

## Therapeutic Management of Anaplasmosis in a Kid

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### Abstract

A non-descript male kid about 4 months old was presented with complaint of anorexia, lethargic and tick infestation. Clinical examination revealed elevated temperature (104.6°F), pale conjunctival mucous membrane, anaemia and enlarged lymph nodes. Peripheral blood smear showed the presence of Anaplasma organism in the RBCs. Whole blood was collected and subjected to PCR, in which sample shown positive for *Anaplasma ovis* infection. The kid was administered with oxytetracycline @ 20 mg/kg body weight I/M, Sharkoferrol vet (@ 5 gm daily) and B- complex injection (@ 1 mL I/M) at an interval of 48h. Significant clinical improvement was noticed after five days of treatment.

**Keywords:** Anaplasmosis, PCR, Oxytetracycline, Small ruminants

### Introduction

Anaplasmosis is an infectious, non-contagious disease caused by *Anaplasma ovis*, a rickettsial organism that exists as an obligate intra-erythrocytic pathogen (CabezasCruz *et al.*, 2019). The disease is usually mild and subclinical, but it may advance to an acute stage when aggravated by stress, severe mite infestation, inadequate nutrition, high environmental temperatures, or concurrent infections (Stuen *et al.*, 2003). This article reports anaplasmosis in a kid.

### Case History and Observation

A non-descript male kid about 4 months old was presented with complaint of anorexia, lethargy (Fig.1) and tick infestation (Fig.2). On clinical examination, pyrexia (104.6°F), pale conjunctival mucous membrane (Fig.3) and enlarged lymphnodes were noticed Peripheral blood smear stained with Giemsa stain, showed the presence of *Anaplasma* organism in the RBCs. For further confirmation whole blood was subjected to PCR as described by Torina *et al.* (2008)



Fig.1. Animal was dull and lethargy

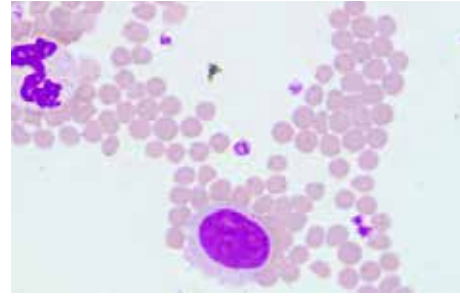


Fig.2. Severe Acariasis

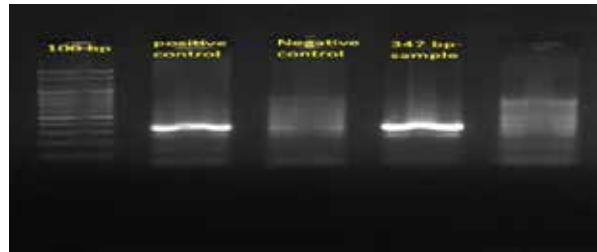
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**Fig.3. Pale conjunctival mucous membrane**



**Fig.4. RBCs infected with *Anaplasma* organism**



**Fig.5. PCR- amplicon size of *Anaplasma ovis* is 347bp**

### Treatment and Discussion

The kid was administered with oxytetracycline @ 20 mg/kg body weight I/M, Sharkoferrol vet (@ 5 gm daily) and B- complex injection (@ 1 mL I/M) at an interval of 48h. Significant clinical improvement was noticed after five days of treatment. *Anaplasma ovis* is

the principal species responsible for the disease in sheep and goats (Smith *et al.*, 2009). In this study microscopic examination suggested for *Anaplasma* spp and this was further confirmed by PCR. Smith *et al* (2009) reported that Imidocarb dipropionate might provide better treatment outcome in these cases.

**Table 1: Serum biochemistry of *Anaplasma* infected kid**

PARAMETERS	OBSERVED VALUE	NORMAL RANGE
Glucose (mg/dl)	68	45-75
Total protein (g/dl)	6.9	6.1-7.5
Albumin (g/dl)	3.3	2.3-3.6
Calcium (mg/dl)	9.8	9.0-11.7
Phosphorous (mg/dl)	4.7	3.7-9.7
ALT (U/L)	43	11-40
AST (U/L)	86	66-230
GGT (U/L)	14	20-50

**Table 2: Complete blood count of Anaplasma infected kid**

PARAMETERS	OBSERVED VALUE	NORMAL RANGE
Haemoglobin (g/dl)	6.2	8.0–12.0
Packed cell volume (%)	20	22-38
RBC (m/cmm)	3.8	8.0-18.0
WBC/ cmm	12,000	4.0-13.0
PLATELETS /cmm	4,00,000	3.0-6.0
Neutrophils (%)	40	30-48
Lymphocytes (%)	57	50-70
Monocytes (%)	2	1-4
Eosinophils (%)	1	3-8

### References

- Akerejola, O.O., Schillhorn Van Veen, T.W. and Njoku, C.O. 1979. Ovine and caprine diseases in Nigeria. A review of economic losses. *Bulletin of Animal Health and Production in Africa*, **27**: 65-70.
- Cabezas-Cruz, A., Gallois, M., Fontugne, M., Allain, E., Denoual, M. and Moutailler, S. 2019. Epidemiology and genetic diversity of *Anaplasma ovis* in goats in Corsica, France. *Parasites & Vectors*, **12**(3) :1–11.
- Shabana, I. I., Alhadlag, N.M., and Zaraket, H. 2018. Diagnostic tools of caprine and ovine anaplasmosis: a direct comparative study. *BMC Vet. Res.*, **14**(165): 1–8
- Smith, M.C. and Sherman, D.M. 2009. *Goat Medicine*. 2nd ed. Wiley-Blackwell, 287-288.
- Stuen, S., Nevland, S. and Moum, T. 2003. Fatal cases of tick-borne fever (TBF) in sheep caused by several 16S rRNA gene variants of *Anaplasma phagocytophilum*. *Annals of the New York Academy of Sciences*, **990**: 433–434.
- Torina, A., Alongi, A., Naranjo, V., Scimeca, S., Nicosia, S., Di Marco, V. and de la Fuente, J. 2008. Characterization of *Anaplasma* infections in Sicily, Italy. *Annals of the New York Academy of Science* : 90–93.

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