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Abstract

Objectives: Herpes simplex virus (HSV) laryngitis is rare in adults. We discuss a case report and perform a review to further delineate the presentation, course, and treatment of HSV laryngitis in adults.

Study design: Case report and literature review

Results: Ten cases of diagnosed HSV laryngitis in adults were reported in the literature. It is more common in immunocompromised patients. The mean patient age was 51 years. The presentation and course varied from mild chronic symptoms to fulminant airway compromise. On laryngoscopic exam, common findings are a white exudate or ulceration. Treatment is typically with antivirals, which tend to be highly effective.

Conclusions: HSV laryngitis is rare. Clinical presentation of HSV laryngitis is variable and may be indolent or fulminant. Treatment with antiviral medication is effective.

Introduction

Herpes simplex virus (HSV) infections in humans are associated with two different viruses, HSV-1 and HSV-2. HSV can cause a wide variety of symptoms and affect multiple organ systems. HSV-1 typically causes oro-facial infections, while HSV-2 typically causes genital infections, though these classifications are not mutually exclusive.¹ Less commonly, HSV can cause visceral organ infections, pneumonitis, or meningoencephalitis. More extensive and severe infections can occur in immunocompromised patients.¹

HSV infections are ubiquitous in humans. More than 90% of adults will have developed antibodies to HSV-1 by their fifth decade.¹ In contrast, HSV infection isolated to the larynx in adults is very uncommon. There are only 10 reported cases of confirmed adult HSV laryngitis in the English literature. We report a case of HSV laryngitis presenting as airway obstruction that required urgent airway intervention in an immunocompetent elderly woman. A review of the literature was also performed.

Methods and Materials

We present a case report of a patient diagnosed with HSV laryngitis. A literature review was also performed by searching Pubmed with search terms of “herpes laryngitis” and “herpes supraglottitis”. Inclusion criteria included English language articles with HSV laryngitis in an adult diagnosed by histology in combination with immunostaining, culture, or serology. Articles were excluded if manifestations of HSV infection did not involve the laryngeal structures or extended significantly beyond the larynx to involve other sites or organ systems.

