EFFECT OF WEATHER FLUCTUATION ON HEALTH OF PEOPLE IN LUCKNOW, U. P.

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ABSTRACT

The goats provide meat, milk, hair, skin, manure and are used as experimental animal. Capra indica reported to suffer severely from the seasonal incidence of amphistomes in vertebrate hosts in U.P. ,India. This present study deals with the seasonal incidence of infection of Paramphistomum spp. and Gastrothylax spp. In Capra indica in Lucknow, the capital of Uttar Pradesh, during July 1998 to March 2000. During this period the maximum temperature ranged from 41.90 to 39.50 in the summer and dropped to as low as 6.50 to 7.57 in winter. Maximum intensity of infection was found in the months of October to January.

The aphistomes are widely prevalent in tropical countries.This parasite causes molnutrition economic losses in these countries including India.

Key Words: *Amphistomes, goat's meat, malnutrition, weather fluctuation and seasonal disease.*

INTRODUCTION

"Health is wealth". There is nothing in our life more valuable than good health. Without health there is no happiness, no peace and no success. Health condition depends on a number of factors like human behaviour, weather changes, sanitation etc. The most important factor affecting human health is the fluctuation in weather condition .Weather is the continuously changing condition of the atmosphere usually considered on a time scale that extent from minutes to weeks. Climate change cans even occur on daily human health and well being. it is a well-established fact that weather is associated with many seasonal diseases.

It is a well-known fact that weather pollution associated with the seasonal incidence of the amphistomes in goats in Lucknow, U. P.

MATERIAL AND METHOD

In the present study rumen of male goats (*Cupra Indica)* were collected from local slaughter houses in Bashiratganj and Subhash-Marg, Lucknw. The parasites were taken out and counted.

RESULTS

Literature is scanty about the seasonal incidence of amphistomesin vertebrate hosts in U.P., India. This

present study deals with the seasonal incidence of infection of Paramphistomum spp .and Gastrothylax spp. in Capra indica in Lucknow, the capital of Uttar Pradesh ,during July 1998 to March 2000. During the period the maximum temperature ranged from 41.90 to 39.50 in the summer and dropped to as low as 6.50 to 7.57 in winter. Maximum intensity of infection was found in the month of October to January. A maximum of 25 rumens infected with amphistomes, 8 rumens infected with Paramphistomum spp., 10 rumens infected with Gastrothylax spp. And 16 rumens infected with Paramphistomum spp. and Gastrothylax spp. were collected from goats per month.

The author has observed that mixed infection were most prevalent

The results indicate that maximum incidence was observed in winter follower by monsoon, spring and summer.

Table-1

Temperature, humidity and rainfall. as recorded in Lucknow from July 1998 to March 2000

S.No.	Months	Temperature in °C		Humidity in percentage	Rainfall in mm
		Maximum	Minimum		
1	July' 98	33.35	25.66	86.86	8.00
2	August' 98	32.56	25.40	83.50	17.00
3	September' 98	34.00	24.32	85.50	9.30
4	October' 98	31.13	20.65	69.00	0.60
5	November' 98	29.40	15.08	63.25	0.00
6	December' 98	25.20	8.23	58,40	0.00
7	January' 99	18.58	6.50	54.67	0.00
8	February' 99	25.42	10.22	44.83	0.00
9	March' 99	33.10	14.70	25.88	0.00
10	April' 99	39,50	20.00	16.00	0.00
11	May' 99	41.90	26.86	15.10	0.00
12	June' 99	39.27	26.33	62.67	10.70^
13	July' 99	38.15	23.26	78.60	4.65
14	August' *99*	32.27	20.78	85.33	4.12
15	September' 99	33.00	25.98	83.92	3.79
16	October' 99	32.51	21.12	73.00	1.60
17	November' 99	26.80	13.17	63.40	0.00
18	December' 99	25.65	9.50	63.23	0.00

19	January' 2000	22.71	7.57	60.43	0.00
20	February' 2000	25.30	9.33	58.51	0.00
21	March' 2000	34.70	15.50	39.60	0.00

Table-2

Number of amphistomes obtained from rumen of *Capra indica* from July 1998 to March 2000 in Lucknow

