

EXTRACTION OF RABBIT INCISOR TEETH!

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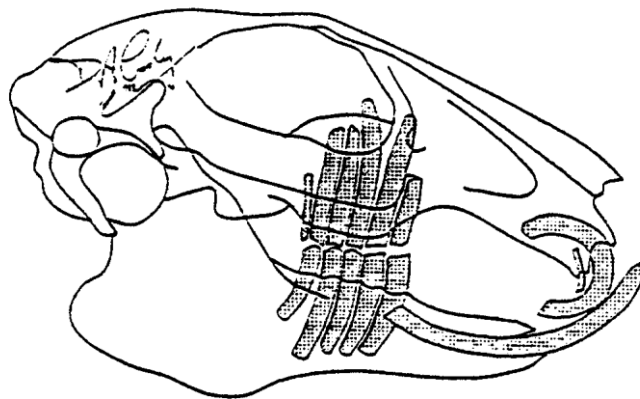
Incisor malocclusion is a frequently seen problem in domestic rabbits. It is less frequently encountered in rodents.

Maloccluded incisor teeth in rabbits and rodents are non-functional and hinder rather than assist prehension of food. Overgrowth of the incisors also interferes with jaw movement preventing adequate mastication of any food entering the mouth. This leads to abnormal wear patterns in the cheek teeth further exasperating the situation. In some cases the incisor teeth grow in such a way that they will penetrate the opposite jaw. Untreated animals waste away, becoming debilitated and prone to opportunistic infections from which they die.

The customary treatment has been to trim the affected teeth at frequent intervals to prevent the problems associated with tooth overgrowth. Trimming procedures are often performed without sedation or analgesia causing the animal, owner (and vet) considerable distress.

A more satisfactory solution in cases of persistent or recurrent incisor malocclusion is the extraction of the offending incisor teeth. This procedure is particularly useful for those individual pet rabbits with traumatically induced or hereditary malocclusions which purely affect the incisor teeth. These animals are better off without the affected teeth.

Affected animals should never be allowed to enter the breeding pool and whenever they can be traced, the sire and dam of affected individuals should no longer be used for breeding. Appropriate genetic counselling should be given to owners and breeders. In pets neutering may be performed, if feasible, to prevent accidental breeding. In a breeding colony, culling of visibly affected and genetic carrier stock may be the most satisfactory solution.



SUGGESTED PROTOCOL FOR TREATMENT OF RABBIT AND RODENT INCISOR TOOTH PROBLEMS

1. A full physical examination is performed and history obtained on first presentation. Dietary advice is given. Supportive therapy including force-feeding may be required in badly debilitated patients.
2. Corrective trimming of maloccluded incisor teeth, preferably using a high speed bur rather than tooth clippers or a wire saw.
3. Re-examination and repeat incisor incisor trimming after 3-6 weeks.
4. Assess response to trimming after another 3-6 weeks – if there is a significant improvement in occlusion repeat (2.+3.+4.) otherwise advice GA for further assessment and treatment.
5. General anaesthesia – see appropriate textbooks.

6. Dorso-ventral and Lateral skull radiographs – Assess: skull and jaw symmetry, temporo-mandibular joints, root abscesses, cheek tooth occlusal profile, and incisor root conformation.
7. Trim incisor crowns to about 5mm above the gingival – preferably using a high-speed dental bur.
8. Thorough examination of the oral cavity. Rabbit/rodent gag + cheek dilators are useful, though an auriscope and speculum can be used.
9. Occlusal equilibrium of cheek teeth. Sharp spikes/spurs and irregularities are trimmed and filed to as near normal conformation as possible.
10. Treat any soft tissue lesions, periodontal pockets, cheek and tongue ulcers, introgenic wounds.
11. Extract incisor teeth:
 - a. Using a new no.11 scalpel blades, cut the epithelial attachment within the gingival sulcus around each incisor tooth.
 - b. Extend the incision as far down the periodontal ligaments as possible.
 - c. Repeatedly insert a purpose designed rabbit/rodent incisor elevator or a fine tipped feline dental elevator alternately lateral and medial to each large incisor – hold under lateral pressure for 20 seconds in each position to strain and tear periodontal ligament fibres. After a few minutes, patience will be rewarded by the teeth loosening.
 - d. Once tooth loosens sufficiently it can be extracted with fingers or gentle use of forceps by pulling along the extension of the line of the root curvature as shown by the lateral radiograph.
 - e. Once the large upper incisors have been extracted, rabbits peg teeth are straightforward to extract using a small conventional root elevator.
 - f. Haemorrhage is usually minimal. If the gingival had been torn or haemorrhage persists, suturing is advised using a very fine (1 or 1.5 metric) absorbable material with a swaged on cutting needle, otherwise the sockets are left to drain.
 - g. Badly infected sockets may require curettage and flushing with an antiseptic or antibiotic solution.
12. Systematic antibiotics are only indicated if there is evidence of infection.
13. Most patients will be eating with a few hours of recovering from anaesthesia.

POTENTIAL COMPLICATIONS

As with extraction of retained deciduous teeth in cats and dogs, the procedure requires a gentle technique in order to avoid root or jaw fracture. Iatrogenic folding fractures of the lower jaw are a potential serious complication in rabbits and rodents resulting in secondary cheek tooth malocclusion.

As rabbit and rodent incisor teeth grow continually, if a root fractures the remaining portion may continue growing. In the author's experience it is rabbits small upper second incisors, 'peg teeth' which are most likely to break, but the fractured roots are also quite easy to extract unlike any remaining portions of the strongly curved larger first incisors.

When discussing cases prior to treatment, clients are routinely advised that a second anaesthetic may be required to complete the procedure. If root fragments are left, the owners are advised accordingly and arrangements made to assess the patient for re-growth of the affected tooth/teeth. If re-growth of such a tooth is not apparent within two months it is likely that the damaged tooth root has caused abnormal growth and impaction of the tooth. Except in cases of the peg teeth, a full surgical approach is then required to expose the tooth and root for extraction of the impacted tooth. Re-growth of a normal tooth allows a second attempt at simple extraction.

DISCUSSION

In uncomplicated cases of incisor malocclusion, rabbits chinchillas and guinea pigs cope very well with normal commercial diets, hay and grass after extraction of the incisor teeth. Larger items like carrots and celery need to be cut into thin strips. Food should not routinely be liquidised except for force-feeding of severely debilitated patients as normal chewing activity is required to maintain cheek tooth occlusion. The author has not yet had a mouse rat, hamster, gerbil or chipmunk requiring incisor extraction.