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DIFFICULT TOOTH EXTRACTIONS

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Anticipating the degree of difficulty of a dental extraction

The degree of difficulty of a dental extraction is related to the indication for extraction. Advanced periodontitis with extensive attachment loss may result in increased mobility and facilitate the extraction procedure. Localized infrabony pockets and furcation lesions may also be indications for extraction but do not necessarily make for an easy extraction. Indications for extraction where most of the periodontal attachment is still intact, such as deep crown-root fracture, are more likely to be associated with a challenging extraction procedure. Secondly, the degree of difficulty of an extraction is also determined by the anatomy of the tooth. Canine teeth have a large bulbous root with an extensive periodontal attachment. The curved roots of multirooted teeth make a extraction technically more difficult. Anatomical variations, such as a supernumerary root, are common for certain teeth and may complicate the extraction procedure. Thirdly, the nature of the pathology present also greatly influence the degree of difficulty. For example, extraction of a malformed unerupted tooth will require careful surgical planning. A very common complicating condition is external replacement resorption, which is the progressive resorption replacement of root tissues by the surrounding alveolar bone, evident radiographically as a gradual disappearance of the periodontal ligament space. Additional factors in evaluating the anticipated degree of difficulty of a dental extraction include the quality of the surrounding bone and the vicinity of important anatomical structures.

Preoperative evaluation

Anticipating the degree of difficulty of a dental extraction and treatment planning are based on clinical and radiographic findings. The most important clinical criteria are mobility, furcation involvement and clinical attachment loss. Pre-extraction radiographs of teeth to be extracted are essential to confirm the diagnosis, to allow visualization of the root morphology, to assess the condition of the surrounding bone and to ascertain the presence of root resorption.
**Simple versus surgical extractions**

A simple extraction is also known as a closed, non-surgical or uncomplicated extraction. It may be defined as an extraction completed without the need for sectioning the tooth, creating a mucogingival flap, or removing alveolar bone. In a simple extraction the periodontal ligament is severed using dental elevators or luxators and the loosened tooth delivered using extraction forceps. A surgical extraction is also known as an open or complicated extraction. It may be defined as an extraction that includes sectioning the tooth, creating a gingival or mucogingival flap, or removing alveolar bone. It is indicated if a simple extraction is unlikely to achieve the objective of removing the tooth completely and with minimal trauma to the surrounding tissues.

It is important to anticipate or to recognize early in the extraction procedure the necessity for a surgical extraction. This decision is largely based on the pre-extraction clinical and radiographic findings. For example, it would be unwise to attempt a simple extraction of a maxillary fourth premolar with a complicated crown-root fracture but that is otherwise in good periodontal health.

When a difficult extraction is anticipated, it is indicated to carefully plan all aspects of the surgical extraction, including flap design, amount of bone removal (partial alveolectomy) and method of sectioning of the tooth, if applicable. All instruments required to perform the extraction, including rotary instruments for sectioning the tooth, and, removing and smoothing bone should be readily available.

**References**