

Causes and Treatment of Common Dental Problems in Rabbits

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Two major problems occur with the cheek teeth of rabbits: malocclusion, or overgrowth of the cheek teeth, and dental abscesses of the cheek teeth. Of the two, malocclusion is the more common and can often be dealt with easily by trimming the sharp points from the offending tooth or teeth. Cheek tooth abscesses are much more difficult to treat and, in the past, have required a lifetime of antibiotics to prevent their return. Recent research, published in March 1995, may offer new hope to rabbits with this condition.

To better understand the diseases of the rabbit's cheek teeth we need to discuss the workings of their teeth and the nature of the abnormalities that cause problems.

Rabbits have open rooted molars that grow throughout life. The upper and lower incisors (front teeth) of rabbits grow 4 and 5 inches a year, respectively. Similar statistics for cheek tooth growth are not available; however, the rate is significant. In the normal rabbit mouth, biting and chewing of food continually grinds down the teeth, keeping this growth in check and the teeth at stable lengths.

Malocclusion or "Slobbers"

Any interference to normal wear results in malocclusion of these constantly growing teeth. Malocclusion leads to difficulty in biting, chewing and swallowing of food. As the growth of cheek teeth is altered, the lower cheek teeth overgrow toward the tongue, whereas the upper teeth overgrow toward the cheek. Sharp points develop on the longer sides of the teeth causing lacerations of the adjacent cheek and tongue.

A common sign of this problem is the rabbit trying to pick up or eat food, only to drop it without chewing. As the condition advances, the rabbit will drool excessively, causing wet, matted fur around the mouth, chin, chest and forelegs. Here, secondary bacterial infections may develop, leading to hair loss in those locations.

Malocclusion has been blamed on a number of things. A genetic defect (mandibular prognathism, or MP) that leads to malocclusion of incisors is well documented in rabbits. In this recessive disorder, both the doe and buck (mother and father) rabbit must carry and pass the trait to their offspring and, then, only 81% of those who get the trait will have a problem with their teeth. Rabbits with this trait typically show signs by 8-10 weeks of age- at or just after the time of weaning-starting with incisors that just meet.

Rabbits with early signs of MP often also have problems with malocclusion of their cheek teeth. In this instance, the cheek-tooth malocclusion is likely caused by the overgrown incisors, preventing normal wear of the cheek teeth, and resulting in overgrowth. Rabbits whose abnormal incisors are cut regularly do not appear to develop problems with their cheek teeth.

Similar to the animals with incisor malocclusion, rabbits who show cheek-tooth malocclusion at a young age may be victims of genetics affecting the angle of cheek-tooth growth. Diet and nutrition may also be involved. Excessively high levels of fluoride (chronic fluorosis) and a diet deficient in folic acid have been shown to cause similar problems.

However, the group we see most often afflicted with malocclusion is older rabbits, where the changes in the cheek teeth are usually the result of aging. As with the horse, older rabbits develop elongated tooth-enamel points even though the length and angle of tooth growth may be normal. Lastly, loss or damage of a tooth may lead to the overgrowth of the opposing tooth.

Because of the depth of the oral cavity caused by the long diastema, the space between the incisors and the cheek teeth, and the limited amount that the mouth will open, it is difficult to treat tooth problems.

Treatment of malocclusion requires the rabbit go under general anesthesia, either with isoflurane, a safe gas anesthesia agent or a short-acting injectable agent. Instruments are used to prop open and light the rabbit's mouth. This makes it easier to see the teeth and gives sufficient space to work. The teeth are cut with specialized bone-cutting instruments designed not to splinter or shatter the tooth. Animals typically return to normal eating behavior within a day or two after their teeth have been trimmed. If the sharp tooth points have caused significant damage to the oral cavity, an antibiotic is administered for several days.

Cheek tooth root abscesses

Abscesses of cheek teeth are not uncommon in rabbits. Most often, food impacted alongside the tooth or in longitudinal tooth fractures causes mixed infection. Occasionally pure cultures of *Pasteurella multocida* or *Staphylococcus aureus* are found. Because a cheek abscess cannot be completely cut out, it has heretofore been typical that the rabbit would need lengthy, perhaps lifelong, treatment.

Treatment begins with extraction of the tooth or teeth involved and a surgical scraping of the abscess sac. The resulting lesion is left open following surgery and treated with a cream (Kymar ointment) or spray (Granulex) containing digestive enzymes, long-term systemic antibiotics and daily irrigation with a disinfectant solution using a Water-Pic. Cleansing and irrigation with the Water-Pic and antibiotics continue until the lesion has begun to grow healthy skin.

Now, at last, comes good news. Recent research shows that packing the abscess with a dental preparation, calcium hydroxide, may greatly increase the chances of total elimination of dental abscesses. In a study published in the *Journal of Veterinary Dentistry* (vol. 12, no. 1, March, 1995) 10 rabbits treated in this manner healed without recurrence of the abscess. At the Avian & Exotic Animal Hospital we have begun using this treatment for cheek tooth abscesses. We hope our success rate will equal that of the researchers.