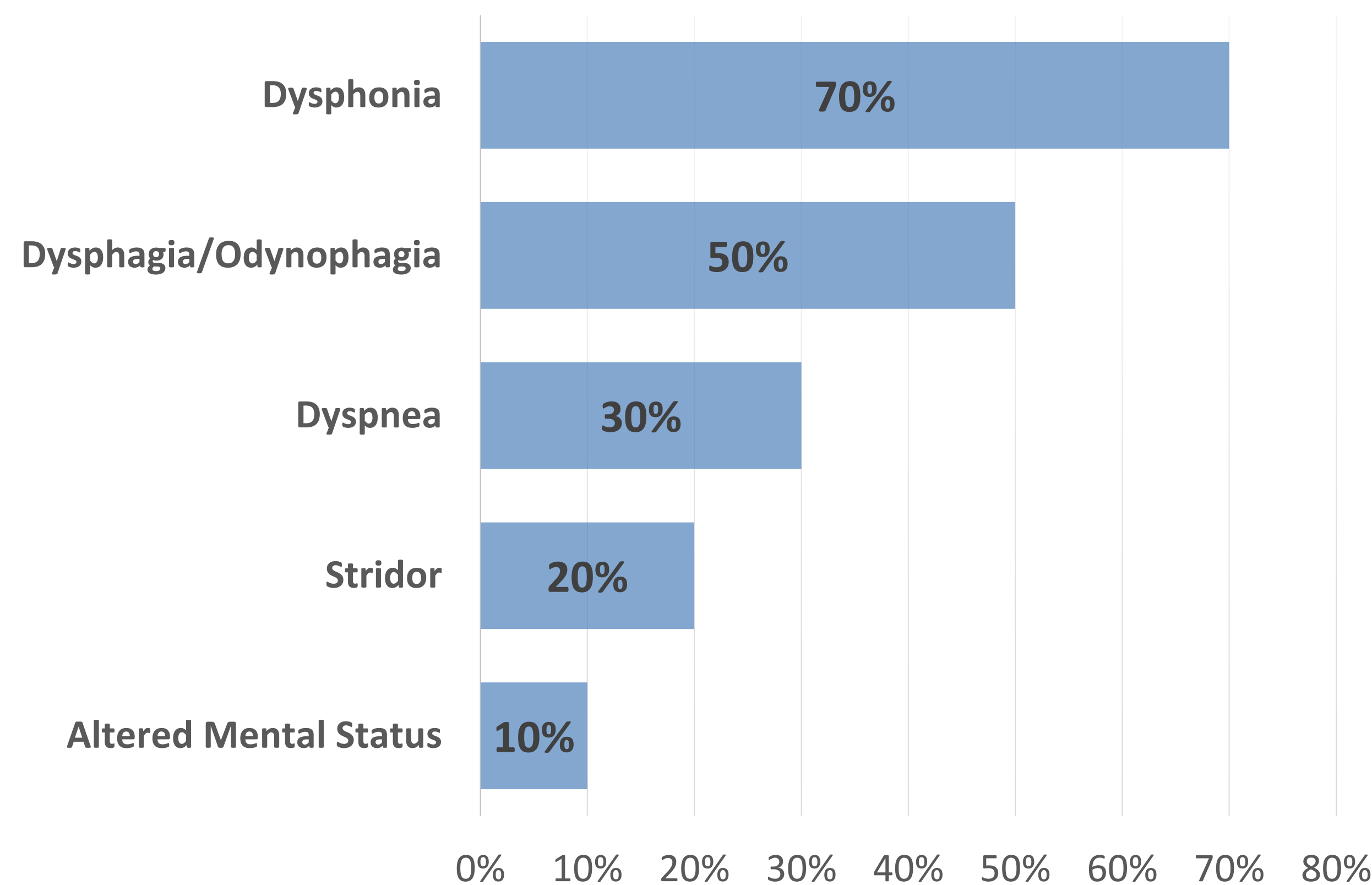
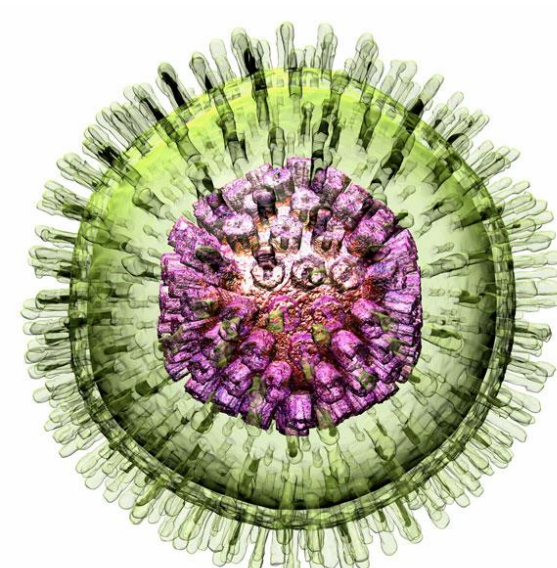


