**Antimicrobial Resistance Pattern of Fecal *Escherichia coli* Isolated From non-diarrhoeic Pet Dogs at Chittagong Metropolitan Area**

# Veterinary Logo

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#  A CLINICAL REPORT SUBMITTED

#  BY

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Intern ID: D-33

Roll No: 08/50

Registration No: 392

***Report presented in partial fulfillment for the degree of Doctor of Veterinary Medicine (DVM)***

**Chittagong Veterinary and Animal Sciences University**

**Khulshi, Chittagong-4225**

 **March, 2014**

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***Approved as to style and content by***

**CONTENTS**

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|  |  |  |  |
| --- | --- | --- | --- |
| CHAPTER | SERIAL  | SUBJECTS | PAGE  |
|  |  | **Acknowledgement** | I  |
|  |  | **Abstract** | II  |
| Chapter: 1 |  | **Introduction** | 1-2 |
| Chapter: 2 |  | **Review of literature** | 3-15 |
|  |  |  |  |
|  | 2.1.1 | Enterobacteriaceae | 3 |
|  | 2.1.2 | *Escherichia coli*  | 3 |
|  | 2.1.3 | Taxonomy  | 4 |
|  | 2.1.4 | Biology of *E. coli* | 4-5 |
|  | 2.1.5 | Isolation and identification of *E. coli* | 5-6 |
|  | 2.1.6 | Clinical Significance | 6 |
|  | 2.2 | Antimicrobial resistance | 6-7 |
|  | 2.2.1 | Molecular mechanisms  | 7-8 |
|  | 2.2.2  | Natural and acquired resistance | 8 |
|  | 2.2.3 | Acquisition by chromosomal mutations | 8-9 |
|  | 2.2.4 | Acquisition by horizontal gene transfer | 9 |
|  | 2.2.5 | Intracellular migration of resistance genes | 10 |
|  | 2.2.6 | Measurement of resistance in bacterial populations | 10-11 |
|  | 2.2.7 | The microbial threat | 11 |
|  | 2.2.8 | Multidrug resistance efflux pumps in bacteria | 11 |
|  |  |  |  |
| Chapter: 3 |  | **Materials and methods** | 16-28 |
|  |  |  |  |
|  | 3.1 | Description of study area | 16 |
|  | 3.2 | Study duration and sample collection | 17 |
|  | 3.3 | Isolation and identification of *Escherichia coli* | 17-20 |
|  | 3.3.1 | Media used | 17 |
|  | 3.3.2 | Isolation of *E. coli* | 18 |
|  | 3.3.3 | Gram’s staining | 19 |
|  | 3.3.4 | Biochemical test | 20 |
|  | 3.4 | Preservation of the culture | 20 |

**CONTENTS**

|  |  |  |  |
| --- | --- | --- | --- |
| CHAPTER | SERIAL  | SUBJECTS | PAGE  |
| Chapter: 3 | 3.5 | DNA Extraction from bacterial culture for PCR test | 20-24 |
|  | 3.5.1  | Identification of *E.coli* by PCR using 16S rRNA primer | 21-23 |
|  | 3.5.2  | Visualization of PCR Product of *E. coli* through agar gel electrophoresis | 23-24 |
|  | 3.5.2.a | Materials and Reagents required | 23-24 |
|  | 3.5.2.b3.63.7 | Procedure of agar gel electrophoresis Antimicrobial Sensitivity Test at Muller Hinton AgarData analysis | 2425-2727 |
|  |  |  |  |
| Chapter : 4Chapter : 5 |  | **Results** **Discussions** | 29-3334-36 |
|  |  |  |  |
| Chapter : 6 |  | **Conclusion and recommendation** | 37 |
|  |  |  |  |
| Chapter : 7 |  | **References** | 38-45 |
|  |  |  |  |
| Chapter : 8 |  | **Appendix** | 46-48 |

**LIST OF TABLE**

|  |  |  |
| --- | --- | --- |
| SL | TITLE OF THE TABLES | PAGE  |
| 3.1 | Oligonucleotide primers used in PCR to detect *E. coli* | 21 |
| 3.2 | Contents of each reaction mixture of PCR used to detect *E. coli*  | 22 |
| 3.3 | Cycling conditions used for PCR detection of *E. coli*. | 23 |
| 3.4 | Diameter (zone of inhibition) standards for *E. coli* (CLSI, 2007) | 37 |
| 4.1 | Isolation and identification of *E. coli*. on MacConkey Agar  | 29 |
| 4.2 | Isolation and identification on *E. coli* onEMB Agar  | 29 |
| 4.3 | Microscopic identification of *E. coli* by Gram’s staining | 29 |
| 4.4 | Indole test for identification of *E. coli*  | 30 |
| 4.5 | Molecular identification (PCR) of *E. coli* by using 16S rRNA gene primer | 30 |
| 4.6 | Prevalence of E. coli in different breed, age & sex group | 31 |
| 4.8.b | Percentage of different patterns of Antimicrobial sensitivity test for *E. coli* | 32 |

