

## PSOROPTIC MANGE AND TOOTH HYPERGROWTH IN A DOMESTIC RABBIT: CASE REPORT<sup>1</sup>

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**Abstract:** Psoroptic mange is a common condition in rabbits, which can trigger both behavioral and secondary changes. Dental hypergrowth is also commonplace in clinics, and may have different etiologies and affect different systems. The present work reports the case of a pet rabbit parasitized by the mite *Psoroptes cuniculi* in the region of the auditory canal and with dental hypergrowth, which was treated at ``Clínica Veterinária Escola da UNIVIÇOSA``. An otoscopy examination was performed, allowing the observation of yellowish crusts and mites present in the region, and the diagnosis regarding the presence of *Psoroptes cuniculi* was made through a microscopic evaluation of the mites present in the cerumen collected by ear swab. While the dental diagnosis was based on physical examinations.

**Keywords:** Mite, tooth wear, malocclusion, veterinary medicine, *Psoroptes cuniculi*.

## INTRODUCTION

In Brazil, domestic rabbits (*Oryctolagus cuniculus*) have become increasingly popular with the status of pets due to their characteristics, such as the ease of adaptation in environments. With this increase, noThe appearance of diseases such as Psoroptic Mange and tooth hypergrowth are noted, both of which will be discussed in this work.

The ectoparasite *Psoroptes cuniculi* is common in rabbits and its entire cycle occurs in the host. Mites have mouthparts that cause inflammation in the superficial epithelium of the skin, causing intense itching, causing rabbits to shake their heads or scratch their ears with their paws. The mites are attracted by the odor and thermal stimuli of the host, and when a fertilized female finds a satisfactory area on the skin, she digs a gallery in the stratum corneum, in which she feeds and lays her eggs, which develop to adults in 10 to 21 days (BRUM et al., 2007). The use of injectable

drugs can make scabies control more efficient.

Rabbits have continuous tooth growth, so the act of chewing and diet are extremely important for the mechanism of tooth wear (CÔRREA et al, 2014). Failures in the balance of wear can cause an elongation of the clinical crown and, consequently, a dental malocclusion, a fact that makes it difficult for the animal to feed and favors weight loss (CROSSLEY, 2003). The diagnosis can be made through physical and/or specific examinations, and dental treatment is based on tooth wear, with the objective of reducing the size of the teeth and adjusting the occlusion (CROSSLEY, 2003). It is also necessary to correct the feeding management, in addition to periodic monitoring by the veterinarian, due to the chances of relapses (CÔRREA et al, 2014).

## CASE DESCRIPTION

A three-year-old male domestic rabbit, SRD, was attended at the UNIVIÇOSA Veterinary School on May 13, 2022, weighing 2 kg, not neutered, without vaccination protocol and dewormed approximately 3 weeks ago (Ivermectin). It was also informed that the animal ate feed, hay and fruit, stayed on an adapted balcony, without contact with other animals and that it was using Otospan and Meloxicam (2 drops, orally, BID). In the anamnesis, the tutor complained that the animal had inflammation in the auditory canal, loss of an incisor tooth, wounds on the paws of the right and left pelvic limbs, and that the animal reduced food consumption, causing weight loss.

During the physical examination, vital parameters were measured. On auscultation, there was heart rate 248 BPM and respiratory rate 128 MPM, rectal temperature 37.8°C, pale mucous membranes, capillary refill time greater than two seconds, hydration lower than 95% and reactive lymph nodes. Dental

hypergrowth of the lower and upper incisors was observed during the clinical evaluation (Figure 1). An otoscopy examination was also carried out, allowing the observation of yellowish crusts and mites present in the region (Figure 2), in addition to swab collection for later identification of the mite by visualization under a microscope.

Outpatient treatment was prescribed with application of Ivermectin 1% (0.2 ml subcutaneously, every 4 days, for 28 days), associated with home treatment with Enrofloxacin 25mg/kg (SID, for 7 days), Prednisolone 2mg/kg (SID, for 3 days) and Terra-Cortril spray (TID, for 15 days). A hemogram was requested, in which the result showed microcytic and hypochromic anemia. Dental wear was also carried out to resolve the hypergrowth of the incisor teeth (Figure 3). On May 27, 2022, the tutor returned and reported that there was improvement in the lesions (Figure 4), increased appetite and gradual weight gain.



Figure 3- Incisor teeth after malocclusion correction.

Figure 4- Normal pinna, after treatment.  
Source: personal archive.

## TECHNIQUE (OR SITUATION)

The resolution of incisor hypergrowth consists of tooth wear, reducing the teeth to a normal size and adjusting the dental occlusion.

## DISCUSSION

Ectoparasites are common dermal disorders in rabbits, directly interfering with the quality of life of these animals. Mites of the genus *Psoroptes* can affect several species of animals, not only domestic, but also wild (Coelho et al.2014), according to TAYLOR, et al. (2017), the mites described as *Psoroptes cuniculi* are found only in the ear of their hosts. In rabbits, it is the most reported ectoparasite, mainly in otological pathologies, being responsible for the development of otitis, ulcerations, hyperemia and formation of granulation tissue (Coelho et al.2014). In the present case report, its occurrence in a three-year-old SRD domestic rabbit is described. The clinical signs presented corroborate with those cited by several authors. Dental malocclusion also has a high incidence in rabbits, because these animals have a constant dental growth (CÔRREA et al, 2014), the natural wear of the teeth occurs through masticatory activity and the ingestion of abrasive foods such as



Figure 1- Hypergrowth of the incisors.

Figure 2- Inflammation of the superficial epithelium of the skin, presence of crust.

foliage, hay and grass, which in addition to the nutritional function, can be provided as a form of environmental enrichment. Dental treatment is the only way to correct malocclusion, odontosection and occlusal adjustment is performed in order to reduce the teeth to normal size, allowing correct dental occlusion (SEREJO et al, 2016). Treatment was established through outpatient applications of Ivermectin 1% (0.2 ml subcutaneously, every 4 days, for 28 days), associated with home treatment with Enrofloxacin 25 mg/kg (orally, SID, for 7 days), Prednisolone 2mg/kg (oral, SID, for 3 days) and Terra Cortril spray (topical use, TID, for 15 days), Danoninho (3ml, every 4 hours, for 5 days), soft fruits ad libitum, homemade serum (5ml, every 4 hours, for 5 days), Hidrovit (1ml SID, for 20

days) or Glicopan (2ml SID, for 20 days). A change in feeding management was indicated, providing commercial feed of better quality, Megazoo or Nutropica.

## CONCLUSION

It is concluded that the therapeutic protocols submitted to the treatment were evaluated and provided the recovery of the patient with evident improvement after surgical treatment (correction of the malocclusion) and, upon return, the wounds and crusts that were on the pinna were no longer as abrupt as before, the entire inflammatory process had already regressed through the use of the protocol exposed throughout the treatment, a favorable prognosis.

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