UNIVERSITI TEKNOLOGI MARA

UTILIZATION OF NON-STEROIDAL ANTI INFLAMMATORY DRUGS AT KLANG PRIMARY HEALTHCARE CLINICS

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ABSTRACT

Non-steroidal Anti Inflammatory Drugs (NSAIDs) are among the most frequently prescribed medications worldwide especially in the developed countries. NSAIDs are a common cause of reported adverse drug side-effects and their safety profiles always become a concern. Despite its therapeutic effects, NSAIDs is associated with side effects involving the upper gastro-intestinal tract (GIT), cardiovascular system and renal function. This is a retrospective drug utilization study of NSAIDs available at Klang Health District primary healthcare government clinics. Patient's data who were NSAIDs user were extracted from electronic system namely e-CMS system. The Defined Daily Dose (DDD) and anatomical therapeutic chemical (ATC) were used in the analysis and comparison of data. The objective of the study is to describe the utilization pattern of non-steroidal anti-inflammatory drugs (NSAIDs) at Klang Health District primary healthcare clinics. The specific objectives for this study are to assess the pattern of NSAIDs prescribed, to estimate Define Daily Dose (DDD) for each NSAIDs prescribed, to determine relation in pattern of NSAIDs usage with patient's characteristics and to identify potential NSAIDs prescription related problem. A total of 852 records were retrieved from 3 respective clinics namely Klinik Kesihatan Anika, Bukit Kuda and Pandamaran with the mean age of 45.5 years old (SD 1.63). Based on their DDD's, the most prescribed NSAIDs were Diclofenac (1.5725), Mefenamic Acid (1.4108), Ibuprofen (0.0166) and Meloxicam (0.0016). Majority of patients received NSAIDs for 5 to7 days; only for acute cases. Regardless of the age category, gender and race, the main reason of prescribing NSAIDs were because of pain involving musculoskeletal system, pain involving infection at multiple sites and pain involving nervous system. There is no significant association between age category and status of patients who followed WHO defined daily dosage of ($p=0.522$) for Diclofenac. There is also no significant association between gender and races and status of patients who followed WHO defined daily dose ($p=0.295$, $p=0.714$) respectively. Among the NSAIDs user, around 3.2% to 17.6% (according to clinics) had chronic conditions such as hypertension, diabetes mellitus and cardiovascular disease. The prevalence of concurrent antihypertensive usage among all NSAIDs user were 1.8% to 22.9% according to clinics. Mean prevalence of potential drug-drug interaction with NSAIDs in Klang Health District clinics is 8.6%. All potential drug-drug interactions with NSAIDs were involving diuretics and ACE Inhibitors. This study is able to show NSAIDs drug utilization habit among patients especially who were at risk for NSAIDs adverse event or who have chronic conditions that should be monitored closely for adverse event. It was also notable that there is potential drug-drug interactions of NSAIDs prescribed in this study. These results should raise awareness to prescribers and pharmacists of such risk and work collaboratively to encourage safe prescribing and use of NSAIDs.

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TABLE OF CONTENTS

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	xii
CHAPTER ONE: INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Research Objective	3
1.4 Research Question	3
1.5 Significance of the Study	4
1.6 Rational/Aims of the Study	4
CHAPTER TWO: LITERATURE REVIEW	5
2.1 Healthcare system in Malaysia	5
2.2 Non-Steroidal Anti Inflammatory Drugs (NSAIDs)	6
2.3 Rational Use of Medicine	10
2.4 Drug Utilization Study	11

2.5 Defined Daily Dose 12
2.2 Drug utilization Study of NSAIDs 14
2.3 Drug Safety of NSAIDs 16

CHAPTER THREE: METHODOLOGY 19
3.1 Study Design 19
3.2 Study Flow Chart 20
3.3 Inclusion and Exclusion Criteria 20
3.4 Sampling Procedure 21
3.5 Study Sample 22
3.6 Outcome Parameter 24
3.7 Statistical Analysis and Interpretation 25
3.8 Ethical Considerations 25

CHAPTER FOUR: RESULTS 27
4.1 Demographic and Patients Characteristic 27
4.2 Drug Pattern and Utilization 30
4.3 Quality of Use of Non-Steroidal Anti Inflammatory Drugs 66

CHAPTER FIVE: DISCUSSION 73
5.1 Drug Pattern and Utilization 73
5.2 Quality of Use of NSAIDs 74

CHAPTER SIX: CONCLUSION, RECOMMENDATIONS AND LIMITATION 78
6.1 Conclusion and Recommendations 78
6.2 Limitation of the Study 79

REFERENCES 80
APPENDICES 84