Different solutions have been investigated in order to reduce pain associated with piglet castration. Four treatments were compared in a first experiment: sham castration (S), castration without analgesia or anesthesia (V), castration with local anesthesia (1ml lidocaïne 2%/testis, L) and castration with anti-inflammatory treatment (0.75 ml ketoprofene 1%/piglet, K).

Considering that anaesthesia is time consuming, labour demand has been compared between V and L treatments in order to evaluate the cost of this technique.

**MATERIALS AND METHODS**

**Experiment 1**

- 4 males were allocated within litters to 4 treatments (48 litters = 48 blocs)
- V: castration without analgesia or anesthesia
- S: sham castration
- L: castration with local anesthesia (1ml lidocaïne 2%/testis)
- K: castration with anti-inflammatory treatment (0.75 ml ketoprofene 1%/piglet)

**Experiment 2**

- 2 persons
- 24 litters / person / treatment

<table>
<thead>
<tr>
<th>Injections</th>
<th>Behaviour</th>
<th>1 obs / 2 min</th>
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<tbody>
<tr>
<td>- 24h</td>
<td>- 20min</td>
<td>- 10min</td>
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<tr>
<td>(next L)</td>
<td>(next L)</td>
<td>(next L)</td>
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<tr>
<td>lidocaïne injection</td>
<td>castration</td>
<td></td>
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<tr>
<td>(next litter)</td>
<td>(next litter)</td>
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<table>
<thead>
<tr>
<th>Behaviour</th>
<th>1 obs / 2 min</th>
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<tbody>
<tr>
<td>+ 30min</td>
<td>+ 1h</td>
</tr>
<tr>
<td>+ 24h</td>
<td>+ 25h</td>
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**RESULTS**

**Experiment 1**

**Behaviour during castration** (Table 1)

- call intensity and number of piglets trying to escape during castration were reduced under local anesthesia.
- no effect of ketoprofene on these parameters.

**Cortisol level**

- local anesthesia had no effect on plasma cortisol level whereas AINS induced a reduction of it.

**Post castration behaviour** (Fig 1)

- on D0, K piglets tended to behave like S ones. Exploring and standing were more frequent in K than in L and V piglets.
- on D1, no difference between treatments concerning non-specific behaviours.

**Conclusion**

Piglets feel pain during and after castration. Ketoprofene had a limited impact during castration but reduced post-operative pain. The main effect of local anesthesia concerned pain during castration. The cost of this method was estimated at about 0.348 € in this experiment. Some L piglets presented convulsions; further studies should determine more precisely the amount of lidocaïne that should be injected to obtain the maximal pain reduction without negative side-effects.