SKIN

RESEARCH LETTER

Weekly Isotretinoin Therapy (WIT) Study: A Potential Alternative for the Treatment of Moderate Acne Vulgaris

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ABSTRACT

Background: Treatment options for moderate acne remain limited.
Methods: We evaluated the efficacy of once-weekly dosed isotretinoin for moderate acne. Nineteen participants took isotretinoin dosed at 1-1.5 mg/kg/week for four months. Patient clinical improvement, quality of life, and adverse effects were measured at baseline and at monthly follow-up visits. Laboratory monitoring was performed at baseline and after two months.
Results: Ninety-five percent of patients (18/19) had improvement in their acne. The majority (68%) went from a baseline of moderate acne (score 3) to either clear (score 0) or almost clear (score 1) by the end of four months. There were no major lab abnormalities or adverse events. Eighty-nine percent of patients (17/19) reported improvement in their quality of life.
Conclusion: Once weekly isotretinoin may be an additional treatment option for patients with moderate acne.

INTRODUCTION

Current treatment options for moderate acne vulgaris remain limited and usually include long courses of oral antibiotics. Nagler et al. found that the average antibiotic use for moderate-to-severe acne prior to receiving isotretinoin was 331 days, with 88% requiring treatment for six months or more, and 46% for at least one year.[1] Males are especially limited in their treatment options as they are not eligible for hormonal management. Consequently, there is a need for further research on alternative moderate acne treatment options.

The efficacy of isotretinoin has been well-established; however, there are numerous reported side-effects, such as severe dry skin, lips, and eyes, as well as liver enzyme and lipid abnormalities, thought to be caused by achieving the cumulative dose rapidly via once to twice daily dosing. Studies have explored alternative isotretinoin dosing regimens, including microdose and lower daily dose regimens,[2,3] and daily dosing for only 7-10 consecutive days out of each month.[3,4] These studies had favorable outcomes with fewer to similar adverse effect rates compared to conventional dosing. Despite the lower total cumulative dose achieved versus with conventional dosing, recurrence rates were similar.[3] Additionally, cost of alternative dosing was lower than conventional dosing, and patient satisfaction was highest in the alternative dosing groups.[2-4]

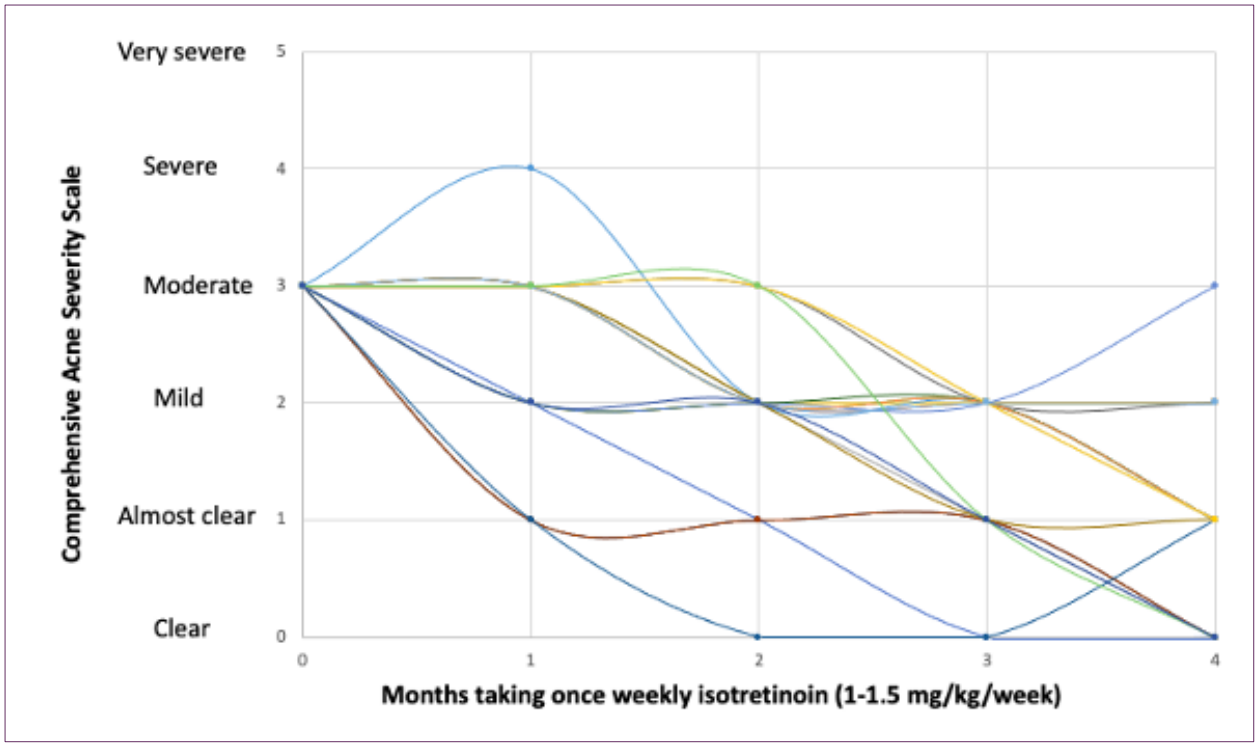

Figure 1. Results from 19 participants taking once weekly isotretinoin for a four month study period showing improvement in acne in 95% of patients (18/19), with the majority (68%) going from a baseline of moderate acne (score 3) to either clear (score 0) or almost clear (score 1). The teenage boy participant who initially worsened, then improved, and ended at his baseline is now on twice weekly isotretinoin at 1 mg/kg/dose with acne clearance after two months.

METHODS

In this IRB-approved study, we evaluated the efficacy of once weekly dosed isotretinoin (1-1.5 mg/kg/week) as a potential therapy for moderate acne. Nineteen patients (10 females, 9 males) aged 12-43 years completed the four-month study period. Participants could not be on spironolactone or oral antibiotics commonly used for acne, but could use over-the-counter topicals. Two surveys, the validated Dermatology Quality of Life Index (DQLI) and one created to assess potential side-effects, were administered at baseline and at monthly follow-up visits. Laboratory monitoring (complete blood count, comprehensive medical panel, and lipid panel) was completed at baseline and after two months. Efficacy was determined by comparing baseline and monthly clinical photograph scores; photographs were graded by a blinded researcher using the validated Comprehensive Acne Severity Scale. After the study period, participants could choose to follow-up for two months while either continuing or discontinuing the medication.

RESULTS

Ninety-five percent of patients (18/19) had improvement in their acne. The majority

(68%) went from a baseline of moderate acne (score 3) to either clear (score 0) or almost clear (score 1) by the end of four months. Five patients chose to continue once weekly isotretinoin after the study period; at their two-month follow-up photographs, four patients were clear (0) and one patient almost clear (1). Four patients who elected to discontinue isotretinoin after the study remain clear (0), one patient almost clear (1), one patient mild (2), and one patient back to baseline (3) after two months. The participant who ended back at his baseline achieved acne clearance after two months of twice weekly isotretinoin. There were no major lab abnormalities or adverse events. Eighty-nine percent of patients (17/19) had an improvement in their DQLI, with twelve patients achieving a score of 0 by the end of the study (the presence of acne having no effect on one's quality of life). The most common side-effects were mild dry skin; eleven participants had continued dry skin from baseline and one participant endorsed new, mild dry skin. Additionally, seven patients had continued dry eyes/lips, and three reported new, mild dry eyes/lips. Three participants endorsed new mild myalgias after four months.

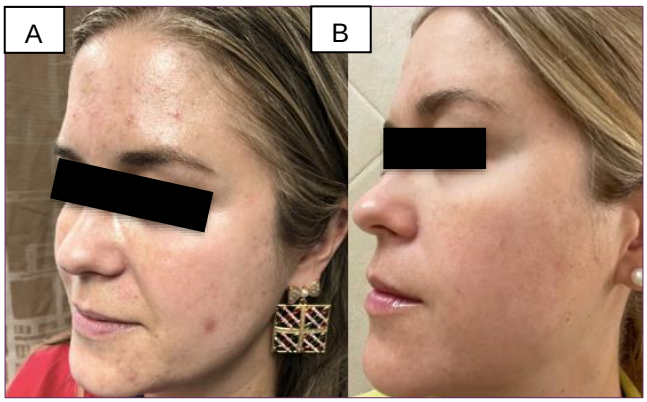

Figure 2 A) Patient with moderate acne at baseline, prior to beginning the study. **B)** Same patient after four months of once weekly isotretinoin (1-1.5 mg/kg/week). No acneiform lesions, just mild post-inflammatory hyperpigmentation.

CONCLUSION

Study findings suggest that once weekly isotretinoin dosing for male and female patients with moderate acne is a potential alternative to oral antibiotics and hormonal therapies. Study replication using a larger patient population and clinical trials exploring alternative dosing regimens for isotretinoin are recommended.

Note: Photographs used with permission

Conflict of Interest Disclosures: None

Funding: None

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