



Cairo University
Faculty of veterinary medicine
Department of internal medicine and infectious disease

Infectious Diarrhea in Young Dogs

A thesis presented

By

Abeer Abd El-Hamid Mohamed

B.V.Sc. (2008) Cairo University

For the degree of

Master of Veterinary Science

(Infectious Diseases)

Under supervision of Prof .Dr. Sabry Aziz Barsoum

Prof. of Infectious Diseases Faculty of Veterinary Medicine Cairo University

Dr. Wagdy Rady EL-Ashmawy

Assistant Prof. of Infectious Diseases Faculty of Veterinary Medicine Cairo University

Cairo University
Faculty of Veterinary Medicine
Department of internal Medicine & Infectious Diseases



APPROVAL SHEET

This is to approve that the dissertation presented by

Abeer Abd EL-Hamid Mohamed to Cairo University entitled

"Infectious Diarrhea in Young Dogs"

For the Master degree in veterinary sciences (Infectious diseases)

Has been approved by the examining committee:

Prof. Dr. Abdel Kareem Abdel Tawab Mahmoud

Professor of infectious disease Faculty of Veterinary Medicine. Edfena, Alexandria University

Prof. Dr. Fayez Awadallah Salib

Professor of Infectious Diseases Faculty of Veterinary Medicine Cairo University

Prof. Dr. Sabry Aziz Barsoum

Professor of Infectious Diseases Faculty of Veterinary Medicine Cairo University (Supervisor) Fayez A. Salib

A. A. Mahm

Date: 17/7/2017

Cairo University Faculty of veterinary medicine Department of internal medicine and infectious disease



Name: Abeer Abd El-Hamid Mohamed

Nationality: Egyptian

Degree: Master of Veterinary Sciences **Specialization:** Infectious disease

Title of the thesis: Infectious diarrhea in young dogs.

Supervision:

Dr. Sabry Aziz Barsoum

Prof. of Infectious Diseases Faculty of Veterinary Medicine Cairo University

Dr. Wagdy R. EL-Ashmawy

Assistant prof. of Infectious Diseases Faculty of Veterinary Medicine Cairo University

ABSTRACT

One hundred and thirty six out of one hundred and forty eight diarrheic dogs less than six month old proved to be infected by viral, bacterial, parasitic causes alone or with mixed infection. Higher prevalence of viral infection (CPV & CCV) (75.5%) was recorded than other type of infections. E.coli was detected in 30.9% of the cases and Varity of parasitic causes (41.9%) were also responsible for diarrhea, some of them were zoonotic. Mixed infections were recorded by variable percentages. Different risk factors were studied including age, sex, breed, season and mangemental conditions. Age, sex, vaccination history and prophylactic deworming had a significant effect on the prevalence of infectious diarrhea. A trial of treatment using specific drugs was done.

Key words: prevalence of infectious diarrhea, mixed infection, risk factors.

Dedication

To My Dear Father

To My Mother

To MY brothers Mahmoud

and Mohamed

ACKNOWLEDGEMENT

First of all, my prayerful thanks are to our merciful **God** who gives us all things we have and gave me the ability to fulfill this work.

I wish to express my deepest appreciation and sincere gratitude to **Prof. Dr. Sabry Aziz Barsoum,** Prof. of Infectious diseases, Faculty of veterinary medicine, Cairo University for his suggestion, supervision and continuous encouragement, valuable advice appreciation and criticism.

I would like to express my appreciation and gratitude to **Dr. Wagdy Rady EL-Ashmawy**, Assistant prof. of Infectious diseases, Faculty of Veterinary medicine, Cairo University for his supervision, encouragement, valuable help, comments and guidance throughout this study.

I wish to express my deepest gratitude and sincere thanks to **Dr. Fatma karam** Assistant lecturer at zoonoses department, Faculty of Veterinary medicine, Cairo University for her help and support.

My deepest thanks for **Dr. Mahmoud Saber Mohamed** Assistant lecturer of internal medicine, Faculty of Veterinary medicine, Cairo University for continuous help during this work.

