ULTRASONOGRAPHIC EVALUATION OF ACCESSORY SEX GLANDS OF GOATS EXPERIMENTALLY INFECTED WITH *TRYPANOSOMA VIVAX*

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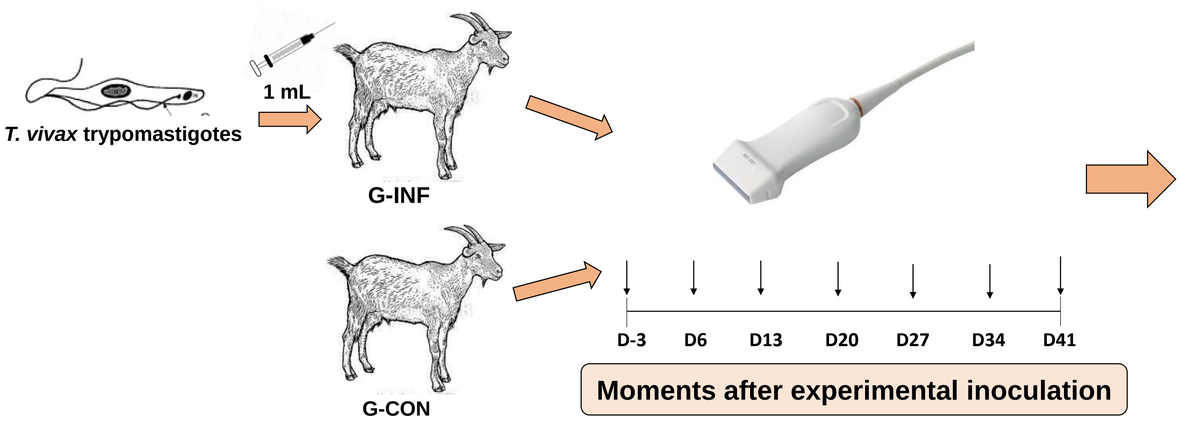
INTRODUCTION AND OBJECTIVE

Trypanosoma vivax is a hemoparasite that **affects negatively the reproductive system** of ruminants. Despite the **importance of accessory sex glands in the composition of seminal plasma**, there is no information about their involvement in *T. vivax* infections in goats. Our objective was to **identify possible alterations** and **characterize the ultrasonographic attributes of these tissues**.

MATERIAL AND METHODS

Eight animals were infected (G-INF) by intravenous **inoculation of 1x10^4 *T. vivax* trypomastigotes** and the other 5 were kept as negative control group (G-CON). These animals were submitted to Mode-B **ultrasound examination for evaluation of the sexual glands**.



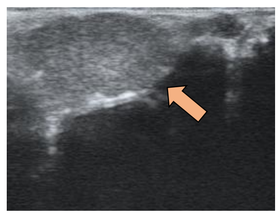


Fig.1 Ultrasonographic image of the vesicular gland.

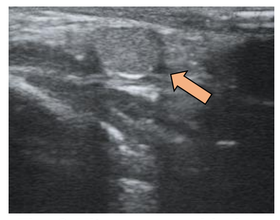


Fig. 2 Ultrasonographic image of the bulbourethral gland.

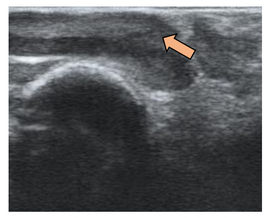


Fig.3 Ultrasonographic image of the disseminated prostate

Image Pro Plus® version 4 software

RESULTS

		-3	6	13	20	27	34	41	G-CON	G-INF	P value		
											Group	Day	Int
VG	NPV	102.60 ±2.81	102.91 ±2.81	105.05 ±2.81	105.20 ±2.81	101.00 ±2.81	105.72 ±2.81	99.75 ±2.81	**99.76 ±2.27**	**106.60 ±1.80**	**0.04**	0.40	0.93
	HET	13.78 ±1.20	14.48 ±1.20	17.91 ±1.20	13.78 ±1.20	13.68 ±1.20	13.24 ±1.20	13.50 ±1.20	14.91 ±0.66	13.76 ±0.52	0.20	0.10	0.20
BG	NPV	104.70 ±13.4	105.25 ±13.14	103.64 ±13.14	105.61 ±13.14	149.18 ±13.14	108.94 ±13.14	105.50 ±13.14	118.91 ±7.93	104.60 ±6.27	0.18	0.16	0.17
	HET	18.64 ±0.79	19.98 ±0.79	19.29 ±0.79	19.68 ±0.79	19.75 ±0.79	17.98 ±0.79	17.10 ±0.79	**19.92 ±0.62**	**17.92 ±0.49**	**0.03**	0.12	0.21
DP	NPV	97.27 ±3.53	104.07 ±3.53	101.81 ±3.53	103.49 ±3.53	97.26 ±3.53	100.12 ±3.53	98.46 ±3.53	99.85 ±2.64	100.87 ±2.09	0.77	0.56	0.61
	HET	14.39 ±0.95	15.22 ±0.95	15.09 ±0.95	15.97 ±0.95	15.84 ±0.95	15.86 ±0.95	16.07 ±0.95	**14.40 ±0.60**	**16.58 ±0.47**	**0.02**	0.88	0.95

Table 1. Adjusted means ± EPM of the mean numerical pixel value (NPV) and parenchyma heterogeneity (HET) of the vesicular (VG), bulbourethral (BG) and disseminated prostate (DP) glands of young goats, 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 increase in NPV is indicative of **increase in reflective surfaces**, which may be due to **fibrin and/or fibrosis**. **HET**, on the other hand, represents the **variation of hypo and hyperechogenic areas** and may be indicative of **tissue modification**, possibly due an **inflammatory process**.

CONCLUSION

Based on the results of the present study, we conclude that **increase in NPV in GV and HET in PD and GB were indicative of tissue alterations promoted by *T. vivax***, which were **detectable by ultrasonography**.

ACKNOWLEDGMENTS: to FAPESP (PROC: 2019/22695-7), to PIBIC-CNPq (Grant 1/2020 – PROC: 147825/2020-2) and to graduate students Amanda Kassem Sammour, Maísa Pansani dos Santos, Sarah Daccach and Viviane Bobadilha Morelli.