

## Infrared thermography to evaluate the inflammatory reaction after testicular injection of 20% CaCl<sub>2</sub> associated to lidocaine 1% or 0.5% DMSO, and treatment effectiveness, in tomcats.

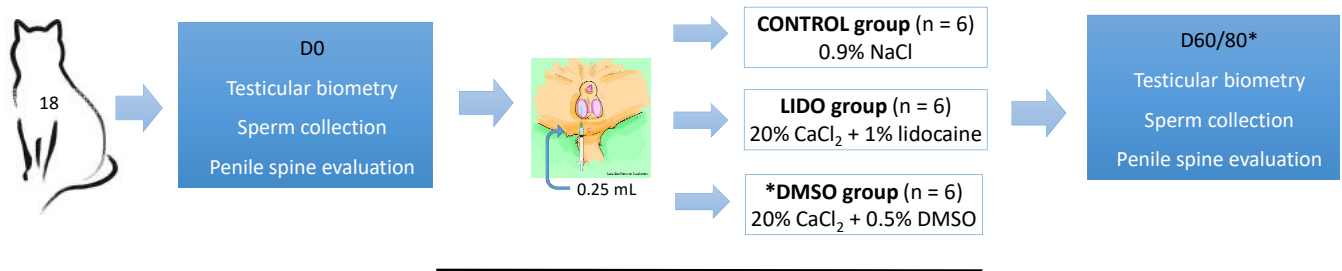
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### INTRODUCTION/OBJECTIVE

Infrared thermography is a simple, objective, effective and non invasive medical tool, to detect and measure superficial skin temperature variation due to pathological processes on its underlying tissue. In this view, the aim of this study was to evaluate the inflammatory reaction caused by intratesticular injection of 20% calcium chloride (CaCl<sub>2</sub>) with 1% lidocaine or 0.5% dimethylsulphoxide (DMSO) in tomcats, by infrared thermography image, and evaluate the treatments effectiveness.

### MATERIALS AND METHODS



- Room temperature controlled at 23°C
- Cats were confined in cages
- 60 cm distance between infrared camera and the testis
- Retal temperature right after thermography

Before	10 min	1 hour	6 hours	Day 1 to 7
D0	10 min	1 h	6 h	D1-7

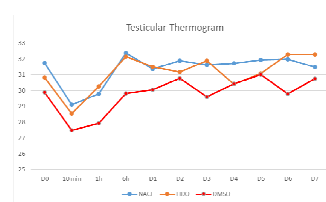
### RESULTS AND DISCUSSION

The cats in the LIDO group had 20% reduction on total testicular volume (TTV), 70% showed seminal subfertility parameters and penile spine reduction, while the cats in the DMSO group had 50% reduction on TTV, were azoospermic and showed total absence of penile spine by the end of the study (D60/80).



**Figure 1.** A. Penile spine in adult male cat (arrow). B. Absence of penile spine in adult male cat 80 days after intratesticular injection with 20%CaCl<sub>2</sub> + 0.5% DMSO

The thermographic measures were similar in the three groups with discrete variation between moments.



**Figure 2.** Mean of testicular area temperature of the cats from CONTROL, LIDO and DMSO groups, measured in celsius degree, by infrared thermography.

### CONCLUSION

The CaCl<sub>2</sub> association with DMSO is more effective to promote infertility in male cats, than with lidocaine.