Self-Medication for Dermatologic Diseases among Children Treated at the HRH Princess Maha Chakri Sirindhorn Medical Center

Arucha Treesirichod MD*,
Suthida Chaithirayanon MD*, Somboon Chansakulporn MD*

** Department of Pediatrics, Faculty of Medicine, Srinakharinwirot University, Nakhon Nayok, Thailand*

Background: *Skin diseases are one of the common problems in Pediatrics Outpatient Department. Because self-medication is practiced, it raises concerns of incorrect self-diagnosis, adverse drug reactions, and the cost of self-treatment. The aim of this study was to investigate the prevalence and the features of self-medicating for skin diseases among children who were observed at the dermatology clinic.*

Material and Method: *This prospective study was conducted in the Pediatric Outpatient Department. All patients seen on a first visit for skin problems were recruited, interviewed, and examined.*

Results: *Four hundred thirty seven patients were recruited in the study and the mean age was 4.6 years of age. Eczema was the most common diagnosis (43.7%), followed by fungal skin infections (7.1%), insect bites and infestations (6.9%), and bacterial skin infections (6.2%). Of all the patients, 204 (46.7%) had used self-medication. The most common reasons for self-medicating were convenience (82.3%), a friend and/or relative's recommendation (15.2%), and avoiding the cost of doctors' visits (2.0%). The most frequently encountered categories of medicines were topical corticosteroids (25.4%), antifungal agents (13.4%), antibacterial agents (8.2%), and others. Most products were obtained from pharmacies (66.2%). The average cost for self-medications was 204.7 Thai baht. Products applied by the topical route were the most common medications used (81.3%) and most patients had reported dissatisfaction with the results (95.1%). Adverse reactions resulting from self-medications were found to be at a rate of 17.1%. There were no significant relationships ($p>0.05$) between the practice of self-medication and the potential factors.*

Conclusion: *Self-medication use is most prevalent. Most patients had reported dissatisfaction from the use of self-medications. Adverse reactions resulting from self-medication were also found.*

Keywords: *Self-medication, Dermatologic disease, Children*

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Skin diseases are a common problem regularly seen in general practice. Self-medicating is often the chosen strategy prior to seeking professional healthcare. The prevalence of self-medication varies between 7.0 to 67.0% globally[1-4]. Generally, self-medication is recommended by friends or pharmacists but the treatment outcomes are usually unsatisfactory[1]. Topical and systemic treatments are the most common choices for self-medication. The concerns of the self-treatment do not limit themselves to the outcomes, but also adverse drug reactions that would possibly result from this strategy. Topical corticosteroids can cause local and systemic adverse drug reactions. Unfortunately, excessive and inappropriate use of systemic treatments such as antibiotics and antifungals may cause life-threatening adverse events[5,6].

In Thailand, over-the-counter medications are easily obtained in most pharmacies and consequently contribute to the risk of adverse drug events from the practice of improper self-medication. This has raised concerns of incorrect self-diagnoses, adverse drug reactions, and unnecessary expenditures of self-medications. The purpose of this study is to investigate the prevalence, potential risk factors, and characteristics in the practice of self-medication for skin diseases among children seen at the dermatology clinic in the HRH Princess Maha Chakri Sirindhorn Medical Center.

Correspondence to:
Treesirichod A, Department of Pediatrics, Faculty of Medicine, Srinakharinwirot University, 62 Moo 7, Rangsit-Nakhonnayok Road, Ongkharak, Nakhon Nayok 26120, Thailand.
Phone: +66-81-5935232
E-mail: trees_ar@yahoo.com

Material and Method

A prospective study was conducted between January and December 2013 in the outpatient clinic of HRH Princess Maha Chakri Sirindhorn Medical Center (MSMC), Department of Pediatrics, Faculty of Medicine, Srinakharinwirot University. All patients, under 18 years of age, who came to the outpatient clinic on a first visit, newly diagnosis with any skin problems, were enrolled, interviewed, and examined. Participants who were previously treated by any other physicians and all those who were known to have chronic skin conditions were excluded. Each participant's information was documented. This information included demographic data (age and gender), the parental socio-demographic information (age, gender, income, occupation, and educational level), and the reasons for self-medicating. Regarding self-medications, we had recorded the patterns of drugs used, the duration, the average cost, the results obtained, any adverse events, and the diagnosis of their skin diseases.

The study was reviewed and approved by the appropriate institutional review boards and the ethics committee of the MSMC. All participants had been provided with and signed letters of consent before engaging in this study.

