Step 1: Anesthetizing the Injection Site

- Select site for injection.
- Apply topical anesthetic.
- Inject a few drops of local anesthetic with Vasoconstrictor in mucco-buccal fold.
- The injection site should be two to four millimeters apical to the crest of the bone and immediately distal to the tooth for treatment.
- Examine pre-operative radiographs of proposed injection site.
- Make certain there is room between adjacent roots to accommodate X-Tip drill and guide sleeve.
- Use cotton pliers to press attached tissue against the bone for a few seconds to confirm anesthesia of perforation site.
- A slight dimple will remain on tissue, marking exact site of penetration.

Step 2: Perforation of Cortical Plate

- Place X-Tip drill and guide sleeve in a slow speed 15,000-20,000 RPM hand piece.
- Secure guide sleeve against drill with finger while withdrawing red protective cover.
- Gently push perforator through attached gingiva until tip contacts bone.
- Hold drill at a 90° angle to bone.
- Run hand piece at maximum speed.
- Use intermittent light pressure (forward & neutral motion) to penetrate cortical plate.
- Penetration of bone should take no longer than two to four seconds. X-Tip drill and guide sleeve will drop into cancellous bone.
- Hold guide sleeve in place with finger while detaching & removing drill from guide sleeve.

Step 3: Injection into Cancellous Bone

- Slowly and gently inject anesthetic through guide sleeve into cancellous bone.
- Inject slowly as rapid injection may cause discomfort to patient.
- If considerable force is required, X-Tip drill and guide sleeve have not entered suitable cancellous space. Select new injection site.
Important Tips

- To prevent premature separation of X-Tip drill and guide sleeve, avoid pointing guide sleeve downward or running hand piece until drill has contacted bone.
- To prevent “frictional burning” of bone, always use light intermittent (forward & neutral motion) pressure, rather than continuous pressure.
- Always operate hand piece at 15,000-20,000 RPM.
- If proper site is selected, no more than 2-4 seconds of drilling will be required. If more than 2-4 seconds is required, bone is too thick. Select another site.
- To avoid patient discomfort from pressure, always inject anesthetic slowly.
  - Use drill, guide sleeve and needle once, then discard.

Removal Of The Guide Sleeve

- If desired, leave guide sleeve in place throughout procedure for re-injections as needed.
- Check site for numbness after injection of anesthetic. Re-inject if necessary.
- To remove guide sleeve, use instrument such as hemostat or needle holder.
- Dispose of drill, guide sleeve and needle under biohazard conditions in “sharps container.”