SHORT COMMUNICATION

MISLOCATED POLYDONTIC MAXILLARY INCISOR TEETH IN THE DOG: A HEREDITARY CONDITION?

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SUMMARY

A case of mislocated polydontic teeth is reported in this paper. Polydontic teeth are seen frequently in dogs. The premolar teeth region is the most frequently involved than the rest of the dental region. However, involvement of the incisor teeth region is a rare finding. The finding of two teeth in two dogs of different sex but of same bitch, having the mislocated polydontic incisor teeth, in the maxilla is intresting. These teeth were located just above the normal maxillary central incisor erupting through the gingiva on the labial surface. The breed involved was the Tanzanian mixed breed. The findings suggest the likelihood of the case being hereditary. This appears to be a very rare condition as only two cases were recorded among 450 dogs examined for dental conditions (0.4%).

CASE REPORT

Two, five year old dogs were brought at the Shaaban Robert Veterinary Clinic in Dar es Salaam with the complaint of abnormal things in the mouth. They were, from the same litter of the same bitch and of different sexes. The oral cavity examination was done and the abnormal things were diagnosed as teeth. These were mislocated and were more than the normal dental formula number. Radiologic examination confirmed the diagnosis. The condition was diagnosed macroscopically and radiologically. The two extra incisor teeth were seen above the normal central incisor teeth in the maxilla of each of the two dogs from the same litter of the same bitch. The mislocated incisor teeth were visible both macroscopically and radiologically, (Fig. 1 & 2). Both cases consisted of two, one rooted teeth on the labial surface of the maxillary gingiva, just above the normal central incisors, (Fig 2). However the condition seems not to be common in dogs.

The two mislocated polydontic teeth cases were encountered during the dental examination in dogs brought at the said Veterinary clinic. A total of 450 dogs werw examined. The examination involved all dogs brought in at the veterinary clinic. The systematic examination included macroscopic and radiologic examination of the oral cavity and the teeth. All dogs were examined for acquired and congenital (developmental) dental disorders. All disorders were recorded as to type, position of the tooth and frequency.

The normal dental formular for the permanent dentition in dogs as per Evans *et al.* (1979) is:

$$(I:3/3\ C:1/1\ P:4/4\ M:2/3)2 = 42$$

Polydontia is a condition where there are more teeth than the normally accepted number.

Polydontic teeth are seen frequently in dogs

(Colyer 1936 and Rossman *et al.*, 1985). The premolar teeth region is the most frequently involved than the rest of the dental region (Bittegeko & Arnbjerg 1987 and Bittegeko 1988). In several studies, about 10% of dogs were recorded to have one or more extra teeth (Colyer 1936, Skrentary 1964, Rosman *et al.*, 1985, Bittegeko and Arnberg 1987, Bittegeko 1988). The prevalence of the condition does vary considerably with breeds, form 2% in Huskies to 19% in Spaniels (Colyer 1936). In another study by Skrentary (1964), he noted that, there were evidence that the condition was inherited in some dogs The observation that the two present case were from the same bitch and litter suggest the possibility of the condition being heritable and congenital.

Polydontic teeth if many, may crowd other teeth, thus causing malposition, malocclusion, incomplete eruption of adjacent teeth, retention of deciduous teeth and periodontal disease, (Rossman *et al.*, 1985).

Retained deciduous tooth may block the line of eruption of the permanent tooth at the location, thus forcing it to follow a different line of eruption. This may lead to the tooth erupting in a different location (Colyer 1936 and Bodingbauer 1979). However, this was not the case in these two present cases. The teeth in the normal location, were macroscopically and radiologically observed to be of permanent dentition, as according to size and the pulp cavity size compared with other teeth in the oral cavity of the two dogs.

These findings, supported the history given by the owner that the deciduous teeth were exfoliated. Since the radiologic investigation revealed that the two teeth in question were having the crown, neck and root, the following could be the possible explanation for these two cases. Possibly the primodium of the permanent teeth involved, divided into two during development. The ones which developed into the teeth erupting

Figure 1: **Polydontic Misclocated teeth. Note the normal maxillary incisor teeth and the mislocated ones above the central and intermediate teeth.**

Figure 2: **Polydontic Mislocated teeth. Note the normal maxillary incisor teeth and the mislocated ones above the central and intermediate teeth.**

through the normal line of eruption emerged earlier due to less resistance in the way. However, the others which developed into mislocated teeth experienced late eruption due to increased resistance in their line of eruption.

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