

A Thesis

Presented to Graduate School

Faculty of Veterinary Medicine,

Alexandria University

In partial fulfillment of the

Requirements for the Degree

Of

Master of Veterinary Science

In

Pharmacology

By

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7.11

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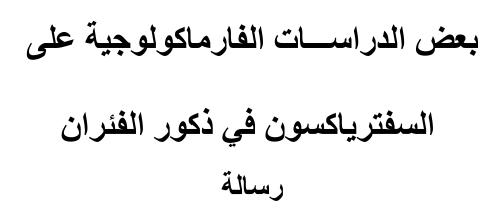
ACKNOLEDGEMENT

First of all I would like to express my sincere gratitude to my merciful God for all gifts he gave and still giving to me, his great help and for being my lord.

My great grateful and appreciation to my advisor Prof. **Dr. Abdel-Salam F. El-Sawy** Professor and Head of Pharmacology Department, Faculty of Veterinary Medicine, Alexandria University For his guidance, supervision, helpful advice, productive discussion and continuous encouragement.

My best thanks to **Prof. Dr. Ibrahim M. El-Ashmawy**, Professor of Pharmacology, Faculty of Veterinary Medicine, Alexandria University For his direct effective help during the fulfillment of this study.

My deepest thanks to **Prof**. **Shawky Ahmed Mustafa**, Prof. Dr. of Pathology, Faculty of Veterinary Medicine, Benha University for his great help in the histopathological examination.



مقدمة إلى الدراسات العليا بكلية الطب البيطري – جامعة الإسكندرية استيفاء للدراسات المقررة للحصول على درجة الماجستير في العلوم الطبية البيطرية

تخصص

الأدوية البيطرية

مقدمة من

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INTRODUCTION

Cephalosporins were originally introduced for treatment of penicillinase-resistant Staphylococcal infections. These drugs had the advantage that they had a similar spectrum of activity against gram-negative microorganisms. Cephalosporins in general have the advantages of beta-lactamases stability, good activity against target proteins (PBPs) and good ability to penetrate bacterial cell wall. Although they may be active against a wide range of microorganisms, such activities are not uniform and there are subtle differences between the different molecules (Wise, 1997 and Prescott, 7...7).

Ceftriaxone is a third-generation cephalosporin that exhibits saturable plasma protein binding, which influences its pharmacokinetic parameters depending on the dose (Yuk et al., 1914). Ceftriaxone is a broad-spectrum parenteral cephalosporin with potent activity against gram-positive and gram-negative bacteria (Neu et al., 1911). As compared to first and second generation cephalosporins, ceftriaxone has enhanced activities against many aerobic gram negative bacilli. Ceftriaxone showed efficacy and safety in patients with bacterial meningitis, respiratory tract, urinary tract, soft tissue, bone and joint infections, and gonorrhea (Richards et al., 1914) and Nahata and Barson, 1914). The major adverse reactions of ceftriaxone are gastrointestinal, dermatologic, hypersensitivity, haematologic, hepatic, and renal as well as central nervous system effects (Christ 1991).

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Introduction

Aim of the work:

The present study was conducted to peer into the possible adverse effects of ceftriaxone on male reproductive organs (testes, epididymis and accessory sex organs) weight, sperm motility, sperm cell count and sperm abnormalities.

Moreover, this work was extended to determine the effect of ceftriaxone administration on haematological parameters, liver and kidney weights and functions, besides histopathological examination of male reproductive organs, liver and kidney in rats.

CONCLUSION

It could be concluded that third generation cephalosporins must not be the first choice antimicrobial agents in animals and should be reserved for use where susceptibility testing indicates that alternative are not available and for serious, life-threatening infections caused by Gram-negative bacteria.

Ceftriaxone fulfills many of the qualities of an ideal antibiotic: an extended antimicrobial spectrum, good penetration into the tissue, a prolonged elimination half-life and balanced excretion pattern. Because of documented efficacy, safety, and convenient dosing schedule, ceftriaxone has become one of the preferred third-generation cephalosporin for treatment of a variety of serious infections.

Ceftriaxone administration induced fertility troubles in the form of abnormal semen characters and decreased reproductive organs weight. Moreover ceftriaxone administration provoked some adverse effects on haematological and biochemical parameters so attention should be paid to administration of higher doses of ceftriaxone.

