KAISER PERMANENTE®

Injection Laryngoplasty

Definition

Injection medialization laryngoplasty is a procedure that helps to bulk up the vocal cord. It can be done in the office or the operating room, although typically, most patients can be treated in the office.

Indications

Injection of the vocal cords is used to treat a vocal cord that doesn't move well or move at all (paralyzed vocal cord) or a vocal cord that has been very thin and bowed due to aging or other causes. The voice can be hoarse and there can be difficulty drinking liquids. Injections are primarily used for temporary correction of a problem or as a trial to see if increasing the bulk of the vocal fold has the expected effect on improving voice or correcting problems with liquids entering the windpipe.

Risks of the Procedure

The main risks of the procedure are continued hoarse voice, bleeding, infection, discomfort during the procedure, or breathing difficulties after the procedure.

- Continued hoarseness
  - The voice may continue to be hoarse even after an injection. This may be due to having too much material injected into the vocal fold, too little material, or there are other factors besides just the shape of the vocal fold that is causing hoarseness. If too little material was added after one injection, we can always repeat it if needed.
- Bleeding
  - Bleeding is a potential risk anytime a needle puncture is made. If you are on any medication that may thin the blood, that would increase the risk, though this procedure has less risk of bleeding than a surgical incision. Examples of medications that might prolong bleeding include Coumadin or aspirin. You should go over all medications that you take with your physician before surgery.
- Infection
  - Any time a puncture is made, that becomes a route for bacteria to enter into the body. With this procedure, risk of infection is very low.
- Discomfort
  - Topical anesthesia may be used to prevent gagging or avoid feeling a needle poke into the vocal cords. Some people are such severe gaggers that the procedure may be unpleasant. It is common for the sensation to be felt in the ear or jaw on the same side.
- Breathing difficulties
  - This is a very uncommon complication. The voice box and wind pipe are of a limited size and since this procedure bulks up a vocal cord, it may decrease the room to breathe. There is also some swelling after working on the voicebox. Your surgeon will usually be able to predict the risk based on how much surgery is being done. Most injectable implants are diluted/suspended in some solution to make them injectable. This solution gets absorbed afterwards and so there is usually some attempt to over-inject the vocal cords initially to prepare for this absorption.

Procedure

First, the skin over the neck will be numbed by using a local anesthetic such as lidocaine. I will also place lidocaine directly into the airway to numb the inside of the throat and windpipe.

A short needle will then be used directly through the skin on the neck to inject into the vocal cord. The vocal folds will be monitored at the same time with a flexible laryngoscope on a video monitor.

The discomfort is variable. Most patients are able to tolerate the procedure very well.

Implant materials

All injection materials used are temporary.

- Prolaryn Gel (carboxymethylcellulose)
  - FDA approved for vocal cord injection
  - Lasts anywhere from 1 to 3 months
- Juvederm (hyaluronic acid)
  - Not FDA approved for vocal cord injection
  - Although not officially FDA approved, it is one of the most common materials used to perform injection laryngoplasty. It is easy to use and allows for a very good result. It's also reversable if the desired effect is not achieved.
  - It is used commonly in the face for cosmetic reasons.
  - Lasts anywhere from 6 to 9 months
- Prolaryn Plus (calcium hydroxylapatite)
  - FDA approved for vocal cord injection
  - Lasts 12 to 18 months

The temporary effect (three to six months) of these injections can be used to your advantage. If it is likely that the injury to your nerve is temporary and the nerve will recover on its own, you now have two options. You can wait a year for the voice to return or you can have an injection that immediately restores voice and typically improves choking and coughing on liquids while you wait for your nerve to recover. These injections may be repeated but if the vocal cord does not return to normal in a year, it is unlikely to further recover. A permanent fix may be provided by a different procedure called a medialization laryngoplasty.

Recovery

Your voice will often seem a little tight or effortful at the end of the injection. It will likely get worse for a few days to a week until any swelling starts to subside. As the injection starts to wear off, your voice will gradually deteriorate over weeks or months.

Instructions during healing

You can continue to talk immediately after the procedure. The voice will be hoarse initially, but it will improve over the following week. If you develop swelling or redness of the skin at the injection site or if you feel like you are getting short of breath, you should call your physician immediately.