One of the current methods being used to promote gingival reattachment is local treatment with antimicrobials. There are several human products available as well as a veterinary labelled doxycycline gel. These products are designed to create a long-term/high-dose antimicrobial effect directly within the periodontal space, with minimal systemic absorption. Local antimicrobial administration has been shown to decrease bacterial counts further than SRP alone. They are effective in decreasing periodontal inflammation and increasing attachment gains (reduced pocket depth), and safe for routine use.

Local antibiotics are best suited for use in periodontal pockets between 3-mm (or maximum normal depth for the species) and 5-mm. Pockets greater than 5 mm are too deep to effectively clean with closed root planing alone, and therefore require surgical therapy. Practitioners can then choose to use the antimicrobial products in these pockets after the surgical procedure.

Once a suitable periodontal pocket is discovered (Figure 1), it should first be treated with closed root planing. Local antibiotic therapy is an aid to standard SRP, not a substitute for it. After the tooth is scaled and root cleanliness is confirmed, the pocket/sulcus is lavaged. The pocket is then ready for the application of the medication. (See chapter 11 for details on closed root planing).

After properly prepared, the cannula is inserted gently to the base of the pocket (Figure 1). Once it has been determined that the bottom of the pocket is reached, the product is slowly injected. Injection is continued until the applied product is just barely overflowing the pocket (Figure 2). Overfilling the pocket will not improve clinical gains, and will make the procedure of filling the pocket much more difficult. Next, the exposed gel is gently but completely wetted with water or saline (Figure 3). (Do not use the air from the air-water syringe). The water hardens the gel instantly. Following this step, the product is gently tapped into the sulcus (Figure 4).

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a Doxirobe®: Pfizer Animal Health, Exton, PA.
An instrument with sufficient surface area (i.e. a 3mm elevator as opposed to a periodontal probe) is used to decrease the chances of inadvertent piercing of the product which can result in its removal from the pocket. It is common for some of the subgingival product (which did not get wet) to extrude from the pocket. This gel will likely become stuck to the placing instrument and result in removal of the product. To avoid this scenario, as soon as any leakage is perceived, the filling instrument is removed, and the exposed gel is rewetted and compaction is re-initiated. These steps should be repeated until no product is visible above the gingival margin, which decreases the chances of the patient dislodging the product before natural dissolution.

This technique is taught in our level one and level 2 training centers. See www.dogbeachvet.com for class information.