

AKNEDE TOPIKAL RETİNOİDLER

4. Bölüm

Hülya SÜSLÜ¹

Ayşe Serap KARADAĞ²

ÖZET

Topikal retinoidler akne tedavisinin yapıtaşı olup hem ana tedavide hem de idame tedavide en önemli topikal tedavi seçeneğidir. Adapalen, tretinoin, izotretinoin, tazaroten ve trifaroten akne tedavisinde kullanılmaktadır. Akne etyopatogenezinde etkili olan foliküler keratinizasyon bozukluğunu düzenler, inflamasyonu, pigmentasyonu ve skarı azaltır. Kombine kullanımda benzoil peroksit ve topikal antibiyotiklerin foliküler penetrasyonunu artırır. Tedavinin erken döneminde eritem, kuruluk, kaşıntı ve batma gibi lokal yan etkiler kullanım güçlüğüne yol açabilir. İnflamatuvar ve noninflamatuvar akne lezyonlarda birinci basamak tedavi seçeneği olmasının yanısıra bakteriyal direnci artırma riski de olmadığından idame tedavide uzun süreli kullanıma uygundur.

Giriş

Retinoidler hem inflamatuvar hem de inflamatuvar olmayan akne lezyonlarının tedavisinde önemli rol oynayan retinolün (vitamin A) sentetik türevleridir (1). Akne tedavisi için kullanılan topikal formlar; tretinoin (all-trans retinoik asit), izotretinoin (13-cis retinoik asit), adapalen, tazaroten (asetilenik retinoid), trifaroten ve kozmetik preparatlarda kullanılan retinaldehit, retinol ve retinil esterlerdir (2) (Tablo 13).

¹ Uzm. Dr. Hülya SÜSLÜ, İstanbul Haseki Eğitim ve Araştırma Hastanesi Deri ve Zührevi Hastalıklar Bölümü hlyasuslu@gmail.com

² Doç. Dr. Ayşe Serap KARADAĞ, Memorial Ataşehir Hastanesi Dermatoloji Bölümü karadagaserap@gmail.com

Kaynaklar

1. Jones DA. The potential immunomodulatory effects of topical retinoids. *Dermatol Online J* 2005; 11 (1): 3.
2. Sorg O, Antille C, Kaya G, Saurat JH. Retinoids in cosmeceuticals. *Dermatol Ther.* 2006;19(5):289-96.
3. Bikowski JB. Mechanisms of the comedolytic and anti-inflammatory properties of topical retinoids. *J Drugs Dermatol* 2005; 4 (1): 41-7.
4. Kang S. The mechanism of action of topical retinoids. *Cutis* 2005; 75 (2 Suppl.): 10-3
5. Elder JT, Aström A, Pettersson U, Tavakkol A, Krust A, Kastner P, et al. Retinoic acid receptors and binding proteins in human skin. *J Invest Dermatol.* 1992;98(6 Suppl):36S-41S.
6. Chen S, Ostrowski J, Whiting G, Roalsvig T, Hammer L, Currier SJ, et al. Retinoic acid receptor gamma mediates topical retinoid efficacy and irritation in animal models. *J Invest Dermatol.* 1995;104(5):779-83.
7. Thielitz A, Sidou F, Gollnick H. Control of microcomedone formation throughout a maintenance treatment with adapalene gel, 0.1%. *J Eur Acad Dermatol Venereol* 2007; 21: 747-753.
8. Thielitz A, Helmdach M, Röpke EM, Gollnick H. Lipid analysis of follicular casts from cyanoacrylate strips as a new method for studying therapeutic effects of antiacne agents. *Br J Dermatol.* 2001;145(1):19-27.
9. Griffiths CE, Elder JT, Bernard BA, Rossio P, Cromie MA, Finkel LJ, et al. Comparison of CD271 (adapalene) and all-trans retinoic acid in human skin: dissociation of epidermal effects and CRABP-II mRNA expression. *J Invest Dermatol.* 1993;101(3):325-8.
10. Martin B, Meunier C, Montels D, Watts O. Chemical stability of adapalene and tretinoin when combined with benzoyl peroxide in presence and in absence of visible light and ultraviolet radiation. *Br J Dermatol.* 1998;139 Suppl 52:8-11.
11. Shroout B, Michel S. Pharmacology and chemistry of adapalene. *J Am Acad Dermatol* 1997; 36 (6 Pt 2): S96-103.
12. Griffiths CE, Elder JT, Bernard BA, Rossio P, Cromie MA, Finkel LJ, et al. Comparison of CD271 (adapalene) and all-trans retinoic acid in human skin: dissociation of epidermal effects and CRABP-II mRNA expression. *J Invest Dermatol.* 1993;101(3):325-8.
13. DiSepio D, Sutter M, Johnson AT, Chandraratna RA, Nagpal S. Identification of the AP1-antagonism domain of retinoic acid receptors. *Mol Cell Biol Res Commun* 1999; 1 (1): 7-13.
14. Aubert J, Piwnica D, Bertino B, Blanchet-Réthoré S, Carlavan I, Déret S, et al. Non-clinical and human pharmacology of the potent and selective topical retinoic acid receptor- γ agonist trifarotene. *Br J Dermatol.* 2018;179(2):442-456.
15. Saurat JH, Sorg O. Topical natural retinoids: the 'proligand-non-ligand'concept. *Dermatology* 1999; 199 Suppl. 1: 1-2.
16. Pechere M, Pechere JC, Siegenthaler G, Germanier L, Saurat JH. Antibacterial activity of retinaldehyde against *Propionibacterium acnes*. *Dermatology* 1999; 199 Suppl. 1: 29-31.

