Objective: A variety of materials as well as approaches have been used to treat glottic insufficiency, but the ideal procedure has yet to be determined. The goal of this study was to evaluate the safety and efficacy of cross-linked hyaluronic acid (Restylane) for office-based injection laryngoplasty for the treatment of vocal fold (VF) immobility.

Study design: Retrospective chart review

Methods: Twenty-seven patients were enrolled in the study. The injections were performed in the office setting using suspension microlaryngoscopy under general anesthesia. Voice outcomes were measured using the Voice-Related Quality of Life (V-RQOL) survey and the Voice Outcome Survey (VOS). Sixty-nine percent of VOS questions demonstrated improvement of symptoms. 24% were unchanged and 7% were worse. Patients were asked to complete the Voice-Related Quality of Life (V-RQOL) survey and the Voice Outcome Survey (VOS) both prior to and at least 1 month after injection.

RESULTS

The study included 27 patients, average age 61 with a range of 19 to 95 years. Ten patients had a left VF paresis (37%), 11 had left VF paralysis (41%), 2 had right VF paresis (7%) and 4 had right VF paralysis (15%). These 27 patients received a total of 30 unilateral injections, average amount 1 mL. Of the 27 patients, four did not have any follow-up. An additional 14 were lost to follow-up without post-injection data gathered, including 5 who expired due to causes unrelated to VF immobility. In all, 9 patients had pre- and post-injection data from the V-RQOL and/or VOS. Mean V-RQOL score improved from 34 to 23 (P = 0.083) but did not reach significance. After consolidation of the VOS questions, 69% of all follow-up responses reflected improvement of symptoms while 24% were unchanged and 7% were worse. For the 23 patients who were seen post-injection, 20 (87%) reported a subjective improvement in voice and 3 (13%) reported worsening. One patient had a collection of Restylane in the subepithelial space of the VF causing dysphonia that did not resolve after five months. The collection was evacuated via suspension microlaryngoscopy and microflap incision. The patient’s voice returned to baseline after evacuation.

METHODS AND MATERIALS

From October 2006 to June 2008, 27 patients with dysphonia secondary to unilateral vocal fold paresis or paralysis as determined by videostroboscopy were included. All patients were offered voice therapy prior to vocal fold injection. 25 patients received office injections under local anesthesia while two patients underwent general anesthesia and suspension microlaryngoscopy.

Injection technique: Office-based injection laryngoplasty with Restylane appears to be a safe procedure that improves vocal function in patients with glottal insufficiency due to impaired VF mobility. Further studies are required to quantify the benefits and to compare the effects with other injectable materials.

REFERENCES