

# **A Patient with advanced Head and Neck Squamous Cell Carcinoma presenting with unexplained Syncope**

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## **Background**

Head and neck squamous cell carcinoma (HNSCC) arise from the mucosal epithelium in the oral cavity. These malignancies account for 90% of the US annual incidence of head and neck cancers. Rarely, these masses can cause syncope. In this case, we present a 61-year-old male from an underserved population in the Rio Grande Valley, with advanced HNSCC, causing carotid sinus syndrome (CSS), due to compression of the carotid sinus by the tumor. Probability of syncope in this setting is <1%.

## **Case Presentation**

A 61-year-old male with HNSCC presented to the emergency department with facial pain, increased oral secretions, fever, dysphagia, dