

CASE REPORT

Comparative Evaluation of Topical Antibiotics in Treatment of Mild to Moderate Acne Vulgaris

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ABSTRACT

Acne vulgaris is the most common condition that brings the patient to the dermatology department in a hospital or clinic. it is a pleomorphic disease and can happen during any age in life most commonly present in teenagers between 14–25 years old with prevalence ranging from 50–95% in different populations worldwide. Acne vulgaris considered a benign condition but can have an important psychological effect on the patient because it targets mostly the most important part of the human body which is the face of young patients.

Clindamycin topical gel and erythromycin topical gel is effective in the treatment of acne vulgaris by acting against gram-positive propionibacterium acnes. FDA has approved dapsone topical gel formulation in 2005. So, we compare the therapeutic efficacy of topical clindamycin, erythromycin, dapsone, and control group in our study by dividing 60 patients randomly into four groups of 15 for each group. Each group was subjected to twice daily application on clean skin for 12 weeks. Followed up every two weeks and the result was compared.

We found that the overall percentage of reduction of dapsone 5% gel is 13.3% has a good response after 12 weeks. While it is 6.7% with clindamycin and 0% with erythromycin, 2% have a good response. the side effect is slightly better in the dapsone 5% gel group when compared with clindamycin 1% gel group and erythromycin 2% gel. Dapsone can also be used as monotherapy without significant risk of developing resistance, while clindamycin and erythromycin being antibiotics don't have such privileges. So it is concluded that dapsone 5% gel is a slightly better topical option than clindamycin 1% gel and erythromycin 2% gel in mild to moderate acne vulgaris.

Keywords: Clindamycin 1% gel, Dapsone 5% gel, Erythromycin 2% gel, Moderate acne, Placebo.

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INTRODUCTION

Definition

Acne vulgaris is a common chronic skin disease of the pilosebaceous unit resulting from both ovarian and testicular androgens induced increased sebum production, alter in keratinization, inflammation, and bacterial colonization by *Cutibacterium acnes* (formerly known as *Propionibacterium acne*) that affect the hair follicles of the face, chest, neck, and back.¹ The majority of acne started in the pre-pubertal period and can continue into adulthood. Facial scarring effect up to 20% of acne patient.¹

Acne vulgaris are divided into two types:

Inflammatory papules or pustules.	Non-inflammatory lesions open or close comedones
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distribution of acne vulgaris depends on the density of the pilosebaceous unit in the face, neck, shoulder, chest, and back.²⁻⁸

Clindamycin

An antibacterial agent represents the preferred topical antibiotics for acne treatment. It is available in gel and solution. Few rare reports are showing a low risk of *clostridium difficile* infection-related colitis with topical clindamycin. It is pregnancy category B.⁹

Erythromycin

It is a macrolide antibiotic that is present in 2% concentration as lotion, cream, gel. Its efficacy is lower than clindamycin because of *C. acne* resistance.¹⁰