|  |  |  |  |
| --- | --- | --- | --- |
| No. | CHAPTER | TITLE OF THE FIGURES | PAGE |
| 12 | Chapter : 2Chapter : 2 | Diagrammatic figure of *Escherichia coli*Diagram showing the difference between non-resistant bacteria and drug resistant bacteria. | 5 7 |
| 3 | Chapter : 2 | Molecular mechanisms of antibiotic resistance | 8 |
| 4 | Chapter : 2 | Mechanism of bacterial genetic transfer | 9 |
| 5 | Chapter : 3 | Study area map | 16  |
| 6 | Chapter : 3 | Preparation and inoculation of agar plate for isolation and identification of the isolates | 18 |
| 7 | Chapter : 3 | Colony features of E. coli on EMB and MacConkey agar | 19 |
| 8 | Chapter : 3 | Gram staining and features of isolated *E. coli*, under microscope  | 19 |
| 9 | Chapter : 3 | Indole test for *E. coli* by using Kovac’s reagent | 20 |
| 10 | Chapter : 3 | Extracted DNA putting into PCR thermo cycler | 22 |
| 11 | Chapter : 3 | Preparation for visualization of PCR Product through gel electrophoresis technique | 24 |
| 12 | Chapter : 3 | Resistance pattern of *E. coli* isolates to tested antimicrobials.  | 24 |
| 13 | Chapter : 4 | Results of PCR for 16s rRNA gene of*E. coli* ; Lane M: 100 bp ladder; Lane N: Negative control; Lane 1-9: 16S rRNA gene-sized (585bp) amplicon | 26 |
| 14 | Chapter : 4 | Resistance pattern of *E. coli* positive isolates against different antimicrobials | 31 |

**LIST OF FIGURE**

**LIST OF ABBREVIATION AND SYMBOL USED**

|  |  |
| --- | --- |
| Abbreviation and symbol | Elaboration |
| % | Percent |
| / | Per |
| +ve-ve | PositiveNegative |
| ±˂˃≤≥χ2β= | plus-minusLess thanGreater thanLess than or equals toGreater than or equals toChai squareBetaEquals to |
| 0C | Degree Celsius |
| CDDEP | Center for Disease Dynamics, Economics & Policy |
| CLSI | Clinical and Laboratory Standards Institute |
| Cm | Centimeter |
| CSCVASU | Culture SensitivityChittagong Veterinary and Animal Sciences University |
| *E. coli* | *Escherichia coli* |
| EMBESBLs | Eosin Methylene BlueExtended Spectrum β-lactamases |
| FAO | Food and Agriculture Organization |
| Hrs | Hours |
| Ltd. | Limited |
| µg | Microgram |
| mg | Milligram |
| ml | Milliliter |
| mm | Millimeter |
| NIAD | National Institute of Allergy and Infectious Diseases |
| NO. | Number |
| PRTC | Poultry Research and Training Center |
| SAQTVHSL | Shahidul Alam Quadery Teaching Veterinary HospitalSerial |
| WHOWWTP | World Health OrganizationWaste Water Treatment Plant |
| www | World Wide Web |

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Page: I

**ABSTRACT**

Antimicrobial resistance has become an increasingly pressing problem in many countries in human and animal. The study was designed with the aim of isolation and identification of *Escherichia coli* and estimation of its antimicrobial resistance to ascertain the prevalence of *E. coli* in dog. A total of 24 *Escherichia coli* isolates recovered from 40 rectal swab samples of non diarrhoeic pet dogs in SAQTVH, Chittagong. Antimicrobial resistance was determined with 9 antimicrobial agents by means of disc diffusion assay. 100% resistance was observed in Ampicillin which was followed by Amoxicillin (95.83%), Colistin Sulfate (79.16%), Oxytetracycline (75%), Cotrimoxazole (75%), Ciprofloxacin (70.83%) and Ceftriaxone (62.5%). Conversely, 58.33% sensitivity was shown by Gentamicin and 91.66% intermediately sensitive as Doxycyclin. All *E. coli* isolates were reported as resistant to more than five antibiotics (multidrug-resistant). Therefore, more attention should be paid to the indiscriminate use of antimicrobials, and companion animals should be treated with sensitized drugs on the basis of result of the sensitivity study in the specific areas/regions.

**Key words:** *Escherichia coli*, rectal swab, non-diarrhoeic pet dogs, antimicrobial resistance.

Page: II