

UNIVERSITI TEKNOLOGI MARA



**ASSOCIATION BETWEEN PREVALENCE OF HUMAN
LEPTOSPIROSIS INFECTION AND GENDER IN
HOSPITAL MELAKA**

FARAH AMINAH BINTI HAMKA

**Dissertation submitted in partial fulfillment of the requirements for
Diploma in Medical Laboratory Technology**

FACULTY OF HEALTH SCIENCES

September 2014

ABSTRACT

ASSOCIATION BETWEEN PREVALENCE OF HUMAN LEPTOSPIROSIS INFECTION AND GENDER IN HOSPITAL MELAKA

Leptospirosis is one of the common re-emerging zoonotic diseases transmitted from infected animals to human. It is a bacterial infection caused by a species of pathogenic leptospirigenus called spirocheates. Pathogenic leptospire live in the kidneys of many mammalian hosts, including rodents, insectivores, and livestock. Leptospire are shed into the environment, where they can survive for several months in favorable condition. The first case of human leptospirosis in Malaysia was discovered by Fletcher in the year 1925. The aim of the present study was to determine the association between prevalence and gender of patient infected with Leptospirosis in Hospital Melaka. The medical records of hospital department in Hospital Melaka were used to identify records of patients infected with leptospirosis from January 2013 until May 2014. The laboratory testing for leptospiral infection is important both for diagnosis and management of patients. In this study, the result was obtained from Rapid IgM Elisa test method. The patient data was collected for positive leptospirosis cases reported in Hospital Melaka, where 791 cases detected over the study period. 65% were male patient and 35% were female patient. The risk of leptospiral infections with respect to gender were demonstrated in this study. It is highlighted that the majority of leptospirosis cases were men due to association of man with animal and disease-infected environment. This result revealed that male have the highest prevalence of leptospiral infection compare to female.

Key words : leptospirosis, male, female

ACKNOWLEDGEMENT

Appreciation goes to the following names for their continuous support and invaluable contribution towards the completion of the dissertation entitled “ASSOCIATION BETWEEN PREVALENCE OF HUMAN LEPTOSPIROSIS INFECTION AND GENDER IN HOSPITAL MELAKA”:

1. NOR HAFEEDA BT ROSDAN
2. NOR RAIHAN BT MOHAMMAD SHABANI
3. DR SUHAILA BT BAHARUDDIN (PAKAR PATOLOGI & KETUA UNIT UD54)
4. JURAIMI BIN RAIHAN (PEGAWAI SAINS C48)
5. UMMUL HANINAH BT HJ ALI (PEGAWAI SAINS C41)
6. HALIMAH BT MOHD (JTMP KUP 32)
7. NUR AMIRAH BT AZMI
8. ZATY AINAA BT MOHAMED
9. ZATUL SYALIHAN BT MOHAMED
10. SUZANA BT MAT JAIS
11. HAMKA BIN SALIP

TABLE OF CONTENTS

Chapter	Content	Page
	TITLE PAGE	i
	DECLARATION	ii
	APPROVAL	iii
	ABSTRACT	v-iv
	ACKNOWLEDGEMENT	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	xi
	LIST OF FIGURES	xii
	ABBREVIATIONS	xiv
1.0	INTRODUCTION	
	1.1 Overview	1
	1.2 Problem statement	2
	1.3 Research Justification	2
	1.4 Objectives	
	1.4.1 General objective	3
	1.4.2 Specific objective	3
	1.5 Hypothesis	3
	1.5.1 Alternative hypothesis	3
	1.5.2 Null hypothesis	3
2.0	LITERATURE REVIEW	4-11

1. INTRODUCTION

1.1 Overview

Leptospirosis is recognizing to be the most widespread zoonosis in the world and it is caused by pathogenic spirochetes of the genus *Leptospira* (Karande et al, 2003). Fletcher (1928) was the first person who began working on human Leptospirosis in Malaysia. The first fatal case of human Leptospirosis reported by him in 1925 due to *Leptospira icterohemorrhagiae* and also able to recognise serovars *icterohemorrhagiae*, *hebdomadis* and *pyrogenes* from 21 patients during this early period (Lokman, 2011). Based on research done by Lokman, (2011), the incidence ranges from 0.1 to 1 per 100 000 per year in temperate climates to 10 or more per 100 000 per year in the humid tropics. Moreover, the estimated case fatality rates in different parts of the world have been reported to range from < 5% to 30%. An increasing number of reported cases and outbreaks which had resulted in significant number of deaths have been observed over the past decade in Malaysia (Lokman, 2011). Furthermore, in countries where leptospirosis is a notifiable disease, the vast number of patients with laboratory confirmed clinical cases are majority male individuals, with an incidence ratio of male to female subjects of 5:1 in Germany and 10:1 in France and Italy (Jansen, 2007). Anthony (2012) also proven that based on research in Kerala, India about 65.20% of infection were males and 35.67% were females. In this era modernization, the statistic of male cases is higher than female cases. The high prevalence of leptospirosis in humans in this world is of great public health concern. Therefore, this study is to determine association between prevalence of human Leptospirosis infection and gender in Hospital Melaka.