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RSEARCH PAPER

Clinico-biochemical studies in goats infected with *Fasciola gigantica*

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ABSTRACT

In the present investigation, clinico-biochemical parameters were studied in goats suffering from *Fasciola gigantica*. Infected goats showed clinical symptoms such as weakness, anaemia, diarrhoea, reduced milk, meat and wool production. Infected goats revealed significantly decreased serum calcium (4.10±0.21)), phosphorus (3.98±0.14), TSP (5.70±0.02), TSA (2.68±0.01) and A/G ratio (0.91±70.01) non significantly increased TSG (2.95).

Key words : Biochemical changes, goats, *Fasciola gigantica*

Among the helminthic infections of goats, *Fasciola gigantica*, is the most common pathogenic parasite. The immature stage is more chronic than mature one, but mature flukes are also responsible for irregular rumination and consequently affects body conditions which ultimately lead to alternations in biochemical parameters. The present study, therefore, was planned to observe the changes in biochemical parameters during naturally occurring cases of fasciolosis in goats.

MATERIALS AND METHODS

Out of 150 goats, ten goats aged between 1 to 2 years both sexes (male and female), naturally infected with *Fasciola gigantica* were selected for by his study. Infection was diagnosed on the basis of clinical signs, presence of *Fasciola gigantica* egg in faecal samples and counting of egg per gram (EPG) of faeces as per standard methods described by Soulsby (1986). For the estimation of serum calcium, phosphorus, total serum protein (TSP), total serum albumin (TSA), total serum globulin (TSG) and albumin-globulin ration (A/G), the blood samples were collected in separate clean 1" diameter tubes without anticoagulant. The sera of all animals were separated by centrifugation at 1000 rpm for 5 minutes. The calcium, phosphorus, total serum, protein, albumin and globulin were estimated by Gomorri's method (1942) and A/G ratio was calculated by the method of Oser (1965). Biochemical profiles of 02 healthy goats, free from parasite infection (healthy control) were also determined using the same methods. Statistical analysis of data was carried out as per method of Snedechor and Cochran (1994).

RESULTS AND DISCUSSION

Goats suffering from *Fasciola gigantica* showed clinical symptoms of weakness, anaemia, diarrhoea, reduced milk production. The biochemical parameters are presented in Table 1.

It is evident from Table 1 that there was significant decrease in the serum calcium (4.10±0.21), phosphorus

Table 1: Bio-chemical profiles in serum of affected and healthy goats

Sr. No.	Parameters	Mean value in infected goats (10)	Mean value in healthy goats (02)
1.	Calcium	4.10±0.21	10.18±0.26
2.	Phosphorus	3.98±0.14	4.20±0.16
3.	Total serum protein (TSP) g/dl	5.70±0.02	6.25±0.05
4.	Total serum albumin (TSA) g/dl	2.68±0.01	3.55±0.04
5.	Total serum globulin (TSG) g/dl	2.95±0.01	2.88±0.05
6.	A/G ratio	0.91±0.01	1.22±0.02
7.	Eggs per gram (EPG)	212.89±3.71	Nil

Significant ($P<0.05$)