukrainian Medical Stomatological Academy. 2022;22(2):48–52. doi: 10.31718/2077-1096.22.2.48 [in Ukrainian]
12. Farronato M, Lanteri V, Fama A, Maspero C. Correlation between Malocclusion and Allergic Rhinitis in Pediatric Patients: A Systematic Review. Children (Basel). 2020;7(12):260. doi: 10.3390/children7120260.
13. Kuroyedova VD, Vyzhenko YeYe, Stasiuk OA, Sokolohorska-Nykina Yu.K, Petrova AV. Cephalometric characteristics of skeletal forms of distal bite. World of Medicine and Biology. 2022;2(80):99–102. doi: 10.26724/2079-8334-2022-2-80-99-102
14. Manlove AE, Romeo G, Venugopalan SR. Craniofacial Growth: Current Theories and Influence on Management. Oral Maxillofac Surg Clin North Am. 2020;32(2):167–175. doi: 10.1016/j.coms.2020.01.007.

Стаття надійшла 16.12.2022 р.

DOI 10.26724/2079-8334-2023-4-86-48-52

UDC 626.517-056.52-085

Ya.O. Yemchenko, I.P. Kaydashev, K.Ye. Ishcheykin, O.V. Bezega, K.V. Vasylyeva, L.A. Bolotna  
Poltava Medical State University, Poltava, Kharkiv National Medical University, Kharkiv

## THE INFLUENCE OF OBESITY ON CLINICAL AND LABORATORY INDICATORS OF PSORIATIC DISEASE

e-mail: yanaumsa@ukr.net

Psoriasis is a chronic, inflammatory, systemic immune-mediated disease of a multifactorial nature in which genetic factors play a dominant role in development. Psoriasis is characterized by an accelerated proliferation of epidermocytes and a violation of their differentiation, immune reactions in the dermis and synovial membranes, an imbalance between pro- and anti-inflammatory cytokines, chemokines, and frequent pathological changes in the musculoskeletal system. A close connection between psoriasis and obesity has recently been proven. It is known that in the pathogenesis of psoriasis and obesity, inflammatory processes play a decisive role, which form a vicious circle at the level of the immune system, which must be broken for the successful treatment of these diseases. The results of our study established that dietary obesity in patients with psoriasis leads to metabolic disorders, complicates the course of psoriasis, affects the deterioration of the dermatological index of the quality of life of patients, leads to the ineffectiveness of standard treatment and frequent relapses of psoriatic disease.

**Key words:** psoriasis, systemic inflammation, dyslipidemia, insulin resistance

## Я.О. Ємченко, І.П. Кайдашев, К.Є. Іщейкін, О.В. Безега, К.В. Васильєва, Л.А. Болотна ВПЛИВ АЛІМЕНТАРНОГО ОЖИРІННЯ НА КЛІНІКО-ЛАБОРАТОРНІ ПОКАЗНИКИ ПСОРІАТИЧНОЇ ХВОРОБИ

Псоріаз – хронічне, запальне, системне імуніопосередковане захворювання мультифакторіальної природи, за якого домінуюче значення в розвитку відіграють генетичні фактори. Псоріаз характеризується прискороною проліферацією епідермоцитів і порушенням їх диференціювання, імунними реакціями в дермі і синовіальних оболонках, дисбалансом між про- і протизапальними цитокінами, хемокінами, а також частими патологічними змінами опорно-рухового апарату. Нещодавно було доведено тісний зв'язок між псоріазом і ожирінням. Відомо, що в патогенезі псоріазу та ожиріння вирішальну роль відіграють запальні процеси, які утворюють порочне коло на рівні імунної системи, що необхідно розірвати для успішного лікування цих захворювань. Результати проведеного нами дослідження встановили, що аліментарне ожиріння у хворих на псоріаз призводить до метаболічних порушень, ускладнює перебіг псоріазу, впливає на погіршення дерматологічного індексу якості життя пацієнтів, призводить до неефективності стандартного лікування та частих рецидивів псоріатичної хвороби.

**Ключові слова:** псоріаз, системне запалення, дисліпідемія, інсулінорезистентність

*The study is a fragment of the research project “Development of improved methods of diagnosis and complex treatment of chronic dermatoses and infections, which are mainly sexually transmitted, taking into account the determination of additional factors significant in the pathogenesis of these diseases”, state registration No. 0119U000272.*

Psoriasis is a chronic, inflammatory, systemic immune-mediated disease of a multifactorial nature, in which genetic factors play a dominant role in its development. Psoriasis is characterised by accelerated proliferation of epidermocytes and impaired differentiation, immune reactions in the dermis and synovial membranes, imbalance between pro- and anti-inflammatory cytokines, chemokines, and frequent pathological changes in the musculoskeletal system [14].