Statistical analysis was evaluated using SPSS from IBM Singapore Pte Ltd. (Registration No. 1975-01566-C). The findings were analyzed using descriptive statistics. The association with the outcome was tested using Chi-square. The p-value <0.05 were considered to be statistically significant.

Results

Four hundred thirty seven subjects were enrolled in this study with a mean age of 4.6 years of age (range 1 month to 16 years). Most of the subjects were males (50.8%). Eczematous dermatitis was the most common presentation (43.7%), followed by the fungal skin infections (7.1%), insect bites and infestations (6.9%), bacterial skin infections (6.2%), birthmarks (5.9%), and others (30.2%) (Table 1). Most of the parental occupations were as employees of private companies and business owners as is shown in Fig. 1. Most of them were university graduates with bachelor's degrees and the average family income was more than 50,000 Thai baht/month as is shown in Fig. 2 and 3.

In all, 204 (46.7%) of those seen had used self-medications. The most common reasons for self-medicating were the convenience (82.3%), a friend and/or relative's recommendation (15.2%), avoiding the cost of doctors' visits (2.0%), and the long travel distances from the home and the hospital (0.5%). Most of these products were usually obtained from pharmacies (66.2%), the use of an old medication (25.0%), medications bought from convenience stores or department stores (6.8%), and the sharing of medications with neighbors (2.0%).

Products applied via the topical route were

Table 1. Skin conditions found in this study (self medication and non self-medication group)

Skin condition	Total n = 437 (%)	Patients with self-medication n = 204 (%)	Patients with non self-medication n = 233 (%)
Eczematous dermatitis	191 (43.7)	97 (47.6)	94 (40.3)
Fungal skin infection	31 (7.1)	17 (8.3)	14 (6.0)
Insect bite and infestation	30 (6.9)	18 (8.8)	12 (5.2)
Bacterial skin infection	27 (6.2)	17 (8.3)	10 (4.3)
Birthmarks	26 (5.9)	0 (0)	26 (11.2)
Exanthema	23 (5.3)	4 (1.9)	19 (8.2)
Miliaria	22 (5.0)	12 (6.0)	10 (4.3)
Urticaria	17 (3.9)	11 (5.4)	6 (2.6)
Acne and follicular disease	16 (3.7)	9 (4.5)	7 (3.0)
Dyspigmentation	12 (2.7)	6 (3.0)	6 (2.6)
Papulosquamous disease	12 (2.7)	3 (1.5)	9 (3.8)
Hair disease	10 (2.3)	1 (0.4)	9 (3.8)
Viral skin infection	7 (1.6)	3 (1.5)	4 (1.7)
Other skin disease	6 (1.4)	2 (0.9)	4 (1.7)
Nail diseases	6 (1.4)	3 (1.5)	3 (1.3)
Drug allergy	1 (0.2)	1 (0.4)	0 (0)

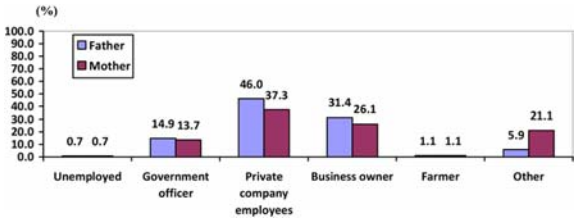

Fig. 1 The overall parental occupations of 437 subjects.

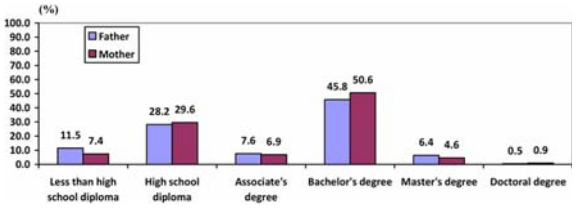

Fig. 2 The overall parental educational levels of 437 subjects.

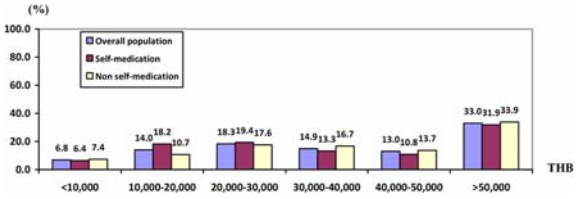

Fig. 3 The average family incomes of the overall population, self-medication and non self-medication group.

most commonly used (81.3%), followed by oral medications (10.3%), a combination of both topical and oral medications (5.4%), and herbal medicines (3.0%). In the self-medicating group, 34.3% of patients did not know the exact details of the medicines they were using. The types of medicines that were chosen were topical corticosteroids, topical antifungals, topical antibiotics, oral antihistamines, traditional topical ointments (Zambuk ointment®; eucalyptus oil, camphor, thyme oil, and colophony), calamine lotion, topical herbal products, and others with the rate of 25.4%, 13.4%, 8.2%, 7.5%, 7.5%, 11.9%, 4.5%, and 21.6% respectively.

