Acute Reversal of Vocal Cord Medialisation with Hyaluronidase

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Introduction

Vocal cord medialisation with hyaluronic acid infiltration is a common procedure to manage vocal cord palsy. This is a temporary measure, is technically straight forward, and usually yields acceptable and predictable outcomes. There are limited case studies in the literature where acute reversal is required.[1]

Aims

We reviewed the case of a 76-year-old female who underwent vocal cord medialization for dysphonia in the context of a vocal cord palsy. She subsequently developed recurrent severe intermittent stridor and laryngeal inflammation and required acute reversal with hyaluronidase infiltration, with successful resolution of her symptoms.

Methods

A retrospective analysis of the clinical record was undertaken to evaluate the presentations and treatment for this patient which occurred over a two-month period.

Case Presentation

Our patient was a 76-year-old female who developed a left vocal cord palsy following a lobectomy for lung adenocarcinoma. 15 months following she had a persisting vocal cord palsy with a hoarse and breathy voice, and opted to proceed with a vocal cord medialisation with hyaluronic acid.

She subsequently had four admissions due to intermittent stridor and laryngeal inflammation. This was managed with intravenous steroids, antibiotics and humidified oxygen, and she improved clinically during each admission. On ceasing antibiotics and steroids the stridor recurred. The working diagnosis was a delayed hypersensitivity reaction to hyaluronidase.

Figure 1: Flexible nasendoscopic image of hemilaryngeal inflammation at the time of an acute presentation with stridor.

Due to recurrent presentations with stridor and inflammation of the left hemilarynx, reversal of the hyaluronic acid filler was undertaken with 150 international units of hyaluronidase, under general anaesthetic. The patient's stridor resolved immediately post operatively, and the quality of her voice remained improved compared to pre-medialisation.

Figure 2: Flexible nasendoscopic image demonstrating resolution of laryngeal inflammation following hyaluronidase infiltration.

Discussion

Hyaluronic acid can cause a delayed hypersensitivity reaction in 3.8-4.8% of cases, including in the larynx in the context of vocal cord medialisation injections.[2–4] The majority of the literature describes conservative treatment measures with corticosteroids, with limited case examples utilising hyaluronidase for medialisation injection reversal.[1] One case example described the need for acute tracheotomy in the context of an inflammatory reaction with airway compromise that did not respond to conservative treatment measures.[5]

Our case demonstrates an example of the use of hyaluronidase to effectively reverse a hyaluronic acid injection in the acute setting, and the need for awareness of delayed hypersensitivity reactions as a possible cause of acute airway compromise in patients who have had vocal cord medialisation with hyaluronic acid.

References

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