

# **UNIVERSITI PUTRA MALAYSIA**

# RETROSPECTIVE STUDY ON EQUINE CASES REFERRED TO UNIVERSITY VETERINARY HOSPITAL (UVH), UNIVERSITI PUTRA MALAYSIA FROM YEAR 2013 TO 2017

**AZIEMAH BINTI MOHAMAD ASHARAF** 

**FPV 2018 11** 

# RETROSPECTIVE STUDY ON EQUINE CASES REFERRED TO UNIVERSITY VETERINARY HOSPITAL (UVH), UNIVERSITI PUTRA MALAYSIA FROM YEAR 2013 TO 2017

i

# UPM

# **AZIEMAH BINTI MOHAMAD ASHARAF**

## FACULTY OF VETERINARY MEDICINE

## UNIVERSITI PUTRA MALAYSIA

# SERDANG, SELANGOR

2018

# RETROSPECTIVE STUDY ON EQUINE CASES REFERRED TO UNIVERSITY VETERINARY HOSPITAL (UVH), UNIVERSITI PUTRA MALAYSIA FROM YEAR 2013 TO 2017

# UPM

## **AZIEMAH BINTI MOHAMAD ASHARAF**

A project paper submitted to the Faculty of Veterinary Medicine, Universiti Putra Malaysia In partial fulfilment of the requirement for the DEGREE OF DOCTOR OF VETERINARY MEDICINE Universiti Putra Malaysia Serdang, SelangorDarul Ehsan

MARCH, 2018

#### CERTIFICATION

It is hereby certified that we have read this project paper entitled "Retrospective Study on Equine Cases referred to University Veterinary Hospital (UVH), Universiti Putra Malaysia from year 2013 to 2017", by Aziemah binti Mohamad Asharaf and in our opinion it is satisfactory in terms of scope, quality, and presentation as partial fulfilment of the requirement for the course VPD 4999 – Final Year Project.

# **DR.NORANIZA MOHD ADZAHAN** DVM, MVM, PhD (UPM) Senior Lecturer, Department of Farm & Exotic Animal Medicine & Surgery, Faculty of Veterinary Medicine Universiti Putra Malaysia (Supervisor)

# DEDICATIONS

In the name of Allah, The Most Benevolent, The Most Merciful

# UPM

Mostly dedicated to:

My family.

Love you guys so much.

#### ACKNOWLEDGEMENTS

Alhamdulillah, first and foremost I am very thankful to Allah SWT for giving me strength to carry out this study. I wish to express my deepest appreciation to my project supervisor, Dr.NoranizaMohdAdzahan for her endless guidance, support and supervision throughout this project.

I wish a special appreciation to Dr.MohdShahromSalisi for his suggestions and supports in for my project. UVH staffs, thank you for all the assistance throughout the project. A million thanks were also dedicated to all my friends especially Wan Amirul, Nazim Khan, Syafia, Dzulkifli, Ikhwaninhelping me throughout this project.

Big thanks also directed to my beloved family for their warm support and unconditional love towards me. Last but not least to all my friends and course mates, thank you very much for all the support and I would cherish every moment.

# CONTENTS

	Page
TITLE	i
CERTIFICATION	ii
DEDICATIONS	iii
ACKNOWLEDGEMENTS	iv
CONTENTS	v
LIST OF ABREVIATIONS	vii
LIST OF TABLES	viii
ABSTRAK	ix
ABSTRACT	xi
1.0 INTRODUCTION	1
1.1 Background of the Study	1
1.2 Overall Objectives of the Study	2
1.3 Justification of the Study	2
1.4 Hypothesis of the Study	
2.0 LITERATURE REVIEW	4
2.1 Injuries in Horses	
2.2 Lameness and poor performance in sport h	oorse 5
2.3 Poor performance and back pain	
2.4 Skin disease in horses	
2.5 Gastrointestinal tract of performance horse	es

3.0	MATERIALS AND METHODS	10
	3.1 Data Collection	10
	3.1.1 Medical Record	10
	3.1.2 Interview	10
	3.2 Data Analysis	11
4.0	RESULTS	12
	4.1 Total number of cases in year January 2013 until December 2017	12
	4.2 Number of cases based on horse establishments	13
	4.3 Number of cases based on general clinical problems	15
	4.4 Number of cases based on specific clinical problems	17
5.0	DISCUSSION	20
6.0	CONCLUSION AND RECOMMENDATIONS	23
REFE	RENCES	24

## LIST OF ABBREVIATIONS

- **UVH** = University Veterinary Hospital
- **UPM** = Universiti Putra Malaysia
- PDRM = Polis Di Raja Malaysia
- **DBKL** = Dewan Bandaraya Kuala Lumpur
- **TEP** = Taman Ekuestrian Putrajaya
- **DARC** = DenaiAlam Riding Club
- MAFEC = Malaysian Armed Forces Equestrian Centre
- **MAEPS** = Malaysia Agro Exposition Park

# LIST OF TABLES

Table 4.1	:	Total number of cases in year 2013 until 2017	11
Table 4.2	:	Number of cases based on horse establishments	13
Table 4.3	:	Number of cases based on general clinical problems	15
Table 4.4	:	Number of cases based on specific clinical problems	18

G

#### ABSTRAK

Abstrakdaripadaprojek yang dikemukakankepadaFakultiPerubatanVeterinaruntukmemenuhisebahagiandaripadake perluankursus VPD 4999 – ProjekIlmiahTahunAkhir

# KAJIAN RETROSPEKTIF TERHADAP KES EKUIN DI HOSPITAL UNIVERSITI VETERINAR, UNIVERSITI PUTRA MALAYSIA DARI TAHUN 2013 HINGGA 2017

Oleh

Aziemah binti Mohamad Asharaf

**MAC 2018** 

Supervisor: Dr.NoranizaMohd. Adzahan

Peningkatan bilangan kes klinikal ekuin yang dilaporkan ke Hospital Universiti Veterinar, Universiti Putra Malaysia (UPM) telah dikenalpasti. Sehubungan itu, satu kajian retrospektif telah dijalankan untuk menentukan kelaziman dan jumlah kes yang telah dilaporkan Hospital Universiti Veterinar, UPM sepanjang lima tahun yang lalu serta mengenalpasti masalah klinikal yang berbeza dalam kuda dari pelbagai pertubuhan dengan kegunaan kuda dan pengurusan yang berbeza berdasarkan hubungannya dengan kadar kejadian. Data kes klinikal ekuin yang telah dilaporkan ke Hospital Universiti Veterinar dari tahun Januari 2013 hingga Disember 2017 telah dikumpulkan dan direkodkan. Sejumlah 4,577 kes ekuin telah direkodkan dan dianalisa berdasarkan bilangan kes, pertubuhan kuda, jenis kerja dan masalah klinikal. Jumlah kes yang direkodkan termasuk kes ulangan pada tahun 2013 adalah 877 (19.16 %), pada tahun 2014 adalah 1,049 (22.92 %), pada tahun 2015 adalah 1,026 (22.42 %), pada tahun 2016 adalah 955 (20.86 %) dan pada tahun 2017 adalah 670 (14.64 %). Bilangan kes yang tertinggi yang dilaporkan melibatkan masalah otot (34.34 %), diikuti dengan kecederaan trauma (14.57 %) dan masalah pencernaan (10.23 %). Data yang dikumpulkan menyediakan sumber rujukan yang bermanfaat untuk mengenalpasti pengurusan kes oleh pemilik kuda.

Kata kunci: Kajianretrospektif, kesekuin, tahun 2013 hingga 2017

#### ABSTRACT

An abstract from the project paper presented to the Faculty of Veterinary Medicine in the partial fulfilment of course VPD 4999 – Project

#### RETROSPECTIVE STUDY ON EQUINE CASES REFERRED TO UNIVERSITY VETERINARY HOSPITAL (UVH), UNIVERSITI PUTRA MALAYSIA FROM YEAR 2013 TO 2017

By

**Aziemah binti Mohamad Asharaf** 

**MARCH 2018** 

Supervisor: Dr.NoranizaMohd. Adzahan

An increase number of equine clinical cases reported to the University Veterinary Hospital (UVH), Universiti Putra Malaysia (UPM) was observed. Therefore, a retrospective study was carried out in order to determine the prevalence of equine cases referred to UVH, UPM for the past five years as well as to identify different clinical problems in horses from different horse usage and management practice in relation to its occurrence rate. Data of equine clinical cases referred to UVH from year January 2013 to December 2017 were gathered and recorded. A total of 4,577 equine cases were recorded and analysed based on case number, horse establishment, type of work and clinical problems. The total of cases recorded in year 2013 including revisit cases was 877 (19.16%), year 2014 was 1,049 (22.92%), year 2015 was 1,026 (22.42%), year 2016 was 955 (20.86%) and year 2017 was 670 (14.64%). The highest cases reported involved the musculoskeletal (34.34%), followed by traumatic injuries (14.57%) and gastrointestinal tract problems(10.23%). The data collected provide a valuable resource to investigate the post-operative management by horse owners.

Keywords: Retrospective study, equine cases, year 2013 to 2017

#### **1.0 INTRODUCTION**

#### 1.1 Background of the study

Over the past few years, equine industry is growing in Malaysia especially by being one of the country that have hosted reputed international horse events including horse racing, endurance, polo and equestrian sports. This has not only developed the interest among the society to be involved in equine industry but also increase the number of imported and local horses in the country which are used for various purposes with various establishments.

Individual owners usually use their horses for leisure or joy rides, private club horse owners usually use the horses for riding schools and equestrian sports whereas government bodies usually use the horses for patrolling and ceremonial events. They will sometimes participate in equestrian events. Some of them also provide hippotherapy service for disabled people especially children.

In this country, equine disease are commonly related to musculoskeletal system, colic, upper respiratory tract infection and fly bite hypersensitivity which increase in the number of cases with more events being held throughout the year (Bashir A., 1993).

