



ULTRASONOGRAPHIC EVALUATION OF TESTIS AND EPIDIDYMIS OF EXPERIMENTALLY INFECTED GOATS WITH *TRYPANOSOMA VIVAX*



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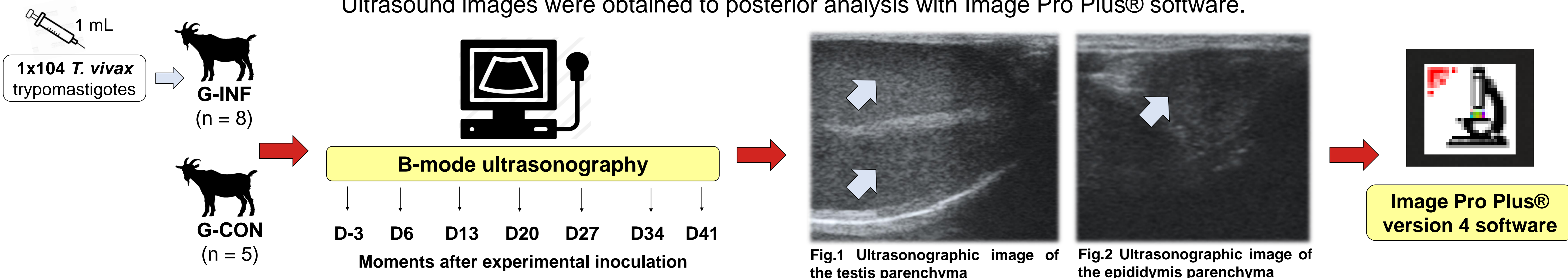
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INTRODUCTION AND OBJECTIVE

Trypanosoma vivax is a hemoparasite which causes economic losses and can affect the reproductive system in farm animals, producing inflammatory and degenerative lesions mainly in testis and epididymis. Our objective was to evaluate by **B-mode ultrasonography**, young goats experimentally infected with *T. vivax*, in order to identify possible **alterations in echotexture** of **testis** and **epididymis**.

MATERIAL AND METHODS

Ultrasound images were obtained to posterior analysis with Image Pro Plus® software.



RESULTS

		D-3	D6	D13	D20	D27	D34	D41	G-CON	G-INF	P value		
											Group	Day	Int
T	NPV	68.47 ± 5.32	66.35 ± 5.32	57.85 ± 5.32	65.97 ± 5.32	61.62 ± 5.32	69.38 ± 5.32	71.80 ± 5.32	59.34 ± 4.80	72.50 ± 3.79	0.05	0.33	0.81
	HET	12.20 ± 0.62	12.85 ± 0.62	10.80 ± 0.62	12.55 ± 0.62	12.3 ± 0.62	13.82 ± 0.62	13.33 ± 0.62	10.78 ± 0.60	14.33 ± 0.47	< 0.01	< 0.01	0.12
EP	NPV	59.20 ± 3.44	51.69 ± 3.44	49.18 ± 3.44	53.25 ± 3.44	53.37 ± 3.44	56.23 ± 3.44	56.07 ± 3.44	52.10 ± 2.78	56.19 ± 2.20	0.27	0.41	0.65
	HET	10.71 ± 0.91	9.96 ± 0.91	8.47 ± 0.91	8.86 ± 0.91	10.48 ± 0.91	11.44 ± 0.91	9.98 ± 0.91	9.22 ± 0.80	10.76 ± 0.63	0.16	0.2	0.14

Table 1. Adjusted means ± EPM of the mean numerical pixel value (NPV) and parenchyma heterogeneity (HET) of the testis (T) and epididymis (EP), according to the main group effects (infected - G-INF and control – G-CON) and moments in relation to the experimental inoculation of *T. vivax*.

DISCUSSION

The normal testicular parenchyma has a **homogeneous** and **hypoechoic echotexture**, therefore, alterations are easily detectable in this structure. As trypanosomiasis is associated with testicular and epididymal **inflammation and degeneration**, collectively, the **increase in T NPV and T HET suggest changes in microstructure and chemical composition**, due to an inflammatory process and proliferation of fibrous connective tissue.

CONCLUSION

Based on the results of the present study, it can be concluded that **the increase in testicular NPV and testicular HET are indicative of tissue alterations promoted by *T. vivax***, which are **detectable by ultrasonography**.

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