

## INTRAPULPAL INJECTION

In about 5 to 10% of mandibular posterior teeth with irreversible pulpitis, supplemental injections, even when repeated, do not produce profound anesthesia; pain persists when the pulp is entered. This is an indication for an intrapulpal injection.

The major drawback of the technique is that needle placement and injection are directly into a vital and very sensitive pulp; the injection may be moderately to severely painful.<sup>9</sup> In the *Journal of Endodontics*,<sup>146</sup> Miles, a dentally trained neurophysiologist needing endodontic treatment, reported intense pain when the intrapulpal injection was administered. While he reported it was successful, success was achieved at a price. Miles stated that there was decreased confidence in the endodontist and increased apprehension.

Because we currently have more successful methods of supplemental anesthesia, the intrapulpal injection should only be given after all other supplemental techniques have failed. Another disadvantage of the technique is the duration of pulpal anesthesia may be short (15 to 20 minutes). Therefore, the bulk of the pulpal tissue must be removed quickly, at the correct working length, to prevent reoccurrence of pain during instrumentation. Another disadvantage is that, obviously, the pulp must be exposed to permit direct injection; frequently, anesthetic problems occur prior to exposure while still in dentin.<sup>9, 11, 19, 122, 131</sup>

The advantage of the intrapulpal injection is that it works well for profound anesthesia if given under back-pressure.<sup>147, 148</sup> Onset will be immediate and no special syringes or needles are required. The methods for this technique can be found in many excellent endodontic textbooks. Strong-back pressure has been shown to be a major factor in producing anesthesia.<sup>147, 148</sup> Depositing anesthetic passively into the chamber is not adequate; the solution will not diffuse throughout the pulp.