

**Abstract N°: 1606****Achieving the desired results in acne therapy: difficulties and their solutions**

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**Introduction & Objectives:** Nowadays dermatologist's arsenal contains numerous pharmacological agents with high efficiency, but achieving the desired results in acne therapy is still not the easiest problem.

The aim - to study the modern possibilities of medical and cosmetological correction of acne manifestations based on the analysis of foreign and domestic sources.

**Materials & Methods:** We conducted a review with further analysis of foreign and domestic sources, domestic, European and American recommendations for the treatment of acne. Publications were searched through the National Center of Biotechnology Information, PubMed, StudMed and GoogleBooks resources.

**Results:** The undisputed leader in the treatment of acne, taking into account the frequency of prescriptions, effectiveness, active substances as mono- and combined forms, lack of systemic influence, are topical medicines.

Among them, benzoyl peroxide, antibiotics and retinoids are prescribed more often than others. Studies have shown higher effectiveness of combined fixed forms in comparison to the use of their components separately. Thus, the use of a combination of clindamycin phosphate 1% with BPO 5% in the form of a gel showed higher efficiency and a lower frequency of antibiotic resistance development compared to 1% clindamycin as monotherapy. In turn, the combination of adapalene 0.1% and BPO 2.5% showed better tolerability and less pronounced local side effects of retinoid, as well as an effective reduction of inflammatory and non-inflammatory elements of the rash compared to the use of these components separately.

The combination of stabilized and solubilized 0.025% tretinoin and 1.2% clindamycin phosphate in the form of a gel showed a statistically significant advantage over the use of these components separately. A reduction in the total number of rash elements was recorded in 55% of patients who used this combination, while when using clindamycin - in 49%, tretinoin - in 50%. A more pronounced reduction in the number of non-inflammatory elements is noted (when using the combined drug by 51%, clindamycin - by 42.9%).

An important step in the optimization of acne therapy was also the appearance of new agents, among which sarecycline, which was created specifically for dermatological needs and is an antibiotic of the tetracycline group, studies on its use in the treatment of acne have shown high efficiency, good tolerance, it is used once a day for treatment of acne in adults and children aged 9 years and older. Worthy of attention is tazarotene, the first new retinoid molecule approved by the FDA in the last 20 years. The uniqueness of the molecule lies in its exclusive effect on RAR- $\gamma$ , widely distributed in the skin, the expression of which has not been detected in other organs (lungs, spleen, prostate, heart, kidneys, etc.), which allows safe use of this retinoid on large areas of the skin (back, chest).

**Conclusion:** As a result, groups of the most effective medical agents for acne therapy, features of their use in different forms and degrees of severity, possible side effects and factors that can provoke them, ways to minimize their occurrence without reducing effectiveness were identified.