UNIVERSITI TEKNOLOGI MARA

DRUG INDUCED ALOPECIA IN MALAYSIA FROM 2010 TO 2015

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Dissertation submitted in partial fulfilment of the requirements for
the Bachelor of Pharmacy (hons.)

Faculty of Pharmacy

June 2017

ACKNOWLEDGEMENT

In the name of Allah, The Most Beneficient, The Most Merciful.
Praise to Allah, the One and Only,
For giving me strength to fulfill this study and complete it.

First and foremost, a lots of thanks to my supervisor , Prof Dr Noorizan binti Abd Aziz for guide and helping to complete this research. Thank you to the staff at NPRA especially Puan Noor 'Ain binti Shamsuddin, Head of Department of MADRAC, Puan Wan Mohaina binti Wan Mohamad. For MREC staff such Dr Lee Keng Yee, Mrs Chan Pui Lim and Dr Ramli bin Zainal for giving the permission to collect the data at NPRA Petaling Jaya, Selangor.

Thank you to all Pharmacy's staff and ethics committee UiTM for approving this study and supporting throughout the semester. I want to appreciate my family that gives much more moral and helping in other aspects and friends for keep supporting each other throughout this project. Thank you again to all the people who direct and indirectly help contribute to this study. May Allah bless you for your kindness.

ABSTRACT

Background: Drug-induced alopecia studies in Malaysia are limited but todays the impact of alopecia to the human is huge as it can affect their quality of life. The number of cases reported of drug-induced alopecia is kept increasing and preventive action should be done in order to control this ADR's from worsening.

Objectives: To study drugs that induced alopecia in Malaysia from the year 2010 to 2015. Besides that, the specific objectives are to determine the number of patient reported having drug that induced alopecia from 2010 till 2015. In addition, this study aims to determine the types of drugs that commonly induced alopecia and to study the association / relationship (drugs and other variables) with alopecia.

Methods: Data of ADR's involving alopecia was collected at Pharmacovigilance Section, National Pharmaceutical Regulatory Agent (NPRA). There are 440 reported cases documented on drug-induced alopecia from the year 2010 to 2015 were extracted from MADRAC Quest 2 and Quest 3+ database system.

Results: Based on the results, the most drug that induced alopecia in those 6 years which is 2010 to 2015 are the anti-cancer drug which shown that female is more likely to get alopecia with 81 cases; 57.9% reported from 138 cases and Malay is at highest risk with 42.1%. An aged patient with age range from 46 to 60 years old (n=53, 37.9%) were highest number of patient reported on drug inducing alopecia. Selangor was reported with the most cases reported on ADR's which 22.9% of 32 cases been reported. 2012 has the highest number of reported cases which is 90 cases while 2013 has highest number of selected cases which is 36 cases. Extend of severity liver toxicity is moderate which 58 cases reported from 107 cases with probable causality with 30.7%. There is an association between races with an extent of a severity of alopecia when the P value is 0.0043. The race is the only predictor for an anti-cancer drug which induced alopecia when it showed Malay is at high risk to get adverse drug reaction related to drug caused alopecia.

Conclusion: Anti-cancer drug such as Sorafenib and Erlotinib was the most common drug that induced alopecia in Malaysia based on cases of ADR'S reported from 2010 to 2015. To avoid this problem, healthcare practitioner should monitor the therapy given to the patients and control the dose, duration/schedule, frequency of the treatment.

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CHAPTER ONE

INTRODUCTION

1.1 OVERVIEW

Dermatological condition disorder chronically refers to alopecia that person loses some or all the hair in the head and also at the body. Hair follicles affect mostly in this disease of chronic inflammatory. It is not painful or threatening but can give irritation to skin and physical problem when losing eyelashes and eyebrows. The formation and its aetiology not fully understand yet, but it is known as autoimmune disorder that comes from the influence of genetic and environment (Hunt & Mchale, n.d.). Some of the harmful effects from alopecia can lead to psychological issue such as depression and increase in levels of anxiety with limited successful in medical treatment to find the best drugs (Hunt & Mchale, n.d.).

Keratin that made the hair comes from protein and the hair follicle's base forms from hair bulb, and it anchors every hair into skin. Dividing of living cell and building of the hair shaft to grow occurs in the hair bulb while there a many of the blood vessels that deliver hormones, and it modify the growth of the hair and its structure for a different time. Three phases that involved in the hair growth include anagen, catagen and telogen ("Hair (Human Anatomy): Image, Parts, Follicle, Growth, Problems, and More," n.d.).