

The Study of Medication Compliance of Sick Priests at Outpatient Department of Priest Hospital

การศึกษาความร่วมมือในการใช้ยาของพระสงฆ์อาพาธที่มารักษาที่แผนกผู้ป่วยนอกโรงพยาบาลสงฆ์

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The present study was aimed to determine the incidence, causes, and factors affecting medication noncompliance in sick priests, who visited outpatient department of Priest Hospital during August to September, 2010. Priests who came for medication dispensing at outpatient pharmacy unit, pharmacy department were randomized to be interviewed about their baseline illnesses, intake habits of medication, and reasons concerning medication noncompliance. Data of noncompliance and factors affecting medication noncompliance were analysed by descriptive statistics, presented as frequency and percentage. The association between factors and noncompliance problem was determined by chi-square test. Significant level was set at $p < 0.05$. During the study period, there were 74 sick priests enrolled into the study. Medication noncompliance was found in 44 sick priests (59%). The first 3 commonly found problems were forgetfulness of medication intake, early discontinuation of treatment, and running out of medication before date of appointment (30%, 26%, and 20%, respectively). Concerning the most common causes of these problems, habitual behavior was the most common cause of the forgetfulness to take medication (77%), while self-feeling of better was the ultimate origin of the early discontinuation of treatment (44%). For the running out of medication before date of appointment, most of them (54%) were caused by insufficient supply from hospital. Presence of underlying disease or chronic disease was significantly related to medication noncompliance ($p < 0.05$) when compared to those without underlying disease. It was concluded that medication noncompliance was a common drug-related problem in sick priests presenting with either acute or chronic illness.

Keywords: Medication compliance, priest

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ธนรัตน์ สรวลเสน่ห์, ณัฐนันท์ โชติวิรัตน์, สุวัฒน์ ดันเฉลิมชัย, ปริญญา พิธีธรรมานนท์, บุษบา จินดาวิจักษณ์. การศึกษาความร่วมมือในการใช้ยาของพระสงฆ์อาพาธที่มารักษาที่แผนกผู้ป่วยนอก โรงพยาบาลสงฆ์. วารสารเภสัชกรรมโรงพยาบาล 2556; 23(2): 86-93.

การศึกษานี้มีวัตถุประสงค์เพื่อศึกษาอุบัติการณ์ สาเหตุ และปัจจัยซึ่งส่งผลทำให้เกิดความไม่ร่วมมือในการใช้ยาของพระสงฆ์อาพาธที่มารับการรักษาจากแผนกผู้ป่วยนอก โรงพยาบาลสงฆ์ระหว่างเดือนสิงหาคมถึงเดือนกันยายน 2553 พระสงฆ์ที่มารับยาจากห้องจ่ายยาผู้ป่วยนอกจะถูกสุ่มเพื่อสอบถามเกี่ยวกับประวัติความเจ็บป่วยทั่วไป พฤติกรรมการใช้ยา และปัจจัยที่อาจมีผลต่อความไม่ร่วมมือในการใช้ยา ทำการวิเคราะห์ปัญหาความไม่ร่วมมือและปัจจัยที่มีผลต่อความไม่ร่วมมือด้วยสถิติเชิงพรรณนาโดยแสดงเป็นความถี่และร้อยละ ศึกษาความสัมพันธ์ระหว่างปัจจัยและปัญหาความไม่ร่วมมือด้วยสถิติไคสแควร์ ความแตกต่างมีนัยสำคัญทางสถิติที่ $p < 0.05$ ในระหว่างการศึกษามีพระสงฆ์เข้าร่วมการศึกษา จำนวน 74 รูป พบอุบัติการณ์ของความไม่ร่วมมือในการใช้ยาจำนวน 44 รูป (ร้อยละ 59) โดยปัญหาของความไม่ร่วมมือในการใช้ยาที่พบมาก 3 อันดับแรก คือ ลืมฉันทยา (ร้อยละ 30) รองลงมา คือ หยุดยาก่อนกำหนด (ร้อยละ 26) และยาหมดก่อนการพบแพทย์ครั้งต่อไป (ร้อยละ 20) เมื่อศึกษาถึงสาเหตุของความไม่ร่วมมือในการใช้ยา พบว่าสาเหตุหลักของการลืมฉันทยา คือ การลืมเป็นนิสัย (ร้อยละ 77) สำหรับสาเหตุส่วนใหญ่ของการหยุดยาก่อนกำหนด เป็นเพราะรู้สึกว่าการดื้อขึ้น (ร้อยละ 44) ในส่วนของปัญหาหยุดยาก่อนการพบแพทย์ครั้งต่อไป ส่วนใหญ่เป็นเพราะได้รับยาจากโรงพยาบาลไปไม่เพียงพอกับวันนัด (ร้อยละ 54) เมื่อพิจารณาถึงปัจจัยที่มีผลทำให้เกิดความไม่ร่วมมือในการใช้ยา พบว่าการไม่มีโรคประจำตัวมีความสัมพันธ์กับความไม่ร่วมมือในการใช้ยามากกว่าการมีโรคประจำตัวอย่างมีนัยสำคัญทางสถิติ ($p < 0.05$) ผลการศึกษาสรุปได้ว่าความไม่ร่วมมือในการใช้ยาเป็นปัญหาทางยาที่พบบ่อยในพระสงฆ์อาพาธที่มารักษาด้วยอาการเจ็บป่วยแบบเฉียบพลัน หรือเรื้อรัง