Chart 1. HSV Laryngitis Presenting Symptoms

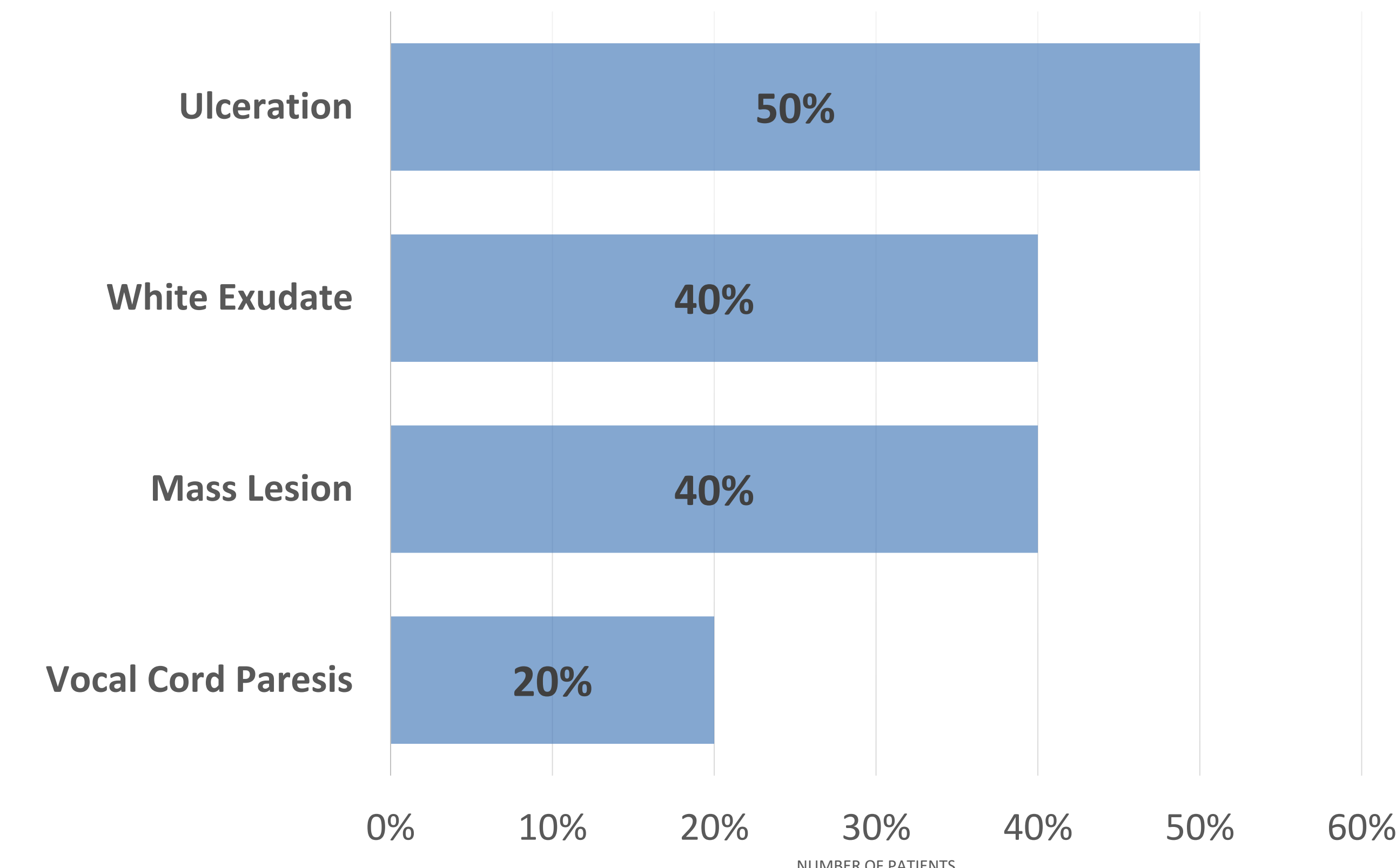


Chart 2. HSV Laryngitis Exam Findings

Case Report

A 79 year old immunocompetent female presented to the ED with 24 hours of altered mental status and hypercapnic respiratory failure. There was no stridor, dysphonia, or signs of sepsis. She underwent intubation in the ED. Her past medical history was noncontributory aside from 1 month of hoarseness. Screening labs revealed a respiratory acidosis with metabolic compensation.

Mental status rapidly improved with mechanical ventilation. She failed extubation despite passing spontaneous breathing trials. Bedside flexible laryngoscopy was performed after the second extubation attempt revealing a large white left vocal cord lesion that extended to the subglottis, causing partial airway obstruction. The true vocal folds were mobile.

She was taken to the OR for a tracheostomy and biopsy. On microdirect laryngoscopy, vocal cords were edematous with a white exudate. There was a large subglottic lesion with a similar white exudate causing partial obstruction (Fig 1). Final pathology revealed inflammation and signs of viral cytopathic effect. Immunostaining for HSV 1 and 2 was strongly positive.

Acyclovir 5mg/kg IV every 8 hours for 21 days. At two weeks after initiation of therapy a flexible laryngoscopic exam revealed resolution of the vocal cord and subglottic lesions. She was later decannulated. At her two month outpatient follow up she had returned to baseline and laryngoscopic exam was normal (Fig 2).

