

## Healthcare data for clinical practice guideline of psoriasis patients in Phitsanulok

Wikunda Limpiangkanan, MD\* and Wichuda Limpiangkanan, MD\*\*

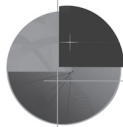
### Abstract

Thai Dermatological Society publicized a clinical practice guideline (CPG) for Thai psoriasis patients in 2010. However, as differences between patients and healthcare providers exist across the country. This study aims to survey healthcare data of psoriasis patients in Phitsanulok to develop a clinical practice guideline to be appropriate for the region. Analysis of responses to a questionnaire mailed to psoriasis patients who had been treated in public hospitals in Phitsanulok in aspect of demographic and healthcare data. Most Phitsanulok psoriasis patients received government health care service support - only 5% self-financed their psoriasis treatment in public hospitals; 96% lived more than 5 km<sup>2</sup> from hospital attended; about 40% visited the hospital more than four times per year. One third of patients had no knowledge about their own disease, and only 7% of those who self-assessed were well-informed about it. Healthcare data from Phitsanulok Psoriasis patients, such as number of annual visits, distance from home to hospital and patients' knowledge about the disease is very useful. Problems identified can be addressed in training physicians and healthcare workers in both hospitals and health stations.

**Keywords :** Psoriasis    Clinical Practice Guideline    Auto-immune disease

\* Department of Medicine    Faculty of Medicine    Naresuan University Muang District    Phitsanulok Thailand  
65000 E-mail : wikkylim@yahoo.com

\*\* Faculty of Medicine    Phayao University    Paholyothin Rd.    Muang District    Phayao  
E-mail : gift\_w\_l@hotmail.com    Tel : 08-9850-6939



## ข้อมูลด้านสาธารณสุขเพื่อพัฒนาแนวทางการดูแลผู้ป่วยสะเก็ดเงินจังหวัดพิษณุโลก

วิกัณดา ลิ้มปิอังคนันต์\* และ วิชชุดา ลิ้มปิอังคนันต์\*\*

### บทคัดย่อ

สมาคมแพทย์ผิวหนังแห่งประเทศไทยเผยแพร่แนวทางการดูแลผู้ป่วยสะเก็ดเงินในประเทศไทย ในปี พ.ศ. 2010 อย่างไรก็ตาม ในแต่ละท้องถิ่นมีความแตกต่างกันในแง่ผู้ป่วยและบุคลากรสาธารณสุข งานวิจัยนี้จัดทำขึ้นเพื่อสำรวจข้อมูลด้านสาธารณสุขของผู้ป่วยสะเก็ดเงินจังหวัดพิษณุโลก สำหรับการ พัฒนาแนวทางในการดูแลผู้ป่วยในจังหวัด โดยประยุกต์จากแนวทางการดูแลผู้ป่วยของสมาคมแพทย์ ผิวหนังแห่งประเทศไทย โดยการส่งแบบสอบถามทางไปรษณีย์ตามข้อมูลในเวชระเบียนของผู้ป่วยสะเก็ด เงินที่มีข้อมูลที่อยู่สมบูรณ์ทั่วทั้งจังหวัด และทำการวิเคราะห์ข้อมูลทั่วไปและข้อมูลด้านการเข้ารับบริการ ในสถานพยาบาล ผู้ป่วยสะเก็ดเงินจังหวัดพิษณุโลกส่วนใหญ่ได้รับการดูแลด้านค่าใช้จ่ายจากรัฐบาล มี เพียงร้อยละ 5 เท่านั้นที่ต้องชำระค่ารักษาพยาบาลเอง ผู้ป่วยร้อยละ 96 ต้องเดินทางจากที่พักมายัง สถานพยาบาลเป็นระยะทางมากกว่า 5 กิโลเมตร และผู้ป่วยร้อยละ 40 ต้องมาสถานพยาบาลเพื่อรักษา โรคสะเก็ดเงินมากกว่า 4 ครั้งต่อปี นอกจากนี้ หนึ่งในสามของผู้ป่วย ไม่มีความรู้เกี่ยวกับโรคสะเก็ดเงิน เลย ในขณะที่มีเพียงร้อยละ 7 เท่านั้นที่ประเมินตนเองว่ามีความรู้ดี การให้ความรู้ทั้งต่อแพทย์และเจ้า หน้าที่สถานื่อนามัยเพื่อให้สามารถดูแลผู้ป่วยอย่างถูกต้อง การจัดทำแนวทางการดูแลและการส่งต่อโดย สถานพยาบาลขนาดเล็ก น่าจะเป็นแนวทางเพิ่มเติมเพื่อแก้ปัญหาการเดินทางไกล ไม่พอใจคุณภาพ ผู้รักษา และเสียเวลาของผู้ป่วย

