Rabbits were anesthetized with intramuscular ketamine and xylazine. They were maintained under spontaneous ventilation with the assistance of the veterinary staff. Once an appropriate level of anesthesia was achieved, the rabbits were placed supine on the operating table and suspension laryngoscopy was performed using an 8cm pediatric Parsons laryngoscope. The larynx and trachea were visualized using 3mm and 5mm, zero degree telescopes. Tracheal lesions were created with electrocautery via a transoral, endoscopic approach using a Bovie pencil hand piece with an extended right angle tip. Cautery was performed to approximately 50% of the tracheal circumference.

The rabbits were taken back to the operating room at weekly intervals for suspension microlaryngoscopy and bronchoscopy to evaluate the progression of the stenotic lesions. Photodocumentation was performed using the telescope at each procedure. At the conclusion of this study, animals were euthanized and the laryngotracheal complexes harvested.

**CONCLUSIONS AND FUTURE DIRECTIONS**

From this pilot study, we concluded the following:
1. The New Zealand white rabbit is an appropriate choice as a small animal model for the study of tracheal stenosis.
2. It is possible to perform laryngoscopy and bronchoscopy without injury to the airway in rabbits.
3. It is possible to create a predictable stenosis in rabbits endoscopically.

Our goal is to continue this study with the hope to start treating the tracheal stenoses we create using different modalities i.e. dilation, stenting, resection.