

Profile of Cosmetic Side Effect and Atopic Risk Factors in Aesthetic Polyclinic and Cosmetic Medical RSUP Dr. Sardjito Yogyakarta 2015-2017

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Keywords: Profile, side effects, cosmetics, atopic

Abstract: The purpose of this study is to determine the profile of cosmetic side effects and risk factors in patients with atopic. The study was conducted retrospectively based on the medical records of new patients with cosmetic side effects in Aesthetic Polyclinic and Cosmetic Medical Dr. Sardjito Yogyakarta from January 2015-December 2017 which 16.642 patients, with cosmetic side effect of 1.361 patients. The result showed that the profile of cosmetic side effects according to sex: 95.15% women, 4.85% men; by age category: adult 46.73%, teenager 29.02%, elderly 24.25%; based on the level of education: high school level is 44.12%, bachelor 33.33%, unknown 19.46%, master degree 2.31%, elementary school 0.77%. Profile of adverse effects based on diagnosis: Exogenous Ochronosis 34.68%, Acne Cosmetics 28.14%, Contact Irritant to Cosmetic 9.70%, Demodicidosis 8.52%, Steroid Acne 8.23%, Steroid Induced Rosacea 4.48%, Perioral Dermatitis 3.31%, Contact Allergy to Cosmetics 2.94%. The frequency profile of cosmetic side effects per year by age category from 2015-2017 respectively: adolescents 14.03%, 8.89%, 6.10%, adult 21.82%, 15.21%, 9.70%, and elder 7.05%, 8.45%, 8.74%. Prevalence of risk factors for atopy patients are determined by Atopic Skin Diathesis is 35%. It can be concluded that cosmetic side effects on women are more dominant than men. The most dominant side effects in adulthood, with high school education. The most dominant side effect of cosmetics is Exogenous Ochronosis while the most rare is Contact Allergy to Cosmetics. There is a tendency to decrease the frequency of the side effects in teenager and adult. However, there is an increase in elder age. Prevalence of risk factors for atopic patient is small.

1 INTRODUCTION

Cosmetic is a product that used on the body and face to enhance appearance. Cosmetic ingredients mostly contain chemicals such as sodium laureth sulphate, talcum, parabens, phthalates, mineral oil, triethanolamine and some heavy metals such as lead, arsenic, nickel, cadmium, mercury, silicon, etc. that can cause allergies even damage to skin tissue, cancer, and disruption of growth and reproduction function. Some of the side effects of cosmetic use including allergic contact dermatitis (DKA), irritant contact dermatitis, hyperpigmentation, hypopigmentation, exogenous ochronosis, cosmetic acne, contact urticaria (Prafitasari, 2010; J. N, 2015).

The use of cosmetic from year to year is increasing. In the USA there has been a rapid increase

in cosmetic use in the last decade whether the use of cosmetics through surgery or non-surgery, both in men and women. Some reasons of using cosmetic include improving quality of life, increasing prices and trust, increasing people's judgments on the social status of users. Atopic dermatitis is a common, chronic, relapsing, inflammatory skin disease that primarily affect young children. Atopy is defined as an inherited tendency to produce immunoglobulin E (IgE) antibodies in response to minute amounts of common environmental proteins such as pollen, house dust mites, and food allergens included cosmetics (Nash *et al.*, 2006; Sadick, 2008).

2 METHODS

This research is a cross sectional study conducted retrospectively based on medical records of new patients in Aesthetic Polyclinic and Cosmetic Medical Dr.Sardjito Yogyakarta from January 2015-December 2017. The number of patients as many as 16,642 people, patients suffering from cosmetic side effects as many as 1361 people. Patients are grouped by sex, age, education level, diagnosis. To evaluate the Atopic Skin Diathesis (ASD) Atopic Skin Diathesis (ASD) trend, with score criterion > 10 is Atopy (Dickel *et al.*, 2003). Due to hospital data limitations, the side effects evaluated with ASD were

2017 patients only, which amounted to 110 people. Data analysis techniques use descriptive statistics in the form of frequency tables, pie charts, bar charts, and prevalence percentages.

3 RESULT

Table 1 shows the profiles of people with side effect that's based on sex and age. Patients with side effects of women cosmetics as many as 1295 (95.15%), while men as many as 66 (4.85%). Grouped by age, adult sufferers 636 (46.73%), teenagers 395 (29.02%), elder 330 (24.25%).