S.No.	Months	Total no. of rumens examined	Total no. of rumens infected with amphistomes	Percentage of infection
1	July' 98	36	17	47.22
2	August' 98	36	25	69.44
3	September' 98	34	21	61.76
4	October' 98	36	25	69.44
5	November' 98	34	20	58.82
6	December' 98	36	19	52.77
7	January' 99	34	22	64.70
8	February' 99	32	17	53.13
9	March' 99	36	13	36.11
10	April' 99	34	7	20.59
11	May' 99	36	6	16.67
12	June' 99	34	10	29.41
13	July' 99	36	15	41.66
14	August' 99	34	22	64.71
15	September' 99	36	23	63.88
16	October' 99	34	22	64.71
17	November' 99	32	19	59.38
18	December' 99	35	20	57.14
19	January' 2000	32	22	68.75
20	February' 2000	35	17	48.57
21	March[1] 2000	42	17	40.47

Table-3

Number of *Paramphistomum* spp. obtained from rumen of *Capra indica* from July 1998 to March 2000 in Lucknow

S.No.	Months	Total no. of rumens examined	Total no. of rumens infected with *Paramphistomum* spp.	Percentage of infection
1	July' 98	36	4	11.11
2	August' 98	36	7	19.44
3	September' 98	34	5	14.71
4	October' 98	36	2	5.56
5	November' 98	34	5	14.71
6	December' 98	36	7	19.44
7	January' 99	34	5	14.71
8	February' 99	32	2	6.25
9	March' 99	36	4	11.11
10	April' 99	34	3	8.82
11	May' 99	36	0	0.00
12	June' 99	34	5	14.71
13	July' 99	36	3	8.33
14	August' 99	34	2	5.88
15	September' 99	36	6	16.67
16	October' 99	34	8	23.50
17	November' 99	32	3	9.38
18	December' 99	35	5	14.29
19	January' 2000	32	2	6.25
20	February' 2000	35	6	17.14
21	March' 2000	42	4	9.52

Table-4

Number of *Gastrothylax spp.* obtained from rumen of *Capra indica* from July 1998 to March 2000 in Lucknow

S.No.	Months	Total no. of rumens examined	Total no. of rumens infected with *Gastrothylax* spp.	Percentage of infection
1	July' 98	36	4	11.11
2	August' 98	36	5	13.89
3	September' 98	34	6	17.65
4	October' 98	36	7	19.44
5	November' 98	34	7	20.58
6	December' 98	36	9	25.00
7	January' 99	34	8	23.52
8	February' 99	32	8	25.00
9	March' 99	36	3	8.33
10	April' 99	34	1	2.94
11	May' 99	36	2	5.56
12	June' 99	34	2	5.88
13	July' 99	36	5	13.89
14	August' 99	34	7	20.59
15	September' 99	36	10	27.78
16	October' 99	34	5	14.70
17	November' 99	32	5	15.63
18	December' 99	35	1	2.89
19	January' 2000	32	7	21.88
20	February' 2000	35	5	14.29
21	March' 2000	42	1	2.38

Table-5

Number of parasites *(Paramphistomum* spp. and *Gastrothylax* spp.) obtained from rumen of *Capra indica* from July 1998 to March 2000 in Lucknow

S.No.	Months	Total no. of rumens examined	Total no. of rumens infected with Paramphistomum spp. and Gastrothylax spp.	Percentage of mixed infection
1	July' 98	36	9	25.00
2	August' 98	36	11	36.11
3	September' 98	34	16	29.41
4	October' 98	36	16	44.44
5	November' 98	34	8	23.53
6	December' 98	36	3	8.33
7	January' 99	34	9	26.47
8	February' 99	32	7	21.88
9	March' 99	36	6	16.67
10	April' 99	34	3	8.82
11	May' 99	36	4	11.11
12	June' 99	34	3	8.81
13	July' 99	36	7	19.44
14	August' 99	34	13	38.24
15	September' 99	36	7	19.43
16	October' 99	34	9	26.47
17	November' 99	32	11	34.38
18	December' 99	35	14	40.00
19	January' 2000	32	13	40.63
20	February' 2000	35	6	17.14
21	March' 2000	42	12	28.57

Table-6

The seasonal intensity of infection of amphistomes obtained from rumen of goats from July 1998 to March 2000 in Lucknow

