

Surgical Technique for Applying New Generation Prosthetic Tracheal Rings.

New Generation Prosthetic Tracheal Rings offer many advantages over the old hand-made syringe case prosthesis. These advantages make ring placement less traumatic, quicker and easier. Here are a few tips for the use and application of this exciting new product.

1. Have all sizes of tracheal rings available at the time of surgery, this will allow the surgeon to utilize the ring size which best approximated the outside diameter of the trachea throughout all segments to be supported.
2. Choose the ring size that most closely approximates the normal outside diameter of the trachea. It is best for the ring to fit snugly against the tracheal cartilage, therefore downsizing is preferable to having a loose fit.
3. A fine right angle forceps (Pedifine Mixtar or Krantowitz) can be used to create the soft tissue tunnel around the dorsal side of the trachea with minimal trauma and tissue handling.
4. One of the tapered ends of the ring is grasped with the forceps, while traction is applied by hand to the opposite end of the ring; this opens up the ring for passage around the trachea.
5. The forceps with the ring is withdrawn from the soft tissue tunnel and the ring easily slips circumferentially around the trachea.
6. The prosthetic ring is centered over the desired tracheal cartilage, ensuring a snug fit.
7. Sutures may be placed in one pass fashion through the tracheal cartilage and around the tracheal prosthesis.
8. Exact suture placement in relationship to the ring is not critical as suture detents provide anchoring every 12 degrees around the circumference of the trachea.
9. 4-7 sutures of 3-0 or 4-0 size adequately support the trachea.
10. Non-absorbable monofilament suture, 4-0 or 5-0, on a CE-4 or CP-4 needle are appropriate and easily passed.