17. Gollnick H, Cunliffe W, Berson D, Dreno B, Finlay A, Leyden JJ, et al. Management of acne: a report from a Global Alliance to Improve Outcomes in Acne. *J Am Acad Dermatol*. 2003;49(1 Suppl): S1-37.
18. Thielitz A, Gollnick H. Topical retinoids in acne vulgaris: update on efficacy and safety. *Am J Clin Dermatol*. 2008;9(6):369-81. doi:
19. Laquieze S, Czernielewski J, Rueda MJ. Beneficial effect of a moisturizing cream as adjunctive treatment to oral İzotretinoin or topical tretinoin in the management of acne. *J Drugs Dermatol* 2006; 5 (10): 985-90.
20. Nighland M, Yusuf M, Wisniewski S, Huddleston K, Nyirady J. The effect of simulated solar UV irradiation on tretinoin in tretinoin gel microsphere 0.1% and tretinoin gel 0.025%. *Cutis* 2006; 77 (5): 313-6.
21. Elbaum DJ. Comparison of the stability of topical İzotretinoin and topical tretinoin and their efficacy in acne. *J Am Acad Dermatol* 1988; 19 (3): 486-91.
22. Bell KA, Brumfiel CM, Haidari W, Boger L. Trifarotene for the Treatment of Facial and Truncal Acne. *Ann Pharmacother*. 2021;55(1):111-116.
23. Krishnan G. Comparison of two concentrations of tretinoin solution in the topical treatment of acne vulgaris. *Practitioner* 1976; 216 (1291): 106-9.
24. Webster GF. Safety and efficacy of Tretin-X compared with Retin-A in patients with mild-to-severe acne vulgaris. *Skinmed* 2006; 5 (3): 114-8.
25. Jain S. Topical tretinoin or adapalene in acne vulgaris: an overview. *J Dermatolog Treat* 2004; 15 (4): 200-7.
26. Krautheim A, Gollnick HP. Acne: topical treatment. *Clin Dermatol* 2004; 22 (5): 398-407
27. Eichenfeld LF, Nighland M, Rossi AB, Cook-Bolden F, Grimes P, Fried R, et al. Phase 4 study to assess tretinoin pump for the treatment of facial acne. *J Drugs Dermatol*. 2008;7(12):1129–36.
28. Webster GF. Topical tretinoin in acne therapy. *J Am Acad Dermatol* 1998; 39 (2 Pt3): S38-44
29. Cunliffe WJ, Poncet M, Loesche C, Verschoore M. A comparison of the efficacy and tolerability of adapalene 0.1% gel versus tretinoin 0.025% gel in patients with acne vulgaris: a meta-analysis of five randomized trials. *Br J Dermatol* 1998; 139 Suppl. 52: 48-56.
30. Dominguez J, Hojyo MT, Celayo JL, Domínguez-Soto L, Teixeira F. Topical İzotretinoin vs. topical retinoic acid in the treatment of acne vulgaris. *Int J Dermatol* 1998; 37 (1): 54-5.
31. Hughes BR, Norris JF, Cunliffe WJ. A double-blind evaluation of topical İzotretinoin 0.05%, benzoyl peroxide gel 5% and placebo in patients with acne. *ClinExp Dermatol* 1992; 17 (3): 165-8.
32. Webster GF, Berson D, Stein LF, Fivenson DP, Tanghetti EA, Ling M. Efficacy and tolerability of once-daily tazarotene 0.1% gel versus once-daily tretinoin 0.025% gel in the treatment of facial acne vulgaris: a randomized trial. *Cutis* 2001; 67 (6 Suppl.): 4-9.
33. Leyden JJ, Tanghetti EA, Miller B, Ung M, Berson D, Lee J. Once-daily tazarotene 0.1% gel versus once-daily tretinoin 0.1% microsphere gel for the treatment of facial