คำสำคัญ: ความร่วมมือในการใช้ยา พระสงฆ์

Introduction

Appropriate use of medication is an important part of successfully pharmacotherapeutic outcomes and reducing health care costs.¹ Only patients that take medications will receive their benefits, thus the compliance to the treatment medications per prescription is quite important. Medication compliance is defined as “the act that conforms to the recommendations of the provider with respect to timing, dosage, and frequency of medication intake”.² Medica-

tion compliance can be measured over a period of time and reported as a percentage,³ then compliance can be dichotomous classified as “good” or “poor” compliance.

Noncompliance to treatment or poor medication compliance is commonly found in real practice. Poor medication compliance results in adverse health outcomes and increased health care costs. Many factors can contribute to medication noncompliance. Such factors are aging, financial status, comorbid diseases, disease-

related perception, adverse drug reactions, and complexity of drug regimen.⁴

Priests are a special population in Buddhism country including Thailand. They have distinct habit from general people, such as having only 1-2 meals a day, being prohibited from choosing food or drink, and believing in alternative treatments. These behaviors may have impact on medication adherence when they were sick.

Objectives

The present study was aimed to determine the incidence, causes, and factors affecting medication noncompliance in sick priests, who visited outpatient department of Priest Hospital

Methods

This was a cross-sectional study designed to interview sick priests who visited the outpatient department of Priest Hospital. A questionnaire composed of 3 parts was developed. The first part was intended to collect general data of sick priests, the second part was intended to detect noncompliance problem, and the third part was intended to determine factors causing noncompliance problem. All sick priests who visited the outpatient department and came for medication dispensing at outpatient pharmacy unit during 1 August to 30 September 2010, except those who had psychological problems or were unable to communicate or were deaf or

refused to participate, were eligible for the study. They were randomized by convenience sampling method. The included sick priests were asked to give an informed consent, and then were interviewed according to the questionnaire.

All data were analysed by descriptive statistics, and presented as frequency and percentage of patients. The association between factor and medication noncompliance were analysed by chi square test. A p value less than 0.05 was considered statistically significant.

This protocol was reviewed and approved by the Institutional Review Board of Priest Hospital.

Results

During a 1-month study period, 74 sick priests were recruited. The average age was 53.6 ± 12.5 years (range, 20 to 78 years). Most of them (76%) had at least one underlying disease or chronic disease such as hypertension, diabetes, hyperlipidemia, acute coronary syndrome, osteoarthritis, and back pain. Their education was mainly at primary level (42%), followed by secondary level (27%) and bachelor degree (15%).