I wish to express my high appreciation to **Dr. Wael Abdel Mordy Hassan** Lieutenant Colonel Veterinarian Egyptian Armed Forces for his great and valuable help during this work.

I want to give special thanks to the staff member in Department of Internal Medicine and Infectious Diseases, Faculty of Veterinary Medicine, Cairo University, for their continuous help and encouragement during my work.

LIST OF CONTENT

Items
1-Introduction
2-Review of literature
3-Material and Methods
3.1. Material
3.1.1. Animals
3.1.2. Samples
3.1.3. Diagnostic kits and chemicals
3.1.3.1. Diagnostic kits
3.1.3.2. Chemicals
3.1.3.3. Bacteriological Media.
3.1.3.4. Media for biochemical test.
3.1.3.5. Chemical reagents used in biochemical test.
3.2. Methods
3.2.1. Diagnosis of viral diseases
3.2.1.1. Diagnosis of canine parvo virus using WITNESS Parvo (Zoetis) test kits
3.2.1.2.Diagnosis of Canine Parvo Virus and Canine Corona virus using Anigen
Rapid CPV-CCV-Ag test kit (BIONOTE)
3.2.1.3. Diagnosis of Canine Parvo Virus, Canine Corona Virus and Giardia
using Anigen Rapid CPV-CCV-Giardia Ag test kit (BIONOTE)
3.2.2. Diagnosis of bacterial infection.
3.2.2.1. Diagnosis of <i>E.coli</i>
3.2.2.1.1. Isolation and Identification of E.coli
3.2.2.1.2. Microscopic Identification of E.coli
3.2.2.1.3. The Biochemical Identification of E.coli
3.2.2.1.4. Typing of E.coli
3.2.2.2. Diagnosis of Salmonella Spp.
3.2.2.2.1. Isolation and Identification of Salmonella spp.
3.2.2.2.2. Microscopic Identification of Salmonella
3.2.3. Diagnosis of parasitic infection.
3.2.3.1. Direct fecal smear.
3.2.3.2. Concentration Floatation Technique
3.2.4. Treatment protocol in young dogs suffering from diarrhea
4. Experiment and result
5. Discussion
6. Conclusion
7. Summary 8. References
9. Arabic summary
/• / NI AVIC SUMMIAL y

I

LIST OF TABLES

Table No.	List of tables	Page
1	Table (1): The prevalence of different infectious causes of diarrhea in	
	young dogs.	53
2	Table (2):Prevalence of mixed infections of diarrhea in young dogs	55
3	Table (3): Distribution of different causes of diarrhea in different age	
	groups of dogs.	57
4	Table (4): The prevalence of infectious diarrhea in different sexes of	
	young dogs.	59
5	Table (5): Effect of season on the prevalence of infectious diarrhea in	
	young dogs.	61
6	Table (6): Prevalence of infectious diarrhea in different breeds of	
	dogs.	63
7	Table (7): Effect of management on the prevalence of infectious	
	diarrhea in young dogs.	66
8	Table (8): Results of treatment of infectious diarrhea in young dogs.	68

LIST OF ABBREVIATION

97 (1884 (
CPV	Canine parvo virus		
CCV	Canine corona virus		
CDV	Canine distemper virus		
E.coli	Escherichia coli		
EPEC	Enteropathogenic Escherichia coli		
EIEC	Enteroinvasive Escherichia coli		
VTEC	Verocytotoxigenic Escherichia coli Enteroaggregative Escherichia coli		
EAEC	Enteroaggregative Escherichia coli		
T. canis	Toxocara canis		
A.caninum	Ancylostoma caninum		
D. caninum	Ancylostoma caninum Dipylidium caninum Giardia duodenalis Clostridium perfringens Clostridium perfringens enterotoxin		
G.duodenalis	Giardia duodenalis		
C.perfrimgens	Clostridium perfringens		
СРЕ	Clostridium perfringens enterotoxin		
СРА	Clostridium perfringens alpha toxin		
ELISA	Enzme linked immunosorbent assay		
RT-PCR	Enzme linked immunosorbent assay Real time polymerase chain reaction Immunochromatography		
IC	Immunochromatography		