## Shanna M. Miranti, MPAS, PA-C<sup>1</sup>

<sup>1</sup>Riverchase Dermatology & Cosmetic Surgery

# **SYNOPSIS**

- Acne vulgaris is a common dermatologic disorder that may require treatment over months or years<sup>1,2</sup>
- Acne negatively impacts quality of life, and acne of any severity can lead to long-term sequelae such as scarring<sup>3-6</sup>
- Common treatments for severe/nodulocystic acne include oral isotretinoin, an oral antibiotic combined with a topical (benzoyl peroxide or a retinoid), an oral combined contraceptive, or oral spironolactone (females)<sup>1</sup>
- Though oral antibiotics and isotretinoin are not recommended for long-term treatment,<sup>1</sup> there is scarce guidance or published research on maintenance therapy<sup>7</sup>
- Topical retinoids—a mainstay of initial acne treatment—may be prescribed for maintenance once initial oral treatments are complete<sup>1,8</sup>
- Additionally, some retinoids such as tretinoin and tazarotene are indicated for the treatment of fine wrinkles and certain pigmentation disorders,<sup>9-12</sup> and some studies have shown that formulations containing adapalene and tazarotene may also reduce acne-induced scarring<sup>13-17</sup>
- Tazarotene 0.045% polymeric emulsion lotion is a well-tolerated retinoid that has demonstrated efficacy in acne treatment and may reduce acne-induced post-inflammatory hyperpigmentation (PIH) and melasma<sup>12,18,19</sup>
- Further, tazarotene lotion provides rapid and sustained improvements in skin barrier function/moisturization<sup>20</sup>

### **OBJECTIVE**

To present a case series report of patients with acne who received maintenance treatment with topical tazarotene 0.045% lotion after an initial course of oral isotretinoin

### **METHODS**

- Patients from a single center with severe recalcitrant acne vulgaris were treated with once daily oral isotretinoin for at least 20 weeks until deemed clinically clear
- All patients received 40 mg isotretinoin once daily for the first 30 days
- The dosage was then increased to 1 mg/kg of bodyweight (treatment naïve) or 1.5 mg/kg (repeat treatment)
- After 20 weeks, patients who achieved clinically clear skin initiated once-daily topical tazarotene 0.045% lotion monotherapy on the day of their last isotretinoin dose
- Follow up visits occurred at 6 months and 1-year post-isotretinoin treatment

### RESULTS

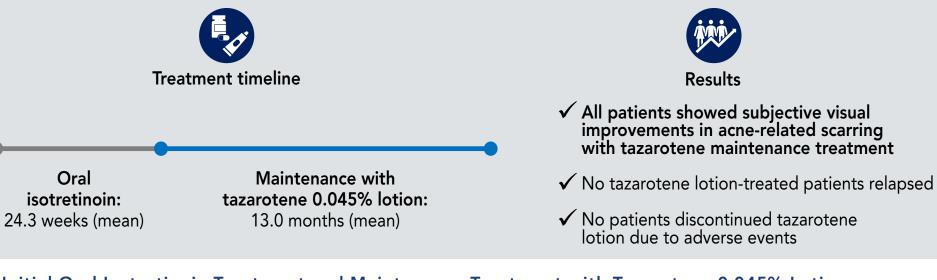
- A summary of the case series patients is shown in Figure 1
- Patients (n=12) had a mean age of 17.8 years (standard deviation [SD]: 3.8) and the majority were female (58.3%) and White (66.7%)
- Oral isotretinoin was used for an average of 24.3 weeks (SD: 6.7), with a mean cumulative dose of 184.6 mg/kg (SD: 75.1)
- One patient required a repeat course of isotretinoin prior to tazarotene initiation
- Post-isotretinoin, patients received tazarotene 0.045% lotion for an average of 13.0 months (SD: 6.7)
- No patients relapsed and all showed subjective visual improvements in acne-related scarring with tazarotene maintenance treatment
- None discontinued tazarotene lotion due to adverse events
- Representative photographs of patients before and after tazarotene lotion maintenance treatment are shown in **Figure 2**

## FIGURE 1. Case Series Patients and Outcomes Following Maintenance Treatment With Tazarotene 0.045% Lotion



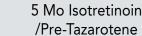
# Patients (n=12) with severe recalcitrant acne vulgaris