It was found that 59% of sick priests (44 out of 74) had poor medication compliance (Figure 1). Interestingly, less number of sick priests with at least one underlying disease or chronic disease had poor compliance compared to those without underlying disease or chronic

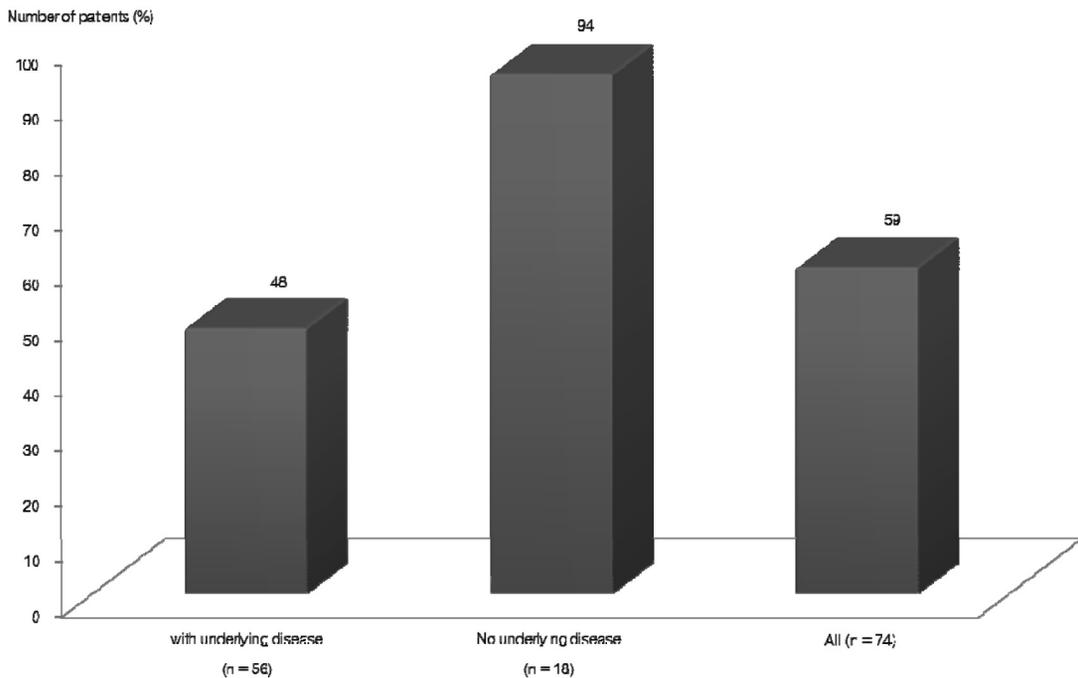


Figure 1 Number of priests (%) with poor medication compliance

disease (27 sick priests or 48% vs 17 sick priests or 94%).

Forgetfulness of medication intake, early discontinuation of treatment and running out of medication before date of appointment were the most encountered problems (30%, 26%, and 20%, respectively; Table 1). In detail, it was found that the three leading problems in the group of sick priests who had underlying disease or chronic disease were forgetfulness of medication intake, running out of medication before date of appointment, and early discontinuation of treatment (33%, 26%, and 19%, respectively) while in the other group of sick priests with no underlying disease, early discontinuation of treatment was the most common problem, followed by forgetfulness of medica-

tion intake, incorrect administration time, and incorrect dosage regimen were the most commonly found (42%, 30%, 11%, and 11%, respectively).

Upon the causes of poor medication compliance (Table 2), habitual behavior was the common cause of forgetfulness of medication intake (77%), followed by doing daily activities (33%) such as priest’s activities, religiously receiving the food offered by people in the morning, and praying. Self-feeling of better or developing side effects or feeling worse were the origin of early discontinuation of treatment (44%, 26%, and 22%, respectively). For the running out of medication before date of appointment, the most common cause was the insufficient supply from hospital (54%), follo-

Table 1. Percentage of sick priests who had poor medication compliance, classified by type of problems

Type of problems	Percentage of priests		
	All sick priests (n = 74)	Priests with at least one underlying disease or chronic disease (n = 27)	Priests with no underlying disease or chronic disease (n = 17)
Forgetfulness of medication intake	30	33	30
Early discontinuation of treatment	26	19	42
Running out of medication before date of appointment	20	26	0
Incorrect administration time	10	11	11
Incorrect dosage regimen	9	7	11
Sharing medications with others	4	4	0
Taking broken tablet	1	0	6

Table 2. Causes of the most found problems of poor medication compliance

Type of poor medication compliance problems	Causes	Number of priests (%)
Forgetfulness of medication intake	Habitual behavior	77
	Doing daily activities	33
	- Priest's activities	16
	- Religiously receiving the food offered by people in the morning	11
	- Praying	6
Early discontinuation of treatment	Feeling better	44
	Developing side effects	26
	Feeling worse	22
	Using herbal medicine instead of medications	8
Running out of medication before date of appointment	Insufficient supply from hospital	54
	Loss of previous follow-up	31
	- Loss due to private business	19
	- Loss due to feeling well	12
	Sharing medications to others	15

wed by loss of previous follow-up (31%) and sharing medications to others (15%).