Further analyses have revealed that 38.1% of patients whom have self-medicated have chosen the appropriate treatment. Most participants had reported dissatisfaction with self-medicating (95.1%). The average cost of self-medication was 204.7 Thai baht (0 to 10,000 Thai baht). The average duration of treatment before seeking professional help was 27.2 days (1-365 days)

Adverse reactions that can result from self-medicating have been found at a rate of 17.1%. Some of these reactions are a worsening skin rash (71.4%), dyspigmentation (19.9%), hirsutism (2.9%), and striae (2.9%). In this study, a patient with Stevens Johnson syndrome (2.9%) due to the self-treatment with co-trimoxazole was found. There was no significant relationship (p>0.05) between the practice of self-medication and parental age, parental occupation, total family income, and educational level among the respondents.

Discussion

The prevalence of self-medicating for common medical problems varied generally with a rate of 25.2 to 56.0%[1-4]. Likewise, the prevalence of self-medicating for skin problems had been shown to vary between 7.0 and 67.0%, globally, as noted in previous literature[1-4]. Nevertheless, there has not been any published data of self-medication, particularly for skin problems, here in Thailand. In our study, 46.7% of all the subjects in our study have ever used self-medication for their skin problems. Many factors can have an effect in the decision making for the use of self-medication. These factors are such as the educational and socio-economic status, family members experience and/or opinions, age, and gender[7]. Hence, there were numerous reasons in choosing the types of medications to treat their symptoms or most minor ailments without seeking medical help. Most of them were seeking this option as it is more convenient and not difficult to obtain the medications, even if there is the risk of improper treatment. In addition, other reasons that might influence the decision for self-medicating were that patients were given the advice of another person in hopes of avoiding the cost of the medical care and the long travel distances between the home and the hospital. Socio-economic status and the added costs from health care facilities are probable factors in the decision making process for choosing self-medication. Several studies have supported the findings that self-medication has been found to be a very common practice, especially in economically underprivileged communities[8,9]. In India, the studies had demonstrated self-medication was very common among the educated population[10,11]. However, in our study, there was no significant relationship between self-medication practice and stated factors.

The practice of self-medicating can also provide both benefits and risks[12,13]. Proper self-medication practices could offer values such as it is convenient, it is economic, saves time, and can decrease absence from work due to trivial symptoms. However,

there are probable risks that could occur from the practice of self-medication. Some of these are incorrect self-diagnosing, incorrect choice of therapy, failure to seek appropriate medical advice in a timely manner, failure to recognize pharmacological risks, and complications from adverse drug events[13]. To the healthcare providers, the major concern associated with self-medication is adverse drug events. Although there are several studies on adverse reactions, there are no accessible data about the rate of adverse reactions directly associated to self-medication for dermatologic diseases. Our study has shown that there is a high prevalence of self-medicating with topical corticosteroids. The potential side effects usually occur with unsuitable or unnecessary usage, especially in children. Some of these present as skin atrophy, dyspigmentation, striae, rosacea, hirsutism, perioral dermatitis, or possible adverse systemic effects[12]. Furthermore, self-medicating with systemic drugs has shown a greater risk for serious adverse events. One of these is Stevens Johnson syndrome, which was seen in one patient in our study. Improper self-medication could result in adverse drug events and could worsen the disease and result in an increase in expenses resulting in it becoming uneconomical.

Most of the products used in self-medicating were obtained from pharmacies or from medications that had been previously prescribed to another person. Consequently, the prevention of potential risks associated with self-medication requires multidisciplinary manipulation. Information, therapeutic advice, and education from healthcare providers are valuable resources to prevent the risks associated with self-medication[14]. Similarly, the pharmacists play an important role in helping to avoid drug related problems by educating their clients about the appropriate drug use. Although the greater part of healthcare services in Thailand is delivered by the public sector, medications can be easily purchased from convenience stores and pharmacies without prescriptions. Accordingly, the healthcare authorities and the pharmacists play an important role in preventing risks of self-medicating and in raising awareness of these problems. However, patients should also be encouraged to pursue professional medical advice to obtain proper treatment. This study has limitations that should be noted. It was conducted as single-center study, which may not represent the actual health situation. Further multicenter studies are needed to explore the role and impact of self-medication. As a questionnaire-interview study, it is also possible that results are not reflective of actual medication use due to information bias.

