

ARTIKEL PENELITIAN

**OVER-THE-COUNTER (OTC) PRODUCT USE PATTERNS
IN MEDICAL STUDENTS WITH ACNE VULGARIS**

*POLA PENGGUNAAN PRODUK OVER THE COUNTER (OTC) PADA
MAHASISWA KEDOKTERAN YANG MENDERITA AKNE VULGARIS*

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ABSTRAK

Pendahuluan: Akne vulgaris (AV) merupakan kelainan kulit akibat inflamasi pada unit pilosebacea yang dapat menyebabkan beban psikososial bagi penderitanya. Pengobatan sendiri (self medication) banyak dijumpai pada mahasiswa fakultas kedokteran, yang bertujuan untuk mengatasi AV. Penelitian ini bertujuan untuk mengetahui pola perilaku penggunaan produk over-the-counter (OTC) untuk kulit berjerawat pada mahasiswa fakultas kedokteran di Jakarta.

Metode: Penelitian observasional secara potong lintang pada 100 mahasiswa kedokteran yang menderita AV, dengan menyebarkan kuesioner berisi survei klinis, pengobatan, serta penggunaan produk OTC. Penilaian klinis derajat keparahan AV dinilai menggunakan kriteria Global Acne Grading System (GAGS).

Hasil: Sebanyak 69 subjek penelitian (SP) ditemukan menggunakan produk OTC untuk mengatasi AV. Jenis produk OTC yang paling banyak digunakan adalah pembersih wajah, yaitu sabun wajah (89 Subjek) dan cleansing oil (29 Subjek). Lima puluh persen subjek tidak mengetahui kandungan bahan aktif dalam produk OTC yang digunakan, 15% menggunakan benzoil peroksida, 13% retinoid topikal, dan 12% nicotinamide.

Simpulan: Pengobatan sendiri dengan produk OTC untuk kulit berjerawat sering dilakukan oleh mahasiswa kedokteran di Jakarta, dengan produk terbanyak yang digunakan adalah pembersih wajah. Sebagian besar subjek penelitian tidak mengetahui bahan aktif yang terkandung di dalam produk OTC yang digunakannya.

Kata Kunci: akne vulgaris, pengobatan sendiri, over-the-counter, mahasiswa

ABSTRACT

Introduction: Acne vulgaris (AV) is a skin disorder caused by inflammation in the pilosebaceous unit and may cause a psychosocial burden for patients. Self-medication is common in medical students, including in treating AV. This study aimed to determine the behavioral characteristics of using over-the-counter (OTC) products for acne-prone skin in medical students in Jakarta.

Methods: This was a cross-sectional observational study of 100 medical students with AV. The study was conducted using questionnaires consisting of clinical survey, medications, and OTC products. The clinical assessment of the severity of AV was determined using the Global Acne Grading System (GAGS) criteria.

Results: Sixty-nine study subjects only used OTC products for their acne management. The most common OTC product was a facial cleanser, which facial cleanser (89 subjects) and cleansing oil (29 subjects). Fifty percent of the study subjects did not know the active ingredients in the products; 15% used benzoyl peroxide, 13% used topical retinoid, and 12% used nicotinamide.

Conclusion: Self-medication with OTC products for acne-prone skin is frequent among medical students in Jakarta, and the most commonly used product is a facial cleanser. Most study subjects did not know the active ingredients in their OTC products.

Key Words: acne vulgaris, self-medication, over-the-counter, students

Abbr. : AV = acne vulgaris; OTC = over-the-counter; GAGS = Global Acne Grading System

INTRODUCTION

Acne vulgaris (AV) is an inflammatory condition in the pilosebaceous unit of the skin on the face, neck, chest, and back regions.^{1,2} The face is the most commonly affected region by AV, causing a burden to the patient, especially teenagers to young adults.¹ Acne vulgaris is a condition that causes low self-perception, shyness, social withdrawal, and depression.^{3,4} The psychological and social impact caused by AV drives patients to seek treatment, even in mild cases.⁵

A study by Szepietowski et al. on the 12-25 years old population showed that 81% of the subjects had AV, and 39% did not consult a doctor.⁶ Self-medication is common among medical students since they possess pharmacological knowledge and more accessible access, for instance, from the hospital pharmacy or hospital wards. The prevalence of self-medication in medical students varies between 57.7 to 76%.^{3,7}

Self-medication is using medications or herbal medicines on one's initiative or based on others' advice without consulting a doctor.⁸ The impact of the such wide availability of (OTC) products for acne-prone skin and the difficulty in making an appointment to visit a doctor lead to increased self-medication rate for AV.⁵ This study was conducted to determine the behavioral characteristics of using OTC products to treat acne skin in medical students in Jakarta.

METHODS

This study used an observational cross-sectional method using a questionnaire. The

sample of this research is students of the medical faculty at Atma Jaya Catholic University of Indonesia who suffer from acne vulgaris. After calculating and considering the possibility of design errors, the minimum sample size used is 68 students. The inclusion criteria used were: 1) students who suffer from acne vulgaris, 2) are willing to fill out a questionnaire, and 3) are willing to have their face examined by a dermatovenereologist. The exclusion criteria used were: 1) students with systemic diseases associated with acne vulgaris (e.g., Polycystic ovarian syndrome, metabolic syndrome, etc.). Sampling was done by purposive sampling technique.

The questionnaire used is divided into two parts. The first part contains the demographic data of the sample (age and sex) as well as data regarding the severity of the sample's AV as assessed by a dermatovenereologist (severity assessment was carried out using global Acne Grading System (GAGS) criteria). The second part of the questionnaire consists of the OTC products used as samples for AV and the active ingredients contained in them. Data collection was carried out from February to March 2020. This study has been approved by the Ethical Committee of the School of Medicine and Health Sciences Atma Jaya Catholic University of Indonesia with an ethical clearance number No: 12/01/KEP-FKUAJ/2020.

