ABSTRACT

Objectives: To determine outcomes and outcome predictors in the office-based treatment of chronic laryngitis and glottic stenosis secondary to chronic inflammatory sarcoidosis.

Study Design: Retrospective case series

Methods: Patients were treated with staged or concurrent bilateral percutaneous injections of triamcinolone acetate into the glottis. Outcome measures include demographics, subjective measures of voice and airway, treatment dosage, intervals, and frequency, vocal recovery, and length of follow-up.

Results: Five patients were identified with long-standing sarcoidosis who presented with chronic dysphonia and dyspnea on exertion. Patients underwent a mean of 3.4 injections each with follow up of 3-19 months. Following bilateral injection, 4 of 5 patients experienced an immediate, dramatic improvement in voice and airway symptoms.

Conclusions: Office-based steroid injection is a viable alternative to both systemic steroids and operative intervention and may obviate the need for prolonged intubation and tracheotomy.

INTRODUCTION

Sarcoidosis is a systemic granulomatous disease of unknown etiology. Although the lung is most frequently involved, the disease can affect any organ system of the body, including the larynx, resulting in dysphonia and airway obstruction. The cause of sarcoidosis still is unknown. The illness can be self-limited or chronic, with episodic recrudescence and remissions. The hallmarks of the disease, sarcoid granulomas, most likely are formed in response to a persistent, poorly degradable, antigenic stimulus. The mainstay of treatment has been systemic glucocorticoids and immunosuppression. However, chronic steroid use carries substantial long-term side effects and complications. If local symptoms may be managed without the use of systemic treatment, the complications of long-term steroid may be avoided.

METHODS

Institutional review approval was obtained. Patients with chronic laryngitis and glottis airway narrowing due to sarcoidosis treated with steroid injections in the office setting were included for study. Patients were treated with staged or concurrent bilateral percutaneous injections of 20mg triamcinolone acetate into each vocal fold via the cricothyroid membrane under continuous EMG monitoring to identify the vocal fold. Outcome measures include demographics, subjective measures of voice and airway, treatment dosage, intervals, and frequency, vocal recovery, and follow-up.

RESULTS

Five medical records were identified which met inclusion criteria. Patients were black females with long-standing sarcoidosis aged 38-45 years (mean 41.6) who presented with chronic dysphonia and dyspnea on exertion. Patients underwent a mean of 3.4 injections over an average of 8.8 months. Total follow up was 3-19 months. Following bilateral injection, 4 of 5 patients experienced an immediate, dramatic improvement in voice and airway symptoms of an average of 3.5 months' duration, while the remaining patient required operative intervention for worsening airway symptoms. One patient who initially experienced substantial improvement later developed worsening symptoms with eventual operative intervention being warranted.

DISCUSSION

Administration of corticosteroid in the management of diseases of the larynx is well established in the management of epiglottitis, croup, and upper airway edema. Corticosteroid is one of the most potent inhibitors of inflammation. The use of local injections avoids consequences of systemic use. The first reported use of steroid injection was by Krespi in 1987 with six cases of patients with sarcoidosis. In the present series, most patients enjoyed dramatic improvement in voice and airway symptoms for up to 4 months without surgery. Patients with Wegener's granulomatosis and granulomas of the larynx are also known to benefit from local steroid injections.

CONCLUSION

Sarcoidosis can have devastating effects on the larynx from chronic inflammation and remodeling of glottic and supraglottic structures leading to stenosis and dyspnea. Airway instrumentation to treat stenosis, however, may require prolonged intubation or even tracheotomy due to transient edema, while chronic, systemic steroids have significant side-effects. Office-based steroid injection is a viable alternative to operative intervention and may maintain a safe airway while avoiding the need for prolonged intubation and tracheotomy.

REFERENCES