Photodynamic Therapy for Endolaryngeal Kaposi’s Sarcoma

Mausumi N. Syamal, MD, MS1, Vanessa G. Schweitzer MD, FACS1
1Department of Otolaryngology – Head & Neck Surgery, Henry Ford Health System, Detroit, Michigan

Abstract

Objective: We present the first documented case of successful Photodynamic Therapy (PDT) treatment of endolaryngeal Kaposi’s sarcoma.

Study Design: Case Report.

Methods: Presentation and photo documentation of successful PDT treatment of endolaryngeal Kaposi’s sarcoma.

Results: A 37-year old male initially presented to our office with Kaposi’s sarcoma on his face, tongue, soft palate and epiglottis. He subsequently underwent injection of Photofrin II followed by PDT to a total of five fields at a dose of 100 joules/cm² involving the supraglottic region. Post-operatively, he was found to have 80-90% resolution of his epiglottic lesion based on size reduction.

Conclusions: PDT is a safe and effective alternative for treating mucocutaneous as well as endolaryngeal lesions and Kaposi’s sarcoma.

Introduction

In 14% of patients, Kaposi’s Sarcoma of the head and neck will be the first presenting sign of AIDS [1]. Clinically, KS presents as multifocal angioproliferative cutaneous or visceral neoplasms and lesions appear as violaceous macules, plaques or nodules [2,3]. Lesions in the larynx are rare with scant literature regarding progression or effective treatment [4,5]. Photodynamic therapy (PDT) is a technique involving the use of a photosensitizing agent (Photophrin II ®) and the subsequent application of a diode laser to ablate the target. Of note, our group pioneered the use of PDT in oral Kaposi’s sarcoma with efficacious results [6]. This treatment modality was expanded in the mid-1990s to include potentially obstructive endolaryngeal Kaposi’s sarcoma.

To the best of our knowledge, this is the first case report describing the successful use of PDT to treat Kaposi’s sarcoma.

Methods

• IRB Approval
• Photophrin II (Dihematoporphyrin ether) injected 2.5mg/kg two days prior to treatment
• 630nm Diode Laser Ablation to target sites
  – 100 Joules/cm²
• Post-operative admission
  – 10mg IV Dexamethasone 24-72 hrs

Case

37 year old male with HIV/AIDS
• Bulbous violaceous epiglottic mass
• August 1
  • PDT treatment
    – Photophrin II injection 175mg two days pre-op
    – 8 facial lesions at a dose of 100 joules/cm²
    – 4 soft palatal lesions at a dose of 50 joules/cm²
    – 5 supraglottic fields at a dose of 100 joules/cm²
    – Laryngeal surface of the epiglottis, Right aryepiglottic fold, False & True vocal cords
• Post-Op
  • POD #1: Self-extubated in SICU
  • POD #5: Home
  • POD #10: 4/8 facial lesions partial response, supraglottis and other lesions healing
  • POD #17: 3/8 facial lesions partial response, all other lesions healing
  • 5 wks: all facial lesions resolved, 80-90% size reduction of epiglottic lesion
  • Expired on November 1 of pulmonary KS

Discussion

The multiplicity of this patient’s lesions made him a good candidate for photodynamic therapy due to its selective nature which tends to spare surrounding normal tissues. A more aggressive treatment of excision would almost certainly result in more morbidity secondary to the need for local reconstruction, pain, and scarring.

Photodynamic therapy produces mild photosensitivity. Patients must be willing to avoid UV light for 6 weeks after injection of the Photofrin II ®.

Oral cavity PDT produces moderate discomfort requiring narcotic pain management. Despite this, patients are generally able to tolerate a diet within 24-48 hours post treatment. Laryngeal PDT required minimal pain management. Post-operative Videostroboscopy and voice assessment yielded no dysphonia and normal vocal fold vibration.

Conclusion

The ease of performing photodynamic therapy along with its success allows for a broad-range of applications and we have demonstrated that Kaposi’s sarcoma is responsive to this treatment. PDT is a safe and effective alternative for treating mucocutaneous and endolaryngeal KS lesions.

References