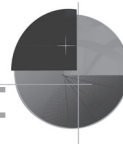
คำสำคัญ : สะเก็ดเงิน แนวทางการดูแลผู้ป่วย โรคระบบภูมิคุ้มกัน

\* ภาควิชาอายุรศาสตร์ คณะแพทยศาสตร์ มหาวิทยาลัยนเรศวร อ.เมือง จ.พิษณุโลก 65000

อีเมล : wikkylim@yahoo.com

\*\*คณะแพทยศาสตร์ มหาวิทยาลัยพะเยา ถ.พหลโยธิน ต.แม่กา อ.เมืองพะเยา จังหวัดพะเยา

อีเมล : gift\_w\_l@hotmail.com



## Introduction

Psoriasis is classified as the most prevalent immune-mediated adult skin disease (1). It is a chronic and inherited disease that affects between 1-2% of Caucasians, and about 0.1% of Asians (1-3). Around 85% of United States physicians prescribe topical corticosteroids as the first line of treatment, psoriasis is estimated to cost between 1.6 and 3.2 billion US dollars annually (4). Unfortunately, no cost data exists for Thai. Not only is annual cost of treatment high, psoriasis also has important effects to both physical and psychological aspects of patients (5). Thai Dermatological Society publicized a clinical practice guideline (CPG) for Thai psoriasis patients in 2010 (6). However, as differences between patients and healthcare providers exist across the country. More study and analysis of healthcare data in each region is necessary for development of local CPG.

Ministry of Interior data (December 2010) for Phitsanulok, which is located in the lower north of Thailand, has 9 districts with a total population of 849,692 people. It is the 16<sup>th</sup> largest province area and comprises 10,815,854 Km<sup>2</sup>. The mean annual income is 73,590 Baht. There are 279 working doctors (data from Ministry of Public health, Naresuan University and Military Affairs Hospital, December 2010.) under government healthcare service. These include 3 dermatologists and 1 rheumatologist. There is one university hospital namely Naresuan University, one tertiary center

hospital, 8 district hospitals and 143 healthcare centers. There are 325 completed address records of psoriasis patients in all public hospitals. In 2009, Limpiangkanan and Limpiangkanan(7) found that many patients did not make follow-up visits for reasons such as distance(33%), unqualified physicians (30%), wasted time (14%), and poor service (13%). Analysis of this data related to patients' problems is useful for developing an appropriate psoriasis clinical practice guideline specific to this region.

## Methods

Questionnaires were mailed to home addresses of psoriasis patient who had been treated in public hospitals in Phitsanulok. The subjects were psoriasis patients who had made at least two visits to an out-patients' ward. A trial to check validity and reliability of questionnaire items was undertaken with 10 psoriasis patients at the out-patient clinic of Naresuan University Hospital. The revised questionnaires were sent between October 2008 and Jan 2009 to 325 patients for whom complete addresses were held; 234 (79%) completed questionnaires were returned. The questionnaires provided information on 3 majors aspects viz. demographic data, healthcare data and patient satisfaction. Data was coded and entered into the computerized statistical analysis program-SPSS which enable simple percentages was determined. In this paper, only analysis of demographic and healthcare data is reported.



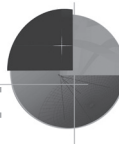
## Results

### Part I. Demographic data

Data from returned questionnaires showed that 77% of the patients were in the age range 21-60 years old, while 60+ and below-20's were only 18% and 5% respectively. There were more men than women - 63% v 37%, and 43% of the respondents graduated from primary school. A further 29% had completed secondary, and 20% were educated beyond secondary school level. Nine percent had no education. Annual income was 1,000-5,000 Thai Baht(ThB) for 37%; less than 1,000 ThB and more than 5,000 ThB were 29 and 33% respectively.

### Part II. Healthcare data

Most patients had government financial support and received reimbursement of costs from health insurance; only 5% had to pay from their own sources. In terms of distance from home to hospital, 57% lived more than 20 kilometers (Km) away, while 4% and 39% of patients were 0-5 km and 6-20 km distance respectively. Each patient attended for treatment 1-4 times, > 4 times and <1 time annually in 44,40, and 16% consecutively. Most patients (76%) got more than one modality of treatment, 22% were prescribed only topical drug, 1.3% received systemic and only 1% recieved photo therapy. About the acknowledgement of their own disease, the patients who had high level were only 7%, 32% had moderate and 28% that had low level. There are 33% that did not have any information about psoriasis. Data were detailed in Table 1.



