

Surgical management of malocclusion due to overgrown incisors in Indian palm squirrel (*Funambulus palmarum*)

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Abstract

Malocclusion due to overgrown incisors was diagnosed and treated in an Indian palm squirrel (*Funambulus palmarum*). The overgrown incisors were trimmed using a dog nailclipper under ketamine sedation. The squirrel made an uneventful recovery and feeding of hard fibre rich food was recommended to avoid reoccurrence.

Introduction

Squirrels are a species of rodent in the family Sciuridae and like all rodent have four chisel like continuously growing incisors at the front of the mouth two above and two below which they use for gnawing. Gnawing keeps the incisors short, sharp and prevents their excessive growth (Thorington and Katie, 2006). But when these squirrels are kept as pets by humans and fed food poor in fiber, problem of overgrown incisors arise rendering the squirrel unable to feed due to overgrown teeth called malocclusion. This communication describes one such successfully treated case of malocclusion in an Indian palm squirrel.

History, Clinical Examination and Treatment

A 2 year old female Indian palm squirrel weighing 70 gm was referred to the clinic with a complaint of difficulty in eating for past 5 days. On clinical examination the squirrel was alert and active. The squirrel was held in the palm after wrapped in a piece of cloth and was sedated with ketamine @ dose rate of 36 mg/kg body wt i/m in upper thigh by exposing hindquarters. The ketamine gave good sedation for approximately 30 minutes and allowed to be restrained for surgical management. The oral cavity was closely examined, the mandibular incisors were visibly



Fig 1. Overgrown mandibular incisors in Indian palm squirrel (*Funambulus palmarum*)



Fig 2. Clipped incisors in Indian palm squirrel (*Funambulus palmarum*)

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overgrown with their tips approximately 1 cm out of the oral cavity (Fig. 1), the maxillary incisors were also overgrown with an inward curve in the oral cavity but molars were normal. A Neem stick was placed in the mouth to depress the tongue and the overgrown teeth were clipped 0.5 cm above the gingival margin using a dog nail clipper (Fig. 2). After clipping meloxicam @ dose rate of 0.2 mg/kg body weight was given i/m. The squirrel resumed feeding normally on the very next day. The owner was advised to feed tough food like whole shelled walnuts and high fibre containing lab diet to promote gnawing habit.

Discussion

The squirrels have sharp chisel like continuously growing incisors, which they use to gnaw and eat buds, bark, nuts, fruits and nuts. This habit keeps the incisors

trimmed and sharp with a very low prevalence of oral disease in free living squirrels (Sainsbury *et al.*, 2004). With improper diets the problems of overgrown incisors and malocclusion crop up along with dietary imbalance to such an extent that the squirrel even dies due to starvation. The Indian palm squirrel presented to us had severely overgrown upper and lower incisors preventing it from gnawing normally. Dog nail clipper was used to clip the incisors, while accidental injury to tongue and soft tissue was avoided by placing a Neem stick in the mouth. Small amount of the tooth was trimmed at time to avoid accidental exposure of the pulp cavity. The squirrel made an uneventful recovery and resumed feeding the next day. Gnawing on hard nut shells, barks, roots etc is very important to dental health of rodents like squirrels.

References

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