Dental Malocclusion in Chinchillas

(Dental Disease)

Basics

OVERVIEW

• Occlusion is the relationship or contact between the biting and chewing surfaces of the upper and lower teeth; malocclusion is any deviation in the relationship or contact between the biting and chewing surfaces of the upper and lower teeth.

• The cheek teeth are the premolar and molars. These function as a unit to grind and chew food and are thus referred to as cheek teeth. The incisors are the set of front teeth that can easily be seen when looking at the front of the mouth.

• Chinchilla’s teeth grow continuously, lifelong. The rate of normal wear should equal the rate of growth. Normal wear requires proper occlusion with the opposing set of teeth and a highly abrasive, fresh food diet to encourage proper movement of the mandible and grind tooth surfaces.

• The most common cause of dental malocclusion is feeding diets that contain inadequate amounts of the coarse roughage material required to properly grind tooth surfaces. The second most common cause is trauma to the teeth caused by falling or being dropped, or by excessive chewing on cage bars. Malocclusion as an inherited defect does not occur in chinchillas.

• When cheek teeth are a normal length, they will contact the apposing set of cheek teeth at an angle such that the teeth will wear normally. If normal wear does not occur and teeth overgrow, sharp spikes or spurs will often form, angling toward the tongue on the bottom row of teeth or toward the inside of the cheek on the top row of teeth. Spikes can become very long and penetrate into the tongue or cheeks.

SIGNALMENT

• Usually seen in middle-aged or older chinchillas

• Disease due to tooth trauma can occur in any aged animal.

SIGNS

• Preference for soft foods

• Decreased appetite—may show an interest in food, but unable to eat

• Excessive drooling—wet fur around the mouth and/or front limbs

• Tooth grinding

• Weight loss
• Signs of pain—reluctance to move, depression, lethargy, hiding, hunched posture  
• Unkempt hair coat, lack of grooming  
• May sometimes notice incisor overgrowth first, as these teeth are readily visible. Not all chinchillas with cheek teeth malocclusion have abnormal incisors. The cheek teeth cannot be seen by just opening the mouth. Examining the cheek teeth requires specialized lighting and magnification, and often requires sedation or anesthesia to completely assess the extent of disease.

CAUSES
• Inadequate fibrous, tough foods or foods containing silicates (grasses) to encourage proper jaw motion and properly grind tooth surfaces  
• Trauma—fractures of the cheek teeth, usually bottom teeth or incisors

RISK FACTORS
Feeding pelleted diets and simple carbohydrate treats, with insufficient hay

TREATMENT
APPROPRIATE HEALTH CARE
• Trimming of the teeth requires general anesthesia but is usually performed on an outpatient basis.  
• Most chinchillas have severe overgrowth of the teeth and the gums by the time they show symptoms. The overgrowth of the gums limits how much the teeth can be trimmed; repeated trimming, often lifelong, is usually necessary.

DIET
• Most chinchillas with dental disease are taken to the veterinarian because they are not eating, or cannot eat. It is absolutely imperative that the chinchilla continue to eat to prevent potentially life-threatening disease of the intestinal tract (GI stasis, bacterial overgrowth). Chinchillas that cannot chew are syringe-fed a gruel such as Critical Care for Herbivores (Oxbow Pet Products) or Emeraid Herbivore (Lafeber Company, Cornell, IL); feed as much as the chinchilla will readily accept. Alternatively, pellets can be ground and mixed with fresh greens, vegetable baby foods, water, or juice to form a gruel. Do not feed starchy, sweet, or fatty foods.  
• Return the chinchilla to a solid food diet as soon as possible to encourage normal occlusion and wear. Increase the amount of tough, fibrous foods and foods containing abrasive silicates such as hay and wild grasses; limit pelleted food and soft fruits or vegetables.  
• Encourage oral fluid intake by offering fresh water or wetting leafy vegetables.

SURGICAL CONSIDERATIONS
• Trimming of the teeth is always performed under general anesthesia, using a focused, directed light source, magnification, and specialized dental equipment.  
• Most chinchillas have severe, advanced disease with overgrown teeth and overgrown gums by the time they show symptoms. The overgrowth of the gums limits the amount of tooth trimming that can be performed.  
• Severely damaged teeth may require extraction.

MEDICATIONS
Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered all-inclusive.  
• Pain medications such as butorphanol, meloxicam, or carprofen are commonly used following molar trimming procedures.

FOLLOW-UP
• Make sure that the chinchilla is eating after the teeth are trimmed. Many chinchillas with dental disease appear to be painful or unable to chew solid food for weeks after trimming. It is very important to assist-feed gruel until they can eat on their own.  
• Return to the veterinarian for rechecks and to have teeth trimmed as needed, every 3–12 months, depending on the severity of disease.
PATIENT MONITORING
• It is extremely important to monitor the chinchilla’s ability to eat after teeth trimming. If the patient cannot eat solid food, assisted feeding of gruel is critical to maintain normal intestinal function and prevent potentially life-threatening disorders of the intestinal tract.
• Monitor for signs of recurrence of overgrowth, such as inability to chew, excessive drooling, teeth grinding, or decreased appetite and stool production.

PREVENTION/AVOIDANCE
• Prevention is not possible once symptoms of malocclusion are present. With periodic molar trimming and appropriate diet, progression of disease may be arrested, but treatment is often lifelong.
• To help prevent dental disease, limit the feeding of pellets and soft fruits or vegetables; provide adequate tough, fibrous foods such as hay and grasses to encourage normal wear of teeth.

POSSIBLE COMPLICATIONS
• Tooth root abscesses, recurrence, chronic pain, or extensive tissue destruction
• Inability to chew solid food following teeth trimming

EXPECTED COURSE AND PROGNOSIS
• Mild to moderate disease—good prognosis with regular trimming and appropriate diet change, depending on severity of disease; lifelong periodic trimming is often required.
• Advanced disease—many chinchillas do not show symptoms of dental disease until the disease is in advanced stages. These patients may not be able to chew solid food and will require assisted feeding for prolonged periods. The lack of tough hay during this assisted feeding period allows the teeth to overgrow again, requiring repeated dental trimmings, often lifelong.

KEY POINTS
• Chinchilla’s teeth grow continuously throughout life and have to line up properly in order to wear normally.
• Malocclusion of the cheek teeth is usually caused by feeding diets that have insufficient rough, coarse hay. Hay helps the teeth stay trimmed because it forces proper motion of the jaw and the rough surface of hay grinds the teeth.
• Once a chinchilla develops dental disease, periodic trimming is usually needed lifelong. The interval between trimmings depends on the severity of disease and can range from 3–12 months.
• Teeth trimming requires general anesthesia and specialized dental equipment.