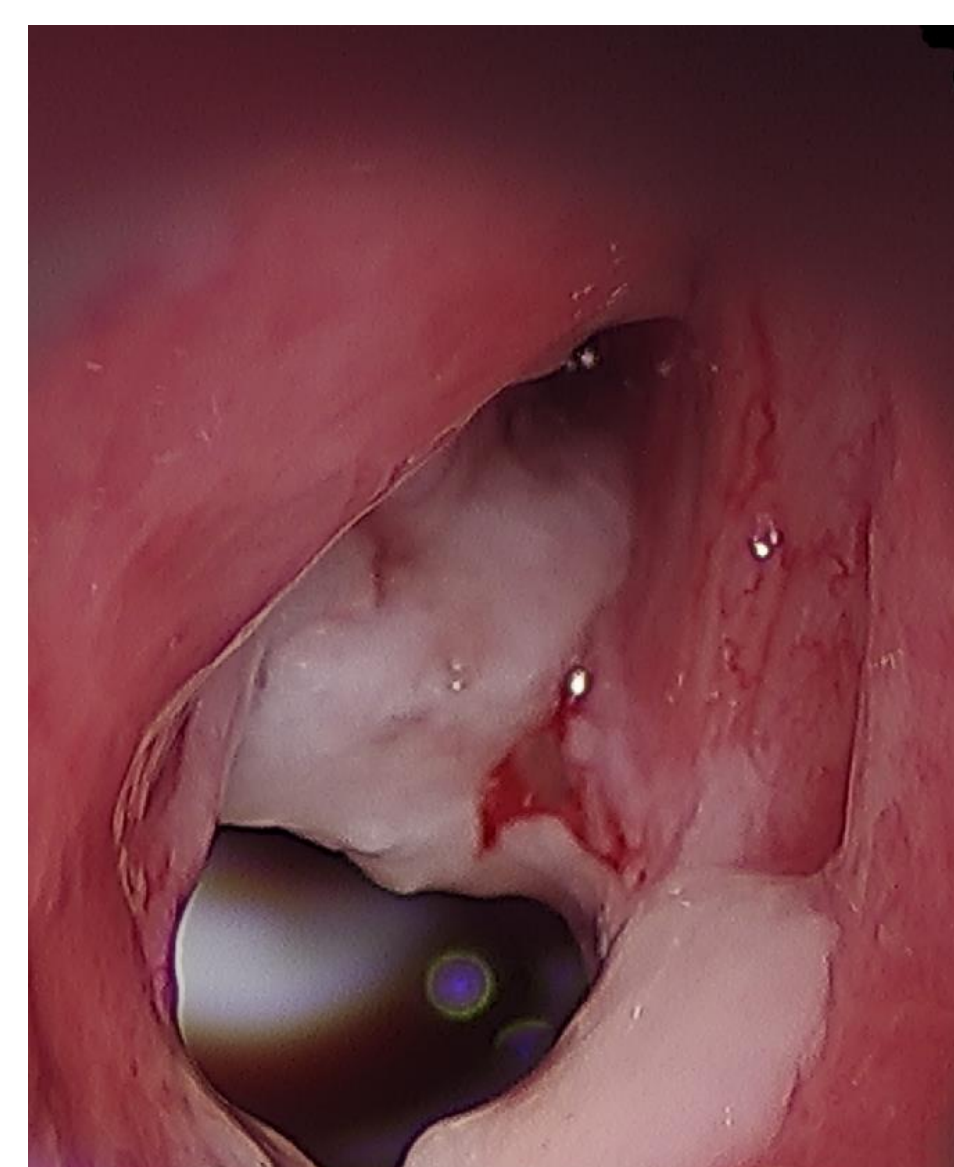


Figure 1. Pre-treatment Laryngoscopy



Figure 2. Post-treatment Laryngoscopy

Literature Review

A literature review of HSV laryngitis was performed. A total of 60 abstracts were reviewed with 10 articles meeting inclusion criteria. The mean age of all patients was 51 years. There was a female to male ratio of 1:1. Immunocompromise of some degree was present in 60%.

The clinical presentation and duration of symptoms for patients with HSV laryngitis was highly variable. Symptoms range from chronic laryngitis over months with relatively mild symptoms⁵ to a fulminant course leading to airway compromise requiring emergent intervention within 24 hours³. The most common symptom was dysphonia (Chart 1).

Findings on laryngeal exam in HSV laryngitis are also variable. The most common finding on laryngoscopy is a white exudate and/or ulceration of the laryngeal mucosa (Chart 2).^{2,5-9} There have been two reported cases of vocal fold hypomobility at presentation that resolved with treatment.^{5,9} Interestingly, HSV laryngitis may also present as a mass lesion.^{3,4,10,11}

With rare exception, all patients showed significant improvement with antiviral treatment. This was also the case in our patient. Two cases in otherwise healthy patients resolved without antiviral treatment.^{9,10} There was one report of HSV laryngitis with extensive destruction of the thyroid cartilage requiring a total laryngectomy.⁴ Our patient and three of the ten cases included in the literature review required airway intervention by tracheostomy.^{3,10,11} All patients that underwent tracheostomy, including our patient, were able to be decannulated after treatment.

Conclusions

We present the fifth reported case of HSV laryngitis in an otherwise immunocompetent adult. Presenting symptoms and exam findings can vary, thus biopsy the best method of diagnosis. Airway compromise can occur with HSV laryngitis, and even patients with mild chronic symptoms can have acute decompensations requiring emergent intervention. This case also further supports the efficacy of antiviral medications in treating HSV laryngitis.

Contact

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