SURGICAL MANAGEMENT OF IMPACTED PREMOLAR AND MOLAR TEETH IN A GERMAN SHEPHERD DOG

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The present case report represents a clinical case of German Shepherd dog presented with the history of accident with difficulties in chewing. Radiological examination revealed the embedding of both the premolar and molar teeth in upper part of the right gum. It was successfully treated with standard surgical protocol.

Key words: German shepherd, Molar teeth, Premolar

Impacted teeth or embedded teeth are individual teeth that are unerupted from the gums, usually because of a lack of eruptive force (Shafer et al., 1983). An impacted tooth is prevented from erupting by some mechanical barrier in the eruption path (Rossman et al., 1985 and Shafer et al., 1983). Partially embedded or impacted teeth that communicate with oral cavity may also develop periodontitis (Shafer et al., 1983).

Although the primary goal of dentistry should be preservation of the dentition, but for varying reasons, tooth extraction may be the best option for the animal presented

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with a clinical problem. In addition, tooth extraction is by far the most commonly performed oral surgical procedure in human dentistry (Batenburg et al., 2000) and domestic animals (Gaughan, 1998 and Bellows, 2004). Embedded and impacted teeth are often associated with dentigerous cyst formation and should be surgically extracted especially in case of young animals (Eisner, 1989 and Field et al., 1992).

A five years old male German shepherd dog was presented with the history of accident with difficulties in chewing. On clinical examination, it was found that the upper premolar and molar teeth of the right maxilla were missing. There was huge fluctuating swelling of gums. On radiological examination it was found that both the premolar and molar teeth were embedded in upper part of the right maxilla (Fig. 1).

After diagnosis, surgical method was opted for extraction of both the embedded last premolar and first molar teeth. After mild sedation with xylazine 1mg/kg and butorphanol 0.2mg/kg body weight, local anaesthetic agent was infiltrated using 2% lignocaine hydrochloride to the base of gum. Two inch incision was made at the base of the gum to the corresponding site and the impacted teeth were exposed. The root of the teeth was loosened from periodontal ligament by using dental luxator and offending teeth were extracted using tooth extracting forceps. The wound was closed in a routine manner using non-absorbable synthetic suture material. Dressing of the wound was done regularly and the animal was treated with broad spectrum antibiotic ceftriaxone@ 25 mg/kg b wt twice daily for five days and analgesic meloxicam@ 0.2 mg/kg b wt once daily for two days. Sutures were removed after 14 days of surgery and the wound healed uneventfully (Fig. 2 & 3).

The present case was diagnosed as impacted and embedded teeth, which are often associated with dentigerous cyst formation and to prevent this complication, the embedded teeth were surgically extracted (Eisner, 1989 and Field et al., 1992).

General anesthesia is required as rule of thumb for any type of dental procedures in pet animals. In addition to sedation, the use of 2% lignocaine hydrochloride was beneficial as it provides better local anesthesia for the surgeon because preemptive pain management is highly appreciated to prevent or minimize intra- and postoperative pain which encourages the use of local infiltration anesthesia or intra-oral regional anaesthetic nerve blocks (Rochette, 2005). Butorphanol was used for pre-emptive and meloxicam (Melonex) for post-operative pain control respectively, as NSAID’s or opioids are the drugs of choice which are usually used for pre-emptive and post-operative pain control in all species (DeBowes, 2005).
Surgical management of impacted premolar and molar teeth

Fig. 1. Radiograph of impacted upper premolar and molar teeth of the right maxilla

Fig. 2. Lateral radiograph showing absence of impacted teeth after successful removal

Fig. 3. Healing of gums after one month of treatment
The choice of antibiotic and administration protocol remain controversial, both in human and veterinary oral surgery (Norris and Doku, 1992). In this present case, the use of broad spectrum cephalosporin was beneficial because in general, antibiotic prophylaxis for oral surgery requires antimicrobial activity against gram positive, gram negative and anaerobic organisms (Callender, 1999). Wound healing in oral cavity including the healing of extraction wound is generally rapid and uncomplicated due to excellent blood supply (Huebsch and Hansen, 1969). Similar finding was observed in the present study and the wound also heals completely after 20 days.

REFERENCES


Eisner ER, 1989. Surgical tooth extraction in two cases of impacted abnormally developed teeth. J Vet Dent, 16: 17


