Infrared thermography to evaluate the inflammatory reaction after testicular injection of 20% CaCl₂ associated to lidocaine 1% or 0.5% DMSO, and treatment effectiveness, in tomcats.

**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 (CaCl₂) with 1% lidocaine or 0.5% dimethylsulphoxide (DMSO) in tomcats, by infrared thermography image, and evaluate the treatments effectiveness.

**MATERIALS AND METHODS**

<table>
<thead>
<tr>
<th>DO</th>
<th>CONTROL group (n = 6) 0.9% NaCl</th>
<th>D60/80* Testicular biometry Sperm collection Penile spine evaluation</th>
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<tbody>
<tr>
<td>D0</td>
<td>Testicular biometry Sperm collection Penile spine evaluation</td>
<td>LIDO group (n = 6) 20% CaCl₂ + 1% lidocaine</td>
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- 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

**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).

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

**CONCLUSION**

The CaCl₂ association with DMSO is more effective to promote infertility in male cats, than with lidocaine.