Table 1. Profile of side cosmetic side effects based on gender and age

Characteristic	Years			Total
	2015	2016	2017	
Gender				
Male	19 (1.40 %)	22 (1.62 %)	25 (1.84 %)	66 (4.85 %)
Female	565 (41.51%)	421 (30.93 %)	309 (22.70 %)	1295 (95.15 %)
Age				
Teenager (15-24 yo)	191 (14.03 %)	121 (8.89 %)	83 (6.10 %)	395 (29.02 %)
Adult (25-49 yo)	297 (21.82 %)	207 (15.21 %)	132 (9.70 %)	636 (46.73 %)
Elder (≥50)	96 (7.05 %)	115 (8.45 %)	119 (8.74 %)	330 (24.25 %)

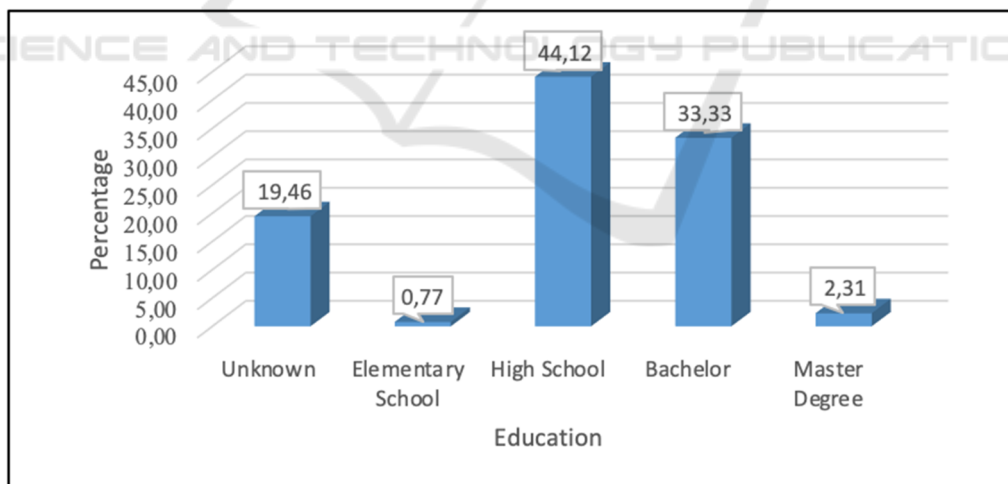


Figure 1. The profile of cosmetic side-effects patients by education level

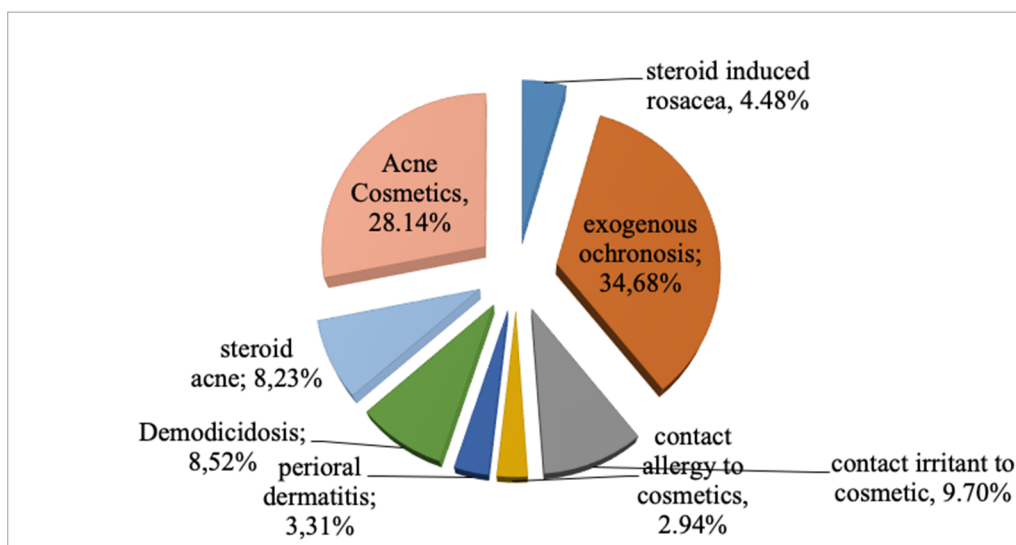


Figure 2. patient profile of cosmetic side effects based on the diagnosis

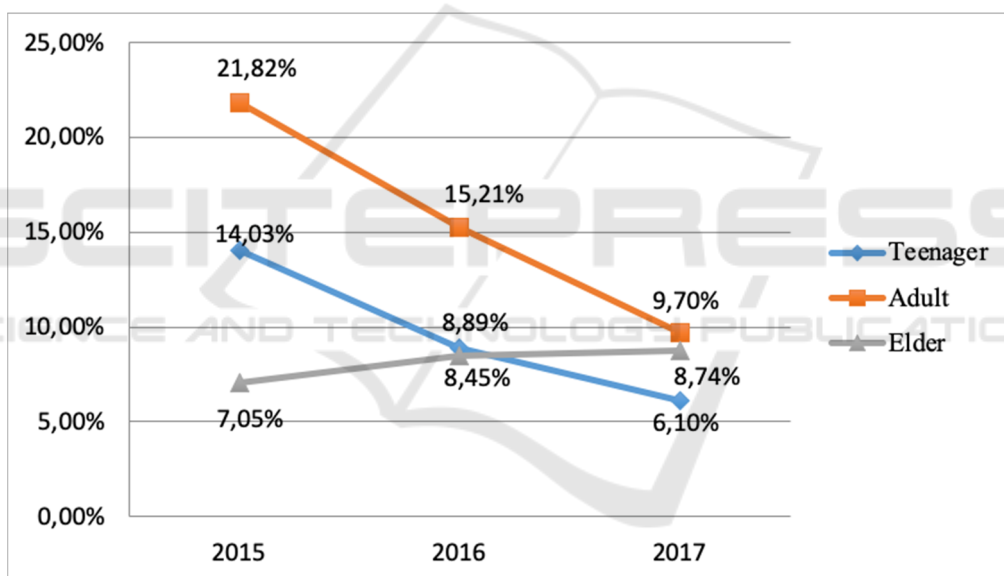


Figure 3. Increased trend of side effects for young, adult, and old age

The profile of cosmetic side effects based on the level of education is presented in Figure 1. The high school level is 44.12%, bachelor 33.33%, unknown 19.46%, master degree 2.31%, elementary school 0.77%. The profile of cosmetic side effects based on the diagnosis is presented in Figure 2. Exogenous Ochronosis 34.68%, Acne Cosmetics 28.14%, Contact Irritant to Cosmetic 9.70%, Demodicidosis 8.52%, Steroid Acne 8.23%, Steroid Induced Rosacea 4.48%, Perioral Dermatitis 3.31 %, Contact Allergy to Cosmetics 2.94%.

The frequency profile of patients with cosmetic side-effects per year by age category from 2015 to

2017: teenager (14.03%, 8.89%, 6.10%), adult (21.82%, 15.21%, 9.70%), and elder (7.05%, 8.45%, 8.74%). Figure 3 shows an increasing trend of cosmetic side effects from young, adult, and elder age. Appear at young and adult age there is a downward trend, whereas for elder age there is an increasing tendency.

From the total of side effects of 110 cases, 38 cases are Atopic patients. Thus the prevalence of Atopic risk factors on cosmetic side effects was 35%.