- acne vulgaris: a double-blind randomized trial. *Cutis* 2002; 69 (2 Suppl.): 12-9.
34. Webster GF, Guenther L, Poulin YP, Solomon BA, Loven K, Lee J. A multicenter, double-blind, randomized comparison study of the efficacy and tolerability of once daily tazarotene 0.1% gel and adapalene 0.1% gel for the treatment of facial acne vulgaris. *Cutis* 2002; 69: 4-11.
 35. Shalita A, Miller B, Menter A, Abramovits W, Loven K, Kakita L. Tazarotene cream versus adapalene cream in the treatment of facial acne vulgaris: a multicenter, double-blind, randomized parallel-group study. *J Drugs Dermatol* 2005; 4 (2): 153-8.
 36. Leyden J, Lowe N, Kakita L, Draelos Z. Comparison of treatment of acne vulgaris with alternate-day applications of tazarotene 0.1% gel and once-daily applications of adapalene 0.1% gel: a randomized trial. *Cutis* 2001; 67 (6 Suppl.): 10-6.
 37. Gold LS, Colón LE, Johnson LA, Gottschalk RW. Is switching retinoids a sound strategy for the treatment of acne vulgaris? *J Drugs Dermatol*. 2008;7(6 Suppl): s11-7
 38. Pariser D, Colón LE, Johnson LA, Gottschalk RW. Adapalene 0.1% gel compared to tazarotene 0.1% cream in the treatment of acne vulgaris. *J Drugs Dermatol*. 2008;7(6 Suppl): s18-23
 39. Thiboutot D, Arsonnaud S, Soto P. Efficacy and tolerability of adapalene 0.3% gel compared to tazarotene 0.1% gel in the treatment of acne vulgaris. *J Drugs Dermatol*. 2008;7(6 Suppl): s3-10.
 40. Bershad S, Kranjac Singer G, Parente JE, Tan MH, Sherer DW, Persaud AN, et al. Successful treatment of acne vulgaris using a new method: results of a randomized vehicle-controlled trial of short-contact therapy with 0.1% tazarotene gel. *Arch Dermatol*. 2002;138(4):481-9.
 41. Zhang JZ, Li LF, Tu YT, Zheng J. A successful maintenance approach in inflammatory acne with adapalene gel 0.1% after an initial treatment in combination with clindamycin topical solution 1% or after monotherapy with clindamycin topical solution 1%. *J Dermatolog Treat* 2004; 15 (6): 372-8.
 42. Leyden J, Thiboutot DM, Shalita AR, Webster G, Washenik K, Strober BE, et al. Comparison of tazarotene and minocycline maintenance therapies in acne vulgaris: a multicenter, double-blind, randomized, parallel-group study. *Arch Dermatol* 2006; 142 (5): 605-12.
 43. Oudenhoven MD, Kinney MA, McShane DB, Burkhart CN, Morrell DS. Adverse effects of acne medications: recognition and management. *Am J Clin Dermatol*. 2015;16(4):231-242.
 44. Tan J, Gollnick HP, Loesche C, Ma YM, Gold LS. Synergistic efficacy of adapalene 0.1%-benzoyl peroxide 2.5% in the treatment of 3855 acne vulgaris patients. *J Dermatolog Treat*. 2011;22(4):197-205.
 45. Saihan EM, Burton JL, Meyrick G, Speller DC, Thornton E, Chestney V. The effect of a topical antibiotic preparation in acne vulgaris--a controlled clinical and laboratory study. *Br J Clin Pract*. 1981;35(3):106-9.
 46. Weiss J, Stein Gold L, Leoni M, Rueda MJ, Liu H, Tanghetti E. Customized Single-agent Therapy Management of Severe Inflammatory Acne: A Randomized, Double-blind, Parallel-group, Controlled Study of a New Treatment--Adapalene 0.3%-Benzoyl Peroxide 2.5% Gel. *J Drugs Dermatol*. 2015;14(12):1427-35.