- Mean age: 17.8 years
- Female: 58.3%
- White: 66.7%



# FIGURE 2. Improvements with Initial Oral Isotretinoin Treatment and Maintenance Treatment with Tazarotene 0.045% Lotion

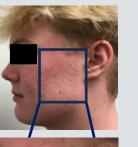
#### 15-year-old White Male



6 Mo Tazarotene



Pre-Isotretinoin





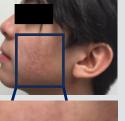
Cumulative isotretinoin dose: 138 mg/kg Total time on isotretinoin: 20 weeks

#### 14-year-old Hispanic Male 5 Mo Isotretinoin





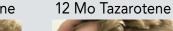




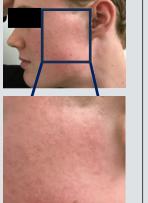


Cumulative isotretinoin dose: 158 mg/kg Total time on isotretinoin: 20 weeks

Individual results may vary. Photographic Images Copyright 2023.











Cumulative isotretinoin dose: 146 mg/kg Total time on isotretinoin: 20 weeks

# 20-year-old White Female

5 Mo Isotretinoin /Pre-Tazarotene

6 Mo Tazarotene



18 Mo Tazarotene

### 16-year-old White Male

5 Mo Isotretinoin

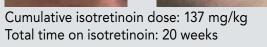


12 Mo Tazarotene



Pre-Isotretinoin







- There is little guidance or research published on acne maintenance treatment after initial oral isotretinoin or other treatments are complete
- Topical tazarotene 0.045% polymeric emulsion lotion has previously demonstrated good efficacy, safety, and tolerability with acne and PIH reductions in patients with moderateto-severe acne, as well as dyspigmentation reductions in patients with melasma and/or PIH<sup>12,18,19</sup>
- The case reports presented here show that tazarotene 0.045% lotion may be an effective and safe treatment to improve scarring and prevent relapse after initial oral isotretinoin treatment for severe recalcitrant acne

#### REFERENCES

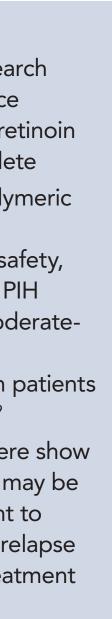
- 1. Zaenglein AL, et al. J Am Acad Dermatol. 2016;74(5):945-973.e933.
- 2. Zouboulis CC. Clin Dermatol. 2014;32(3):389-396.
- 3. Tan JK. Skin Therapy Lett. 2004;9(7):1-3, 9.
- 4. Samuels DV, et al. J Am Acad Dermatol. 2020;83(2):532-541.
- 5. Dréno B, et al. J Am Acad Dermatol. 2017;76(6):AB132
- 6. Bellomo R, et al. J Clin Aesthet Dermatol. 2021;14(12 Suppl 1):S18-s23.
- 7. Tan J, et al. JAAD Int. 2021;5:101-111. 8. Leyden J, et al. Dermatol Ther
- (Heidelb). 2017;7(3):293-304. 9. Renova [package insert]. Raritan,
- NJ: Ortho-Mc Neil-Janssen Pharm; 2000 10. Avage [package insert]. Irvine, CA:
- Allergan; 2016.

#### **AUTHOR DISCLOSURES**

Shanna Miranti has been a speaker, consultant, and/or advisory board member for Almirall, Arcutis Biotherapeutics, Dermavant. EPI Health, Galderma, Incyte, Journey, Ortho Dermatologics, Emblation Limited, and Verrica, and an editorial advisory board member for Dermatology Times.

- 11. Sadick N, et al. J Drugs Dermatol. 2023;22(9):867-873.
- 2023;22(11):1118-1123
- 2018;19(2):275-286.
- Venereol. 2017;31(4):737-742. 15. Loss MJ, et al. Dermatol Ther
- (Heidelb). 2018;8(2):245-257. 16. Afra TP, et al. JAMA Facial Plast
- Surg. 2019;21(2):125-132. 17. Dréno B, et al. Am J Clin Dermatol. 2019;20(5);725-732.
- 18. Tanghetti EA, et al. J Drugs
- 2022;23(1):69-81.





12. Sadick N, et al. J Drugs Dermatol. 13. Dréno B, et al. Am J Clin Dermatol 14. Dréno B, et al. J Eur Acad Dermatol Dermatol. 2020;19(3):272-279. 19. Callender, et al. Am J Clin Dermatol. 20. Draelos Z, et al. SKIN. 2021;5(6):s69.