4 DISCUSSION

The results showed that side effects in women more than men. this is corresponding with the characteristic of women who tends to use more cosmetics than men. Considered of age, the side effects of adult is most dominant, followed by teenager and elder age. It can be explained that in adulthood people socialize so that it has more tendency to maintain the appearance of (Nash *et al.*, 2006; Sadick, 2008; Thomsen *et al.*, 2014; Akhlaghi *et al.*, 2015) so that the frequency and type of cosmetic usage is higher than elder age. Frequency of side effects of Exogenous Ochronosis, most dominant because most of the cosmetics used by women is skin whitening eg Hydroquinone (Findlay *et al.*, 1975; Hardwick *et al.*, 1989), but for the tropics as in Indonesia which tends to very strong sunlight, this triggers Ochronosis. The trend of side effects in teenager and adulthood is decreasing, while elder age it is increasing because elder skin is increasingly susceptible to disease.

5 CONCLUSION

Cosmetic side effects on women are more dominant than men. The most dominant side effect is in adulthood, with high school education. The most dominant side effect of cosmetic is Exogenous Ochronosis while the most rare is Contact Allergy to Cosmetics. There is a tendency to decrease the frequency of side effect in teenager and adulthood but in elder age there is an increase. Prevalence of risk factors for atopic patients is small.

ACKNOWLEDGEMENT

The author would like to delivered thanks to Yan Aditya Prabawa and Naura Syaffira Prabawa for their support in finishing this research. The author also delivered thanks to all staff of Dermatology and Venereology UGM for the guidance during residency.

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