S.No.	Months	Seasons	Total no. of rumens examined	No. of infected rumens	Percentage infection
1	July' 98 to September 1998	Monsoon	106	63	59.43
2	October 1998 to January 1999	Winter	140	86	61.43
3	February 1999 to March 1999	Spring	68	30	44.11
4	April 1999 to June 1999	Summer	104	23	22.12
5	July 1999 to September 1999	Monsoon	106	60	56.60
6	October 1999 to January 2000	Winter	133	83	62.41
7	February 2000 to March 2000	Spring	77	34	44.16

Table-7

The seasonal intensity of infection of *Paramphistomum* spp. obtained from rumen of goats from July 1998 to March 2000 in Lucknow

S.No.	Months	Seasons	Total no. of rumens examined	No. of infected rumens	Percentage of infection
1	July 1998 to September 1998	Monsoon	106	16	15.09
2	October 1998 to January 1999	Winter	140	19	13.57
3	February 1999 to March 1999	Spring	68	6	8.82
4	April 1999 to June 1999	Summer	104	8	7.69
5	July 1999 to September 1999	Monsoon	106	16	15.09

6	October 1999 to January 2000	Winter	133	18	13.53
7	February 2000 to March 2000	Spring	77	10	12.99

Table-8

The seasonal intensity of infection of *Gastrothylax* spp. obtained from rumen of goats from July 1998 to March 2000 in Lucknow

S.No.	Months	Seasons	Total no. of rumens examined	No. of infected rumens	Percentage of infection
1	July 1998 to September 1998	Monsoon	106	15	14.15
2	October 1998 to January 1999	Winter	140	31	22.14
3	February 1999 to March 1999	Spring	68	11	16.18
4	April 1999 to June 1999	Summer	104	5	4.81
5	July 1999 to September 1999	Monsoon	106	22	20.75
6	October 1999 to January 2000	Winter	133	18	13.53
7	February 2000 to March 2000	Spring	77	6	7.79

Table-9

The seasonal intensity of mixed infection of *Paramphistomum* spp. and *Gastrothylax* spp. obtained from rumen of goats from July 1998 to March 2000 in Lucknow

S.No.	Months	Seasons	Total no. of rumens examined	No. of infected rumens	Percentage of infection
1	July 1998 to September 1998	Monsoon	106	32	30.18
2	October 1998 to January 1999	Winter	140	36	25.71
3	February 1999 to March 1999	Spring	68	13	19.12
4	April 1999 to June 1999	Summer	104	10	9.62
5	July 1999 to September 1999	Monsoon	106	27	25.47
6	October 1999 to January 2000	Winter	. 133	47	35.34
7	February 2000 to March 2000	Spring	77	18	23.38

DISCUSSION

Now a days health is one of the most burning topic in the world so to find out how weather flutuactions and high humidity effects the occuraence of *Paramphistomum* spp and *Gastrothylax* spp. in goats Lucknow. U. P.

India provides hot and humid climate, which is suitable to the proliferation of parasites. Besides, inadequate condition in our country ensure a fee passage of parasites from one host to another, as it is impossible to protect any host from every possible source of infection.

In the present study it has been observed that infection of amphistomes in *Capra Indica* was more prevalent in the months of October to January. The finding of the present study confirms to these of Moghe, M.A.(1945), Nath, D.(1971) , Varma, T.K et al.(1989), M.M.R. *et al* (1990) ,Rolfe, P.E. *et al.*(1991), Negesse, T. (1994).

This could be possible since the incidence of parasites is directly related to the availability of the intermediate hosts, the snails, cercariae and metacercariae in the area. It is a well established fact that monsoon provided the best suitable conditions for breeding of snails and to multiply its population to a great extent. Thus many snails are available to be infected with larval forms (miracidia) of these flukes and approximatetly after four to six weeks, the infected snail discharge cercariae that encyst on grass blades for futher infection to the host, which is evident from the present results .After and before the monsoon ,snail population starts decreasing, resulting in poor population of parasites in ruminants.

An in depth study of amphistomes infection in ruminants appears to be an essential pre-requistic before tangible conclusions can be drawn .Control of parasites certainly requires a multi- dimensional approach in the present day management programmes instead of linear approach.

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