Regarding factors affecting medication noncompliance, it was found that only the presence of underlying disease or chronic disease had influence on medication noncompliance.

Sick priests without underlying disease or chronic disease had more number of poor medication compliance than those with underlying disease or chronic disease ($p < 0.05$). Age, sex, and educational level had no influence on medication noncompliance (Table 3).

Table 3. Comparison of factors and their effect on medication compliance

	Percentage of priests		p value
	Good compliance	Poor compliance	
Age			>0.05
< 65 years	31	51	
> 65 years	10	8	
Educational levels			>0.05
No	0	1	
Primary level	16	26	
Secondary level	15	12	
Diploma or equivalence	3	5	
Bachelor degree	4	11	
Others	3	4	
Underlying disease or chronic disease			<0.05
Yes (at least 1 disease)	40	36	
No	1	23	

Discussion

Since poor medication compliance was commonly found in patients with chronic diseases including priests, but there was a little evidence of medication compliance in patients with acute condition.⁵⁻⁶ Hence, the aim of our study was primarily to determine the figure of medication noncompliance in sick priests with either acute or chronic condition (without or with underlying disease). All outpatient priests were randomized for interviewing at the pharmacy department while they came for pick up medications. All participants were well cooperated to answer the questionnaire. Few of them could not remember all detail of their medication taking history but there were no impact on this study.

The authors found that sick priests with no underlying disease or acute disease had very

high rate of medication noncompliance than those with underlying disease or chronic disease, and this difference was statistically significant. Early discontinuation of treatment and forgetfulness of medication intake were the most common noncompliance problems found in sick priests with acute disease. Incomplete treatment of some acute condition (such as back pain, migraine, sinusitis, allergic rhinitis) may cause transformation of acute to chronic condition.⁷⁻⁹ These may lead to increase the overall future cost of treatment. In addition, some sick priests without underlying disease reported their unawareness to take medication despite it was an incomplete tablet. Changes in drug plasma concentration may alter therapeutic outcome and safety.

Focus in sick priests with underlying disease, the proportion of priests who had poor

medication compliance (48%) did not differ from general population in previous studies which were in range of 43-78%.³ Because the authors aimed to study medication compliance in term of overall compliance of priests with chronic disease, thus we did not mention about their individual diseases. Forgetfulness of medication intake was found at same status in both groups, while early discontinuation of treatment was in lower figure in sick priests with underlying disease than those without. This might because of priests with underlying disease has been educated from healthcare professionals about their diseases and consequences, therefore they tried to take medication continuously.

Running out of medication before date of appointment was another problem which only found in the group of sick priests with underlying disease. The main reason of this problem was due to insufficient medication supply from hospital. This might be an error from physicians' order or from pharmacists. Physician might order medications for 2 months which pharmacist usually supplied each medication by 60 pills exactly. However, some period of two months was longer than 60 days, thus they might miss this few days medications.

Concerning early discontinuation of treatment in sick priests without underlying disease or chronic disease which found in higher proportion than those with underlying disease or chronic disease, feeling better in their clinical symptoms was the most possible cause of dis-

continuation. This may be related to their acute condition which usually was resolved rapidly after receiving appropriate treatment. In contrast, if side effects developed after taking medication or they feeling worse in their clinical symptoms, their medication had high chance to be discontinued.

From this finding, appropriate dispensing information and/or drug counseling should be implemented forcefully to priests with acute condition especially transformable condition as do with priests who had underlying disease or chronic disease. Many strategies to improve cognitive skills of priests such as calendaring, and specified time of administered should be emphasized because forgetfulness to take medication was mostly occurred from their habitual behavior.

Conclusions

From our study, it revealed that there were high figure of medication noncompliance in outpatient priests. The presence of underlying disease was related to develop medication noncompliance. Early discontinuation of treatment was more prominent in priests without underlying disease than those with underlying disease. Medication noncompliance in priests was originated mainly from their habitual behavior and dispensing system and/or policy of the hospital, while there was a small effect from regular priests' activities on medication compliance.

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