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# THE EFFECTS OF TAIL DOCKING IN SHEEP REGARDING TO THE HISTOLOGICAL FEATURES OF THE MUSCLES FROM THE PELVIC DIAPHRAGM

## Introduction

Tail docking in sheep husbandry is mainly performed to reduce the risk of fly strike and to improve cleanliness during milking. However, the relationship between tail docking and cleanliness is unclear. This practice causes mild to moderate acute pain and the magnitude of the pain associated with tail removal seems to be related to tail length. Little is known about the long-term implications of tail docking sheep. Ultra-short docking reduces the weight of the recto-coccygeal muscles; it seems to increase the risk of rectal and vaginal prolapse at lambing relative to longer tails and to predispose to neuroma and nerve degeneration.

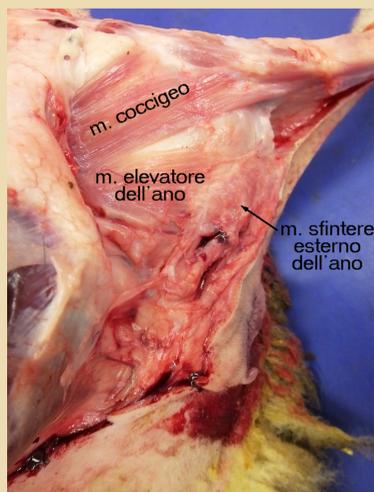
## Aim of the Study

Evaluation of the histological features of the muscles from the pelvic diaphragm and the related nerves in order to improve knowledge concerning to the long-term consequences of tail docking in sheep.

## Materials and Methods

- 1 15-months-old Lacaune ewe with ultra-short tail and recurring rectal prolapse
  - 1 15-months-old Lacaune ewe with undocked tail
  - 1 lamb of Lacaune breed with undocked tail
- Histological examination of the external anal sphincter, levator ani, coccygeal muscle and the deep perineal nerve after haematoxylin-eosin or Masson's trichrome staining.

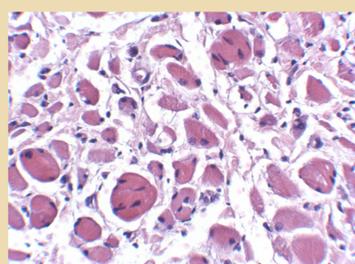
## Results



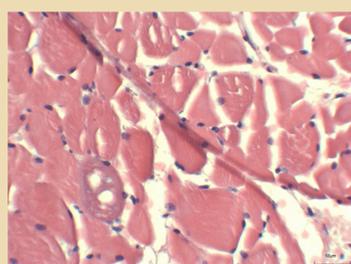
**Adult ewe with undocked tail,**  
 muscles of the pelvic diaphragm



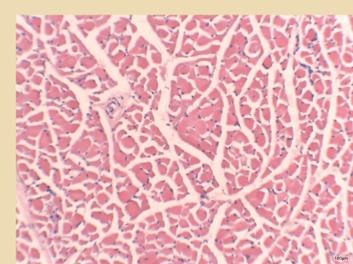
**Adult ewe with undocked tail,**  
 histological examination



**Ultra-short docked ewe,**  
 external anal sphincter with  
 internal nuclei. 20x

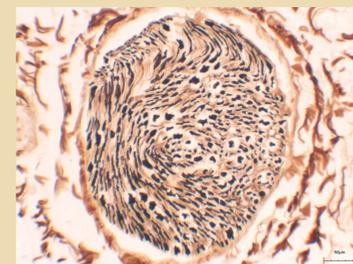


**Ultra-short docked ewe,**  
 coccygeal muscle with vacuoles.  
 20x



**Lamb,** coccygeal muscle. 20x

We found changes in shape and size of the muscle fibres from the ultra-short docked ewe: enlarged or moth-eaten fibres were observed amidst normal sized fibres in each of the three muscles of the pelvic diaphragm; furthermore, some internal nuclei were observed. Lamb's muscles appeared normal. Nerve fibres were found to be normal both in the docked ewe and the undocked lamb. Samples from the adult ewe with undocked tail are still to be processed.



**Ultra-short docked ewe,**  
 deep perineal nerve. 20x

## Conclusions

The muscle abnormalities observed in the ultra-short docked ewe suggest that tail docking, in the long term, may predispose to pathologies such as prolapses. Improved understanding of the long-term consequences of tail docking, especially the possibility of chronic pain, is needed.

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