Conclusion

Self-medication is highly prevalent. Most patients have reported dissatisfaction when self-medicating. Adverse reactions resulting from self-medication have been found. Awareness and perception of the risks associated with self-medication should help in preventing possible complications.

What is already known on this topic ?

There are no reports on self-medication for skin diseases among children in Thailand.

What this study adds ?

The use of self-medication is highly prevalent. Risk awareness and perception of self-medication should help in preventing possible complications.

Acknowledgement

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Potential conflicts of interest

None.

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การรักษาโรคผิวหนังด้วยตนเองในผู้ป่วยเด็กก่อนพบแพทย์ในโรงพยาบาลศูนย์การแพทย์ สมเด็จพระเทพฯ

อรุชา ตรีศิริโชติ, สุธิดา ชัยธีระยานนท์, สมบูรณ์ จันสกุลพร

ภูมิหลัง: *โรคผิวหนังในเด็กเป็นปัญหาที่พบได้บ่อยและมีผู้ป่วยที่ทำการรักษาโรคผิวหนังด้วยตนเองก่อนพบแพทย์ ซึ่งอาจเกิดปัญหาในการวินิจฉัยโรค ผลข้างเคียงจากการใช้ยาและค่าใช้จ่ายที่เกิดขึ้นจากการรักษาด้วยตนเอง*

วัตถุประสงค์: *เพื่อศึกษาอุบัติการณ์และลักษณะการใช้ยารักษาโรคผิวหนังด้วยตนเองในผู้ป่วยเด็กก่อนพบแพทย์ ในโรงพยาบาลศูนย์การแพทย์สมเด็จพระเทพฯ*

วัสดุและวิธีการ: *ผู้ป่วยโรคผิวหนังรายใหม่ที่เข้ารับการตรวจรักษาที่แผนกผู้ป่วยนอกหน่วยโรคผิวหนังในโรงพยาบาล ศูนย์การแพทย์สมเด็จพระเทพฯ จะได้รับการบันทึกข้อมูลในแบบสอบถามและบันทึกการวินิจฉัยโรค*

ผลการศึกษา: *มีกลุ่มตัวอย่างจำนวน 437 คนที่เข้าร่วมโครงการ อายุเฉลี่ยของ 4.6 ปี กลุ่มโรคผิวหนังที่พบบ่อย ได้แก่ กลุ่มโรคผิวหนังอักเสบ (ร้อยละ 43.7) โรคผิวหนังจากเชื้อรา (ร้อยละ 7.1) ผื่นจากแมลงกัดและโรคหิด (ร้อยละ 6.9) โรคผิวหนังจากเชื้อแบคทีเรีย (ร้อยละ 6.2) และโรคอื่น ๆ จากการศึกษาพบว่ามีกลุ่มตัวอย่างร้อยละ 46.7 มีการรักษาโรคผิวหนังด้วยตนเองก่อนพบแพทย์ เหตุผลที่ตัดสินใจเลือกรักษาโรคผิวหนังด้วยตนเองก่อนพบแพทย์เนื่องจากสะดวก (ร้อยละ 82.3) มีคนแนะนำ (ร้อยละ 15.2) และหลีกเลี่ยงค่าใช้จ่ายจากการพบแพทย์ (ร้อยละ 2.0) โดยส่วนใหญ่จะเลือกใช้ยาจากร้านขายยา (ร้อยละ 66.2) ค่าใช้จ่ายที่เกิดจากการรักษาด้วยตนเองเฉลี่ย 204.7 บาท ยาที่ใช้ในการรักษาด้วยตนเองส่วนใหญ่เป็นยาทา (ร้อยละ 81.3) ผู้ป่วยร้อยละ 95.1 ไม่พึงพอใจต่อผลการรักษาด้วยตนเองและร้อยละ 17.1 พบผลข้างเคียงไม่พึงประสงค์จากการรักษาด้วยตนเอง จากการศึกษาไม่พบความสัมพันธ์ระหว่างการเลือกรักษาโรคผิวหนังด้วยตนเองก่อนพบแพทย์กับปัจจัยต่าง ๆ*

สรุป: *กลุ่มตัวอย่างมีอัตราการรักษาโรคผิวหนังด้วยตนเองสูง ผู้ป่วยส่วนมากไม่พอใจกับผลการรักษาด้วยตนเอง และพบมีผลแทรกซ้อนที่เกิดจากการรักษาโรคผิวหนังด้วยตนเองร่วมด้วย*