

TABLE OF CONTENTS

APPROVAL PAGE	ii
PLAGIARISM FREE STATEMENT	iii
PREFACE	iv
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
TABLE OF FIGURES	x
LIST OF ABBREVIATION	xi
ABSTRACT	xiii
INTISARI	xiv
CHAPTER I	1
INTRODUCTION	1
A. BACKGROUND	1
B. PROBLEM FORMULATION	3
C. OBJECTIVES	4
1. <i>General Purpose</i>	4
2. <i>Special Purpose</i>	4
D. RESEARCH AUTHENTICITY	4
E. STUDY BENEFIT	6
1. <i>For the Author</i>	6
2. <i>For the Community</i>	6
3. <i>For Educational Institutions</i>	6
CHAPTER II	7
LITERATURE REVIEW	7

A.	LITERATURE REVIEW	7
1.	<i>Adverse Cutaneous Drug Reactions</i>	7
2.	<i>Common Adverse Cutaneous Drug Reactions in HIV Patients</i>	9
2.1.	<i>Maculopapular morbilliform/maculopapular eruption (EM)</i>	9
2.2.	<i>Stevens-Johnson syndrome/toxic epidermal necrolysis (SJS/TEN)</i>	10
2.3.	<i>Drug Rash with Eosinophilia and Systemic Symptoms (DRESS)</i>	13
2.4.	<i>Acute Generalized Exanthematous Pustulosis (AGEP)</i>	15
3.	<i>Anti-retroviral Therapy</i>	17
3.1.	<i>Protease Inhibitors (PIs)</i>	17
3.1.1.	<i>Lopinavir/ritonavir</i>	17
3.2.	<i>Non-nucleoside analogue reverse transcriptase inhibitors (NNRTIs)</i>	18
3.2.1.	<i>Nevirapine</i>	18
3.2.2.	<i>Efavirenz</i>	18
3.3.	<i>Nucleoside reverse transcriptase inhibitors (NRTIs)</i>	19
3.3.1.	<i>Tenofovir</i>	19
3.3.2.	<i>Emtricitabine</i>	19
3.3.3.	<i>Lamivudine</i>	20
3.3.4.	<i>Stavudine</i>	20
3.4.	<i>Integrase inhibitors</i>	20
3.4.1.	<i>Raltegravir</i>	21
B.	BASIC THEORY	21
C.	CONCEPTUAL FRAMEWORK	22
	CHAPTER III	23
	METHODOLOGY.....	23
A.	TYPE AND STUDY DESIGN.....	23
B.	TIME AND STUDY SETTING.....	23
C.	STUDY POPULATION AND SUBJECTS.....	23
1.	<i>Inclusion Criteria</i>	24

2. <i>Exclusion Criteria</i>	24
D. SAMPLING METHOD.....	25
E. STUDY VARIABLES.....	25
F. OPERATIONAL DEFINITIONS OF VARIABLES	25
1. <i>Prevalence</i>	25
2. <i>Adverse cutaneous drug reactions (ACDRs)</i>	26
3. <i>History of Anti-retroviral drug therapy (ART)</i>	26
G. STUDY MATERIAL AND MEASUREMENT.....	26
H. THE STUDY PLAN.....	27
I. DATA ANALYSIS	27
CHAPTER IV	28
RESULT AND DISCUSSION	28
A. RESULT	28
B. DISCUSSION	36
CHAPTER V.....	44
CONCLUSION AND RECOMMENDATION.....	44
A. CONCLUSION.....	44
B. RECOMMENDATION.....	44
REFERENCES.....	45
APPENDICES	49
APPENDIX 1. ETHICAL CLEARANCE APPROVAL	49
APPENDIX 2. CRF FOR ART ADAPTED FROM REGISCAR.....	51

LIST OF TABLES

Table 1. Research Authenticity.....	5
Table 2. Naranjo ADR Probability Scale.....	8
Table 3. Details of the algorithm of drug causality for epidermal necrolysis (ALDEN).....	11
Table 4. The RegiSCAR-Group Diagnosis Score for Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS).....	14
Table 5. AGEP validation score of the EuroSCAR study group.....	15
Table 6. Different Adverse Cutaneous Drug Reactions observed	31
Table 7. Adverse Cutaneous Drug Reactions in patients receiving ART	31
Table 8. Onset of different ACDRs secondary to ART administration.....	32
Table 9. Drugs (in total) suspected depending on the nature of ACDRs.....	33
Table 10. Occurrence of different types of ACDRs according to ART monotherapy.....	34
Table 11. Types of drugs included in the polytherapy among different types of ACDRs.....	35
Table 12. Reported comorbidities found based on different types of ACDRs.....	36

TABLE OF FIGURES

Figure 1. Algorithm of the sampling procedure used in this study.....	29
Figure 2. Sex distribution of the patients.....	30
Figure 3. Age distribution of the patients.....	30
Figure 4. DRESS patient taken from Central General Hospital dr. Sardjito.....	15
Figure 5. AGEP patient taken from Central General Hospital dr. Sardjito.....	17
Figure 6. SJS/TEN patients taken from Central General Hospital dr. Sardjito.....	13

LIST OF ABBREVIATION

Abbreviation Details

ACDRs	Adverse cutaneous drug reactions
ART	Anti-retroviral treatment
HIV	Human immunodeficiency virus
AIDS	Acquired immune deficiency syndrome
EM	Maculopapular eruption
SJS/TEN	Stevens-Johnson syndrome/Toxic epidermal necrolysis
DRESS	Drug rash with eosinophilia and systemic symptoms
AGEP	Acute generalized exanthematous pustulosis
ADR	Adverse drug reactions
FDC	Fixed drug combination
NSAIDs	Non-steroidal anti-inflammatory drugs
OAT	Anti Tuberculosis drugs
AED	Anti epileptic drugs
TB	Tuberculosis
LPV/r	Lopinavir/Ritonavir
NVP	Nevirapine
EFV	Efavirenz
3TC	Lamivudine
d4T	Stavudine

AZT	Zidovudine
TDF	Tenofovir
FTC	Emtricitabine
RAL	Raltegravir