A Complication of Injection Laryngoplasty Using Radiesse

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CASE

A 50-year-old male presented to a community-based otolaryngologist with a four year history of hoarseness. Fiberoptic laryngoscopy revealed mild, bilateral atrophy of the true vocal folds with incomplete closure. The patient underwent bilateral true vocal fold injection laryngoplasty with Radiesse. He continued to have a breathy voice postoperatively. Three months after the first injection, bilateral injection laryngoplasty with Radiesse was repeated. Following this operation, the patient's voice became significantly worse. He presented to our center where videostroboscopy revealed significant loss of mucosal wave. There was evidence of calcium hydroxylapatite bilaterally within the superficial lamina propria of the true vocal folds. We cared for this patient conservatively using a combination of medical management, voice therapy and serial videostroboscopy. His voice improved and videostroboscopy confirmed partial resorption of Radiesse. The patient's voice has returned to eighty percent of baseline.

REFERENCES


BACKGROUND

In the treatment of unilateral impairment of vocal fold motion and glottic insufficiency, an injectable form of calcium hydroxylapatite (Radiesse) has shown some promise in true vocal fold augmentation secondary to its inert properties and relative long-term stability. In preliminary case series, few complications have been reported. Subepithelial injection with poor voice outcome has been reported and managed most often with surgical excision after observation for a period of months. We present a complication of bilateral subepithelial injection with Radiesse that we managed without surgery. Photodocumentation of this case shows partial resorption of the implant and the patient's voice improved significantly.

CONCLUSIONS

This case illustrates that subepithelial injection of Radiesse can be treated conservatively. There is at least partial resorption of Radiesse which is documented photographically in this report. However, given the evidence in prior studies regarding calcium hydroxylapatite's long term stability, complete resorption of Radiesse would not be expected.

Videostroboscopic image showing submucosal presence of calcium hydroxylapatite, more pronounced on the right. Image was taken at patient's first visit to our clinic, which was seven months since his first injection and four months since his second injection. At this visit, the patient had a Voice Handicap Index of 82, decreased mucosal wave on the left, and nearly absent mucosal wave on the right.