


Clindamycin 0.025% and Tretinoin 0.005% Cream for Infantile Acne Vulgaris

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ABSTRACT

Acne vulgaris is an inflammatory disease of pilosebaceous unit marked by the presence of comedones, papules, pustules, nodules, and cysts. A boy aged 4 years old was reported of having red spots on his cheeks since the age of 1 month old. Erythematous papules and pustules with white heads were found in the facial area. Infantile acne diagnosis was considered. Combination of clindamycin 0.025% and tretinoin 0.005% cream was given to accelerate healing process and to prevent complications such as post-inflammatory hyperpigmentation. The patient's condition was considerably better after 1 month.

Keywords: Infantile acne vulgaris

ABSTRAK

Acne vulgaris merupakan inflamasi kelenjar pilosebasea yang ditandai dengan komedon, papula, pustula, nodula, dan kista. Dilaporkan kasus anak laki-laki usia 4 tahun mempunyai bintik kemerahan di pipi sejak usia 1 bulan. Dijumpai papula dan pustula eritematous dengan *white heads* di wajah, didiagnosis sebagai *infantile acne*. Diberikan krim kombinasi *clindamycin* 0,025% and tretinoin 0,005% untuk terapi dan mencegah komplikasi hiperpigmentasi. Keadaan pasien lebih baik setelah terapi 1 bulan. **Gabriela Reginata, Sukmawati Tansil Tan, Listyani Gunawan. Krim *Clindamycin* 0,025% dan Tretinoin 0,005% untuk *Infantile Acne Vulgaris***

Kata kunci: Infantile acne vulgaris

INTRODUCTION

Acne is an inflammatory disease involving pilosebaceous unit with clinical manifestations of comedones, papules, pustules, nodules, and cysts.[1] The disease is commonly found in adolescents from the age of 12-15 and peaked at the age of 17-21.[2] Acne vulgaris could manifest in infancy, and is called infantile acne.[3] Infantile acne appears in infants aged 1 to 12 months old, most commonly in 3 to 6 months old. Infantile acne is more commonly found in male infant, although there is no epidemiologic data reporting its prevalency.[4]

The etiology of infantile acne remains unknown, but family history and hormonal alteration such as high level of Dehydroepiandrosterone Sulfate (DHEA-S) could potentially stimulate sebaceous gland production. That phenomenon is caused by higher level of androgen hormone in male infants produced by adrenal and testes glands.[3,5] Infantile acne lesions are polymorphic, consist of both open and closed comedones, papules, pustules, cysts, and scars. Early and appropriate therapy is needed to reduce scar formation.[6] We report an infantile acne case treated with combination cream containing clindamycin 0.025% and tretinoin 0.005%.

CASE

A 4 month-old baby was referred to dermatology clinic by a paediatrician due to dermatitis. Some red spots was inspected on the cheeks with increasing number of lesions. The patient had been treated with momethasone cream for two weeks, but the lesions became more reddish.

Physical examination revealed normal general appearance, pulse rate of 55 beats/minute (bpm), respiratory rate of 40 / minute, temperature 36.7°C, and body weight 5.5 kg. Erythematous papules and pustules with white head comedones were observed in facial area **(Figure 1)**. His male older brother had the similar lesions when he was 6 weeks old. Diagnosis of infantile acne was settled.

Topical clindamycin 0.025% and tretinoin 0.005% was given once daily for a month. After two weeks, erythematous papules and pustules were decreased **(Figure 2)**, the therapy was continued. After one month, erythematous papules and pustules became fewer **(Figure 3)**.

Figure 1. Infantile Acne, Before Therapy: Erythematous papules and pustules with white comedones at the facial area

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Figure 2. After 2 weeks: Erythematous papules with pustules began to decrease

Figure 3. After 1 month: Erythematous papulae decreased and few pustules.

DISCUSSION

Acne vulgaris in infants aged 1-4 months is known as infantile acne. Infantile acne was predominantly prevalent in male infants at the age of 3 to 6 months.[5] Among 12 subjects with infantile acne, 9 (75%) were male.[1] Normally, infantile acne improved after 1 year, but it could remain for months or years.

The pathogenesis of infantile acne remained unclear; some factors considered are hereditary and higher level of androgen in male. Chromosomal abnormalities, HLA phenotypes, human cytochrome P450 1A1 polymorphism, MUC 1 gene, and several other factors have been investigated.[7] This case was a 4-month-old male infant with similar family history.

The most common clinical manifestations of infantile acne are comedone, pustule, nodule, and cyst that could be found predominantly in cheek area. Infantile acne is classified based on clinical severity as mild (comedones, some papules, with few pustules), moderate (papules, pustules, few cysts and scars) and severe (predominantly nodules, cysts and scars).[8] Infants with severe infantile acne tend to have severe acne in adolescence and adult.[3]

This case had mild type infantile acne with erythematous papules and pustules and white head comedones on the facial area, predominantly cheeks. Diagnosis is based on clinical findings, anthropometric examination, androgenic effects on children such as body odor, areolar and testicular developments, and genital and axillar hair growth. Alterations caused by androgenic effects need further evaluation by assessing family history, medical history, areolar and testicular developments, and further laboratory test such as testosterone level, Dehydroepiandrosterone Sulfate (DHEA-S), Luteinizing Hormone (LH), Follicle Stimulating Hormone (FSH), prolactine and bone age.[6,8]

Acne venenata due to topical cream, lotion or oil, chloracne and persistent neonatal acne could be considered as differential diagnosis for infantile acne.[9]

This case was diagnosed based on family history of infantile acne and the onset at the age of 4 weeks. Confirmatory laboratory examinations were not performed due to normal growth and developments and negative family history nor medical history related to hyperandrogenism.[6]

Topical therapies for mild infantile acne are benzoyl peroxide, retinoid, antibiotics, or their combinations. Oral erythromycin or macrolide derivatives are used only in severe cases.[6,8] The patient was given a combination topical cream of tretionin 0.005% and clindamycin 0.025% once daily for a month. Tretionin is one of topical retinoid derivatives that targets abnormal proliferation and keratinocyte differentiation as well as possesses anti-inflammatory effects, it is commonly used in commedonal type acne and 40-80% of inflammatory lesions.[6,10,11] Topical clindamycin as antimicrobial agent reduces the free fatty acid proportion and *P. acnes* population in pilosebaceous unit while its anti-inflammatory effects suppress leukocytes chemotaxis and effective in inflammatory type-acne; but it is not effective as monotherapy because of its slow onset of action and it is high risk for *Propionibacterium acne* and *Staphylococcus aureus* resistance.[12] Tretionin 0.005% and clyndamycin 0.025% combination cream was considered giving better results.[9]

Although infantile acne is self-limiting disease, it would potentially induce post-inflammatory hyperpigmentation and scar formation unless it is early treated, especially in severe cases.[6] The prognoses of this patient was good. Infantile acne lesions can heal spontaneously, but several cases persist for years or creating sequelaes such as post-inflammatory hyperpigmentations or scars.

SUMMARY

A boy aged 4 years old was reported of having red spots on his cheeks since 1 month old. Infantile acne was diagnosed. Treatment with combination of clindamycin 0.025% and tretinoin 0.005% cream resulted in better condition after 1 month.

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