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DETECTION OF *TOXOPLASMA GONDII* OOCYSTS IN CATS FECES IN AL-NASSARYA CITY, THI-QAR PROVINCE, IRAQ

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ABSTRACT

The objective of this study was to detection of *Toxoplasma gondii* Oocysts in cats feces in AL-Nassarya city of Thi –Qar province, Iraq. 200 sample of cats feces were collected from five areas of AL –Nassarya city and by 40 sample for each area included (AL –Mualamin, AL –Adara almahlyia, AL –Mutinzh, Sumer and Shara Baghdad). and were subjected to a fecal sedimentation technique. *T. gondii* Oocysts was detected 94(47%), the highest prevalence 70% in Sumer area and the lowest 30% in both AL –Adara almahlyia and Shara Baghdad. There was a significant difference between them (p=0.01).

KEYWORD: *Toxoplasma gondii*, Oocyst, cats. Feces.

INTRODUCTION

Toxoplasmosis is a zoonotoic disease caused by the protozoan parasite *Toxoplasma gondii*, human and other warm blooded animals acts its host.[1] All mammals, in cluding humans and birds are intermediate host. Whereas felidae (cat) are intermediate and definitive host, they are the only animals that pass Oocyst in their feces. Sheep and goat meats are important infection sources for Toxoplasmosis.[2]

Human can acquire *T. gondii* from the environmental by contact with Oocyst, contaminated soil, water or cat feces, from the food supply by eating under cooked meat or in adequately washed vegetables or by transplacental transmission.[3,4] Oocyst released in cat feces survive for a considerably long period of time and are resistant to various chemical and physical treatments.[5]

This study aim to detection of *Toxoplasma gondii* Oocyst in cats feces in in AL- Nassarya city of Thi – Qar province in Iraq.

MATERIALS AND METHODS

A total of 200 cats feces of various areas included (AL – Mualamin, AL –Adara almahlyia, AL –Mutinzh, Sumer and Shara Baghdad) of AL- Nassarya city of Thi –Qar province, fecal sample of cats were collected and were subjected to afecal sedimentation technique.[6]

Statistical analysis

Data was analyzed using statistical analysis system Statistical Package for Social Sciences (**SPSS**). Chi- square (X^2) test were used to compare the significant differences.

RESULT

200 samples were collected from cats feces from different areas of AL-Nassarya city center of Thi-Qar province to investigated the Oocysts of *T. gondii*, the result showed the number of positive samples containing Oocysts were 94(47%) compared with 106(53%) were negative. Table (1).

Table (1): Result of detection of Oocysts of *Toxoplasma gondii* in cats feces in AL-Nassarya city.

Result	N	%
Positive	94	47
Negative	106	53
Total	200	100

In the table (2) the results of the investigation of Oocyst of *T. gondii* in cats feces which were collected from different areas of AL-Nassarya city. This results showed high positive percentage sample 28(70%) at sumer area whereas the lowest percentage was 12(30%) as noticed at both AL-Adara almahlyia and Shara Baghdad There was a significant difference between them (p=0.01).

Table (2): Results of detection of Oocysts of *Toxoplasma gondii* in cats feces in different areas of AL- Nassarya city.

Areas	No. of tested sample	Positive		Negative	
		N	%	N	%
Sumer	40	28	70	12	30
AL-Adara almahylia	40	12	30	28	70
AL-Mutinzah	40	22	55	18	45

Shara Baghdad	40	12	30	28	70
AL-Mualimin	40	20	50	20	50
Total	200	94	47	106	53

X^2 =18.948, d = 4, p =0.01.

DISCUSSION

The present study showed lower prevalence rate than reported by[7] in Pakistan (63%),[8] reported 84.4% of seropositive cats in Santa Isabel doivai and[9] in Rio de janeiro reported 62%, but the present study showed higher prevalence rate than[10] reported 27% prevalence in cats of Diyala province of Iraq and[11] showed the prevalence of *T. gondii* infection was 15.8% by ELISA and 17.5% by PCR in Feral cats in Seoul, Korea and[12] reported (84/237) (35.4%) in serum of cats by the modified agglutination test.

The reason for the high prevalence of *T. gondii* in cats due to the fact that cats are the natural reservoir of the parasite and where the Oocyst sheld out through the feces and when there are appropriate conditions of temperature, soil and moisture and turn into mature infected Oocyst within 72 hours and remain in soil during the year.[13]

The reason for the high prevalence in sumer area due to the presence of main source to the Oocyst is a breeding cats or walkable in the area and contaminated dramatically gardens and vegetables with feces containing infected Oocyst.[8]

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