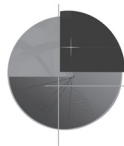
**Table 1** Health care data showed the information of healthcare payment provider, distance from health service, annual visiting time, treatment received, and patients knowledge of psoriasis

Characteristics	Number	Percentage
Healthcare payment		
Own payment	5	2.5
Reimbursement (insurance)	73	36.1
Government's free care	124	61.4
Distance (Kms)		
0-5	8	4.0
6-20	79	39.3
>20	114	56.7
Annual visiting time		
<1	36	15.7
1-4	101	44.1
>4	92	40.2
Previous therapy		
Topical treatment	51	22.0
Systemic treatment	3	1.3
Phototherapy	2	0.9
>1 modality of treatment	176	75.9
Knowledge of psoriasis		
None	78	33.3
Low	66	28.2
Moderate	74	31.6
High	16	6.8

## Discussion

Psoriasis is not only a disease with an unpredictable cause, but it is also a chronic disease. Patients have to visit the healthcare

center to continue their medication; more than 40% of Phitsanulok psoriasis patients visited more than 4 times per year. Moreover, 57% lived more than 40 kms from the hospital. This



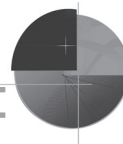
data may be related to information from Ministry of Interior on the size of Phitsanulok province - the 16<sup>th</sup> largest province in Thailand in area. As it has only 9 districts, each district also covers a huge area. Patients have a long distance to travel to hospitals in the city or district.

Despite the existence of 143 healthcare centers in each Tambon, patients still preferred to visit larger hospitals for three main reasons. First, most psoriasis patients are anxious about their illness: studies have shown that 60% of patients report depression and 10% wish to be dead (5). A telephone survey in 1998 reported that 49% of patients were completely dissatisfied with their current treatment, while 32% thought that their treatment was not aggressive enough(8). The above statistical evidence indicates that it is very important to reassure psoriasis patients that they are receiving the best treatment. Second, healthcare center workers who usually care for patients with common diseases, prescribing simple drugs especially topical treatment lack confidence in assessing and caring for psoriasis sufferers as they have never been trained to do so. A final but important reason is limitations in supply of advance drugs and technical processes such as phototherapy that are available only in big hospitals. These three reasons explain the problems of the patients in the previous our report (7). Distance appears to be the reason why 34% do not return for more treatment and 31% thought it wasted their time.

Solutions include training physicians and

healthcare workers at every healthcare center so that they are skilled in caring for simple psoriasis cases. Developing knowledge and skills in how to approach psoriasis patients, grade severity and select proper topical treatment for those whose diagnosis has been confirmed by physicians might take time at the beginning, but will advantage both patients and workers in the future. However, where psoriasis is complicated or advanced, patients should be sent for hospital treatment. Concerns include over-dosing, treatment-related side effects, under-dosing and non-satisfied patients (9). The key features of healthcare workers protocol should included the efficacy, cost and safety that contribute to therapeutic adherence (10).

Another important issue is patients' education. Data showed that 33% of patients self-assess though they lack knowledge about psoriasis; only 7% self-assess well. Psoriasis is a complex illness that has many co-morbid diseases such as diabetes, metabolic syndrome, hypertension, and cardiovascular diseases (11, 12). Not only must health care workers know well how to screen and do further evaluation, but patients also should be taught to take care themselves. However, education should not overload patients with data. In fact, studies show that on average patients can absorb only 3 takehome messages at a time; paying attention to questions from patients is also important (10). Moreover, after training workers and educating patients, consideration should be given to the set-up for healthcare team and establishing an association for patients. Good relationships



would likely increase adherence to therapy. (8,10).

Finally, insufficient and outdated technology is a limitation of the province's health service. There is only one old phototherapy machine in Phitsanulok's tertiary care center hospital. That is insufficient to support all patients in CPG of Thai Dermatologic Society. Although systemic treatment for most complicated patients is quite effective and has high cost-benefits. (2,13-15), more needs to be done to develop the phototherapy center. A weak point of Thai CPG is the loss of evidence-base information that is very crucial in practice.(16)

In conclusion, to solve such main problems as distance and loss of time visiting the hospital, CPG of Phitsanulok psoriasis patients should be more concerned about distribution of health care to small health care centers through training healthcare workers and educating patients about how to treat their condition.

#### Acknowledgement

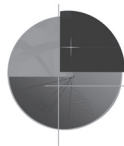
The authors would like to express appreciation to Professor Dr. Waykin Nopanitaya for critical reading, and to Professor Dr. John Wilson, Burapha University for proofreading and comments on the original draft of this paper.

This research was supported by the Research Grant of Faculty of Medicine, Naresuan University, Thailand.

#### References

1. Lowes M.A., Bowcock A.M., Krueger J.G.: Pathogenesis and therapy of psoriasis. *Nature* 445:866-73, 2007.
2. Menter A., Korman N.J., Elmetts C.A., Feldman S.R., Gelfand J.M., Gordon K.B. et al.: Guidelines of care for the management of psoriasis and psoriatic arthritis section 6 Guidelines of care for the treatment of psoriasis and psoriatic arthritis: case based presentations and evidence-based conclusions. *J. Am. Acad. Dermatol* 2011. (cited 2011 May 15); Available from: <http://www.aad.org/.../Education%20and%20quality%20care/AAD-guideline-psoriasis-sect-6.pdf>.
3. Nestle F.O., Kaplan D.H., Barker J.: Psoriasis. *N. Eng. J. Med.* 361:496-509, 2009.
4. Kulkarni A.S., Balkrishnan R., Richmond D., Pearce D.J., Feldman S.R. : Medication-related factors affecting health care outcomes and costs for patients with psoriasis in the United States. *J. Am. Acad. Dermatol.* 52:27-31, 2005.
5. Menter A., Gottlieb A., Feldman S.R., Voorhees A., Leonardi C.L., Gordon K.B. et al. : Guidelines of care for the management of psoriasis and psoriatic arthritis section 1 Guidelines of care for the treatment of psoriasis with biologics. *J. Am. Acad. Dermatol.* 58:826-50, 2008.





6. Nopadon Noppakun, Natta Rajatanavin, Puan Suthipinittharm, Porntip Puvabanditsin, Rutsanee Akaraphan, Chanitsada Tuchinda et al. Clinical Practice Guideline for Psoriasis; Clinical Practice Guideline. 93-126, 2010. (cited 2010 Dec 15). Available from: [http://www.dst.or.th/files\\_news/Psoriasis\\_2010.pdf](http://www.dst.or.th/files_news/Psoriasis_2010.pdf)
7. Limpiangkakan W., Limpiangkakan W.: Factors Affecting Inconsistency Hospital Visits of Psoriasis Out-Patients, Faculty of Medicine, Naresuan University report, 2009. (In Press)
8. Kimball A. B., Gladman D., Gelfand J.M., Gordon K., Horn E.J., Korman N.J. et al.: National Psoriasis Foundation clinical consensus on psoriasis comorbidities and recommendations for screening. J. Am. Acad. Dermatol. 58:1031-42, 2008.
9. Savary J., Ortonne J. P., Aractingis S.: The right dose in the right place: an overview of current prescription instruction and application modalities for topical psoriasis treatments. J. Eur. Acad. Dermatol. 19(3):14-7, 2005.
10. Feldman S. R., Horn E. J., Balkrishnan R, Basra MK., Finlay AY., McCoy D. et al. Psoriasis: Improving adherence to topical therapy. J Am Acad Dermatol. 59(6):1009-11, 2008.
11. Kimball A. B., Gladman D., Gelfand J. M., Gordon K., Horn E. J., Korman N. J. et al. National Psoriasis Foundation clinical consensus on psoriasis comorbidities and recommendations for screening. J. Am. Acad. Dermatol. 58:1031-42, 2008.
12. Gottlieb A. B., Dann F. : Comorbidities in Patients with Psoriasis. Am. J. Med. 122:1150.e1-9, 2009.
13. Berger K., Ehlken B., Kugland B, Augustin M. : Cost-of-illness in patients with moderate and severe chronic psoriasis vulgaris in Germany. J. Dtsch Dermatol Ges. 3:511-8, 2005.
14. Sizto S., Bansback N., Feldman S.R., William M.K., Anis A.H.: Economic evaluation of systemic therapies for moderate to severe psoriasis. Br. J. Dermatol. 160:1264-72, 2009.
15. Menter A., Korman N.J., Elmetts C.A., Feldman S.R., Gelfand J.M., Gordon K.B. et. al.: Guidelines of care for the management of psoriasis and psoriatic arthritis section 4 Guidelines of care for the management of psoriasis and psoriatic arthritis. J. Am. Acad. Dermatol. 61:451-85, 2009.
16. Gorman S.K., Chung M. H., Slavik R. S., Zed P. J., Wilbur K., Dhingra V. K.: A critical Appraisal of the quality of critical care pharmacotherapy clinical practice guidelines and their strength of recommendations. Intensive Care Med. 36:1636-43, 2010.