RESULTS

One hundred study subjects consisting of 35 men and 65 women with an age range of

19-23 years were included in the study. Mild AV was found in 74 subjects, moderate AV in 23 subjects, and severe AV in three subjects. Sixty-nine subjects stated that they only use OTC products for their AV, 27 subjects combined OTC products with therapies from a doctor, and four subjects only had therapies from a doctor.

The reasons for using OTC products in the 69 subjects who did self-medication were that they felt that the acne condition was still mild and did not need to consult a doctor (39 subjects), it was practical or easy to get OTC products (22 subjects), and the costs were cheaper (8 subjects), as shown in Table 2.

Table 1. Characteristics of the Subjects

Characteristic	n
Gender	
Male	35
Female	65
Age	
19	8
20	22
21	43
22	18
23	9
Acne severity	
Mild	74
Moderate	23
Severe	3

Table 2. Reasons for Using OTC Products

Reason	n
Mildness of acne	39
Easy to get OTC products	22
Cheaper costs	8

Table 3. Over-The-Counter Products Used by the Study Subjects

OTC products	n
Facial cleanser	89
Acne spot medication	52
Sheet mask	46
Night cream	40
Mask	32
Serum	32
Cleansing oil	29
Scrub	26
Moisturizer	5
Toner	5
Essential oil	5
Sunscreen	2

One study subject might use more than one OTC product for acne skin. The type of used OTC products included facial cleanser (facial cleanser in 89 subjects, cleansing oil in 29 subjects), acne spot medication (52 subjects), sheet mask (46 subjects), night cream (40 subjects), mask (32 subjects), serum (32 subjects), cleansing oil (29 subjects), scrub (26 subjects), and other products such as moisturizer (5 subjects), toner (five subjects), essential oil (five

subjects), and sunscreen (two subjects), as shown in Table 3.

Most subjects (50%) did not know the active ingredients of the used OTC products. The most commonly used ingredient was benzoyl peroxide (15 subjects), retinoid or topical retinol (13 subjects), nicotinamide (12 subjects), salicylic acid (eight subjects), herbal (seven subjects), alpha hydroxy acid (AHA) (three subjects), and vitamin C (two subjects). The active ingredients of OTC are shown in Table 4 below.

Table 4. Active Ingredients in the Used Over-The-Counter Products

Active Ingredient	n
Unknown	50
Benzoyl peroxide	15
Retinoid/topical retinol	13
Nicotinamide	12
Salicylic acid	8
Herbal	7
Alpha Hydroxy-Acid (AHA)	3
Vitamin C	2

DISCUSSION

Acne vulgaris is a common skin disease and may be found in various age groups.¹ In our study, we found that most study subjects used OTC products to manage their acne, which is in line with another study. In a study conducted by Karamata et al. (2017) in India stated that 307 out of 518 (59.3%) samples (undergraduate medical students) suffering from acne vulgaris took self-medication, while the rest went to doctors for treatment.³ OTC products are commonly used in AV patients since they are typically cheaper and practically easy to get because there is no need for doctor consultation.⁹

The most common reason for using OTC products in our study was that they felt their acne was still mild and did not need to consult a doctor (56.5%). This finding is similar to the study by Karamata et al. Most of the reasons in the study were due to mildness of illness (42.3%), knowledge about the treatment given from previous prescriptions (28.9%), easy availability of drugs (17.9%), lack of time (15.6%), and other reasons.³

OTC products are generally categorized as a cleanser, leave-on, mechanical procedures such as scrub, essential oil, and vitamin.^{9,10} In this study, the most commonly used OTC product was a facial cleanser,

similar to the previous study by Alshehri et al.¹ Samples in Alshehri et al. study were 419 university students in Saudi Arabia. They stated the most used OTC product was cleansers (59.5%), followed by herbal (23%), leave-on-products (15%), mechanical treatments (11.2%), and other products (vitamins, essential oils, etc.).^{1,4}

Topical therapy for AV is recommended for mild to moderate AV patients.¹¹ The topical therapies for mild to moderate AV include benzoyl peroxide, retinoid, topical antibiotic, or combined treatments.^{12,13} In this study, benzoyl peroxide and retinoid/topical retinol were the most commonly used (13.6% and 11.8%, respectively).

Topical therapies for AV may be irritative and cause dry skin. Moisturizers in conjunction with AV therapies may reduce the risk of irritation and dry skin, increasing treatment efficacy, therefore, making the patients more comfortable. Moisturizers for acne skin are usually labeled "oil-free," meaning that they do not contain mineral oils or plant oils.¹⁴ In this study, only five subjects stated that they used face moisturizers. However, we did not investigate the type of moisturizer used.

Most study subjects (50%) in this study did not know the active ingredients in their used OTC products. Although medical students have received pharmacology lessons, this finding might be because students are not accustomed to reading labels on the products and only use the products based on their functions. However, we did not investigate why the students did not know the active ingredients.

The strength of our research is that there are still few similar studies, especially in Indonesia. The limitation of our research is the lack of questions regarding why subjects do not know the active ingredients of the OTC products they use.

CONCLUSION

Self-medication with OTC products for acne skin is common among medical students. Most subjects' reason for using OTC products was the mildness of the acne. The most commonly used product was a facial cleanser. Most study subjects did not know the active ingredients in their OTC products. Since undergraduate, lecturers must provide knowledge about the active ingredients in OTC products because acne is a prevalent disease in clinical settings.

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