

GERIATRIC DENTISTRY:

True or False - Teeth with Severe Periodontal Disease are Easy to Extract.

False! Geriatric dentistry is complicated. Imagine a 10-year-old miniature Dachshund dog with severe periodontal disease requiring extraction of all canine and carnassial teeth (*Fig. 1*). The dog has compensated heart disease secondary to chronic mitral insufficiency and is in compensated chronic renal failure with a BUN of 40 mg/dl and creatinine of 2.5 mg/dl. The periodontal disease is so bad that it may be contributing to the severity of the renal disease, and could complicate the heart disorder. *Talk about stress and... the teeth have to go!* Older patients tend to have greater anesthetic risk, especially in conjunction with major organ dysfunction.



Fig. 1 Severe periodontal disease affecting the mandibular first molar (A) and canine teeth (B,C) in a 10-year-old miniature Dachshund dog.

ventilation and oxygen perfusion and state-of-the-art monitoring including pulse oximetry, non-invasive blood pressure, end-tidal CO₂, ECG, heart rate, and core body temperature minimizes anesthetic risk. Double heating pads during the procedure, and kennels with heated floors aid anesthetic recovery. Medications that could negatively affect cardiac or renal function, and blood pressure are absolutely avoided.

Critical care anesthesia and speed in performing the procedures are vital for a positive result. A multimodal-anesthetic and pain management plan is required, Narcotic premedication, regional and local nerve blocks, anti-inflammatory medications, and transdermal fentanyl patches provide 3 different drug classes for perioperative pain management. Anesthetic induction with short-acting drugs such as propofol aid a smooth recovery. Positive-pressure ventilation during the procedure to ensure appropriate

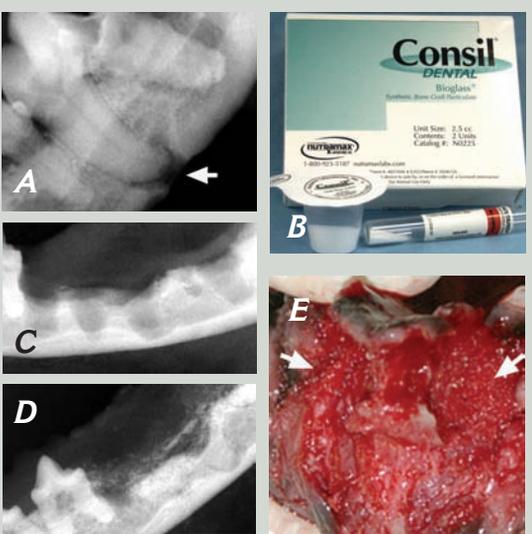


Fig. 2 Note the bone loss (arrow) at the ventral mandible secondary to destructive periodontal disease (A). Bone stimulating materials (B) aid in restoration of bony integrity following extraction. Pre- and postoperative images show application of the material in mandibular alveolar sockets (C,D) and at mandibular incisor and canine teeth extraction sites (arrows) (E).

The presence of severe periodontal disease does not mean the extractions will be “easier”. Surgical tooth extraction requires mucogingival flap techniques to expose diseased periodontal tissues and alveolar bone. Judicious removal of alveolar bone and crown sectioning facilitate extraction. Ventral mandibular bone may be deficient from the destructive periodontal disease process. Extraction forces used in younger patients without complication may cause mandibular fracture in geriatric patients. Following extraction, the mandible is relatively weaker. Synthetic bone stimulating materials provide “insurance” for healing and bone formation to occur in a timely manner (*Fig. 2*).