Equine clinical cases referred to UVH increase dramatically with the increase number of new clients as well as number of clinicians. This group of enthusiasts tend to buy horses to compete in events, which endurance racing being the most popular sports for the past few years till now. Unfortunately, these amateur

horse owners are still lacking with basic knowledge of managing and taking care of their horse particularly associated with health and injuries, leading to high recurrence rates of clinical problems with guarded prognosis due to improper postoperative management. As mentioned by Darmansah (2007), equine education is an important aspect in order to improve the equine industry in Malaysia.

#### **1.2 Overall Objectives of the study**

- 1. To determine the prevalence of equine cases referred to UVH, UPM from January 2013 to December 2017.
- 2. To identify different clinical problems in horses from different horse usage and management practice in relation to its occurrence rate.

#### 1.3 Justification of the study



The number of equine cases referred to University Veterinary Hospital, UPM increase with the increase number of new clients as well as veterinary officers attending equine cases. However, the total number of revisit cases is higher than the total number of new cases for horses from certain establishments in relation to different usage of horses and eventually suggestive of poor post-operative care of horses with clinical problems.

# 1.4 Hypotheses of the study

**Ho:** There is no significant difference in clinical problems in horses used for different purposes.

3

Ha: There is significant difference in clinical problems in horses used for different purposes.

#### REFERENCES

- Abutarbush, S. M., Carmalt, J. L., & Shoemaker, R. W. (2005). Causes of gastrointestinal colic in horses in western Canada: 604 cases (1992 to 2002). *The Canadian Veterinary Journal*, 46(9), 800.
- Archer, D. C., &Proudman, C. J. (2006). Epidemiological clues to preventing colic. *The Veterinary Journal*, 172(1), 29-39.
- Bachmann, I., Bernasconi, P., Herrmann, R., Weishaupt, M. A., &Stauffacher, M. (2003). Behavioural and physiological responses to an acute stressor in cribbiting and control horses. *Applied Animal Behaviour Science*, 82(4), 297-311.
- Bashir, A. (1993). Equine industry in Malaysia.
- Cocq, P. D., Weeren, P. V., & Back, W. (2004). Effects of girth, saddle and weight on movements of the horse. *Equine veterinary journal*, *36*(8), 758-763.
- Darmansah, N. F., Misnan, M. S., Sam, A. R. M., & Omar, A. H. (2017). Contribution of Equine Education to the Equine Industry Development in Malaysia. *Advanced Science Letters*, 23(4), 2818-2820.
- Derungs, S. B., Furst, A. E., Hassig, M., & Auer, J. A. (2004). Frequency, consequences and clinical outcome of kick injuries in horses: 256 cases (1992-2000). WIENER TIERARZTLICHE MONATSSCHRIFT, 91(5), 114-119.
- Durham, A. E. (2009). The role of nutrition in colic. *Veterinary Clinics: Equine Practice*, 25(1), 67-78.
- Dyson, S. (2002). Lameness and poor performance in the sport horse: dressage, show jumping and horse trials. *Journal of Equine Veterinary Science*, 22(4), 145-150.
- Grandin, T., McGee, K., & Lanier, J. L. (1999). Prevalence of severe welfare problems in horses that arrive at slaughter plants. *Journal of the American Veterinary Medical Association*, 214(10), 1531-1533.
- Grogan, E. H., & McDonnell, S. M. (2005). Injuries and blemishes in a semi-feral herd of ponies. *Journal of Equine Veterinary Science*, 25(1), 26-30.
- Hillyer, M. H., Taylor, F. G. R., Proudman, C. J., Edwards, G. B., Smith, J. E., & French, N. P. (2002). Case control study to identify risk factors for simple colonic obstruction and distension colic in horses. *Equine veterinary journal*, 34(5), 455-463.

- Jeffcott, L. B. (1980). Disorders of the thoracolumbar spine of the horse—a survey of 443 cases. *Equine veterinary journal*, 12(4), 197-210.
- Kaneene, J. B., Miller, R., Ross, W. A., Gallagher, K., Marteniuk, J., & Rook, J. (1997). Risk factors for colic in the Michigan (USA) equine population. *Preventive veterinary medicine*, *30*(1), 23-36.
- Knubben, J. M., Fürst, A., Gygax, L., &Stauffacher, M. (2008). Bite and kick injuries in horses: Prevalence, risk factors and prevention. *Equine veterinary journal*, 40(3), 219-223.
- Malmkvist, J., Poulsen, J. M., Luthersson, N., Palme, R., Christensen, J. W., &Søndergaard, E. (2012). Behaviour and stress responses in horses with gastric ulceration. *Applied animal behaviour science*, *142*(3), 160-167.
- Piskoty, G., Jäggin, S., Michel, S. A., &Fürst, A. (2005). Experimental study of fractures of longe bones due to impact loading. In *First international conference on mechanics of miiomaterials & tissues*.
- Said, F. M., &Adzahan, M. (2010). A Retrospective Study on Equine Cases Refered to University Veterinary Hospital, UPM from 2005-2009 (Doctoral dissertation, Universiti Putra Malaysia).
- Wobeser, B. K. (2015). Skin diseases in horses. Veterinary Clinics: Equine Practice, 31(2), 359-376.