

TABLE 2-1 Distribution of Cracked Teeth

Location of Teeth Affected, in Order of Occurrence	*Number of Teeth Cracked*	*Percentage (%) by Location of 475 Teeth*
Mandibular first molar	146	30.7
Mandibular second molar	131	27.5
Maxillary first molar	99	20.8
Maxillary first bicuspid	34	7.1
Maxillary second bicuspid	29	6.0
Maxillary second molar	27	6.0
Mandibular second bicuspid	8	1.7
Mandibular first bicuspid	1	0.2
TOTALS	475	100.0

pessimism will save the practitioner considerable embarrassment and the patient much time and economic penalty.

Many posterior teeth lost because of a fracture after endodontic therapy probably had the problem unrecognized before the treatment. A full crown is not a guarantee that fracture will not progress. Several mandibular molars have been noted to fracture years later even with full coverage. In the opening of any posterior tooth for endodontic therapy, a careful look at the dentin floor for evidence of a subtle fracture before removal of the roof of the chamber will minimize the chances of failure.

If the fracture does not intersect the pulp space and does not terminate beneath the epithelial attachment (i.e., a common fracture of the lingual cusp of an maxillary premolar) and no esthetic problem results, no treatment is necessarily indicated.

If the fracture intersects the pulp space and no movement is evident in the fracture line with a wedging test, an attempt to salvage the tooth would necessitate both endodontic therapy and full coverage. If treatment is elected, the occlusal surface should be reduced radically (as if to prepare for a full crown) at the time of the pulpectomy. This will, for a short time, limit occlusal forces that would tend to fracture the tooth further before a full crown can be placed.

Remember, watching a vertical fracture is not appropriate. It will only go one way—to worsen. It cannot heal. Further, there is no way to see the extent of a vertical fracture without extracting the tooth to examine it with extensive magnification. The rest is guesswork. Finally, do not be an optimist. If you see a fracture that has separated and you cannot remove a mobile piece without leaving a severe pocket, condemn the tooth. It is not my intent to show how to salvage cracked teeth, but rather how to avoid the expense, pain, poor public relations, and so forth in an often hopeless situation.

ENDODONTIC THERAPY IN TOTAL TREATMENT PLANNING

The need for endodontic therapy may occur in any one of three ways: (1) as a result of a painful or traumatic episode requiring emergency treatment, (2) as part of a total treatment plan to restore a patient's oral health, or (3) as a result of discovery of pulpal or periapical damage during a periodic checkup after completed treatment. If emergency therapy is involved or if only endodontic treatment is required, the needed work is performed as soon as practical. However, if endodontic therapy is part of a total treatment plan, the proper timing for the therapy is important.

Significance of a Total Treatment Plan

The concept of total patient care has become the dominant approach in treatment planning. The advantages of this philosophy over the "one-tooth-at-a-time, let's-wait-and-see-what-happens" method need no further discussion. Total patient care includes evaluation of the patient's medical conditions, soft and hard tissues of the mouth, teeth and their supporting structures, and edentulous areas. By using the diagnostic aids discussed earlier, plus additional clinical and laboratory tests, the dentist makes a careful determination of what is wrong—the diagnosis of the patient's dental disease. Without knowing what is wrong, the dentist has no way to correct the problems present in a manner designed to prevent recurrence.

For some patients the total treatment plan may require only minor restorative treatment plus prophylaxis. For others all the specialized areas of dentistry will be needed to return the patient to oral health.

Total Treatment Plan for Complex Cases

Just as no complex apparatus can be built without a master plan, so there must be a specific plan of treatment to correct the dental disease present. Although no general agreement exists as to the correct order of treatment procedures, the following outline offers an effective pattern for treatment of most complex cases. Because I believe that periodontal health is the most important objective to be gained in caring for patients with complicated dental problems, this is emphasized in the treatment plan. Furthermore, because almost all adult patients have some degree of periodontal damage, it is assumed that periodontal treatment is required in most complex cases.

A. Diagnostic phase
   1. General oral examination—including use of diagnostic aids: intraoral and extraoral radiographs, study models, recordings of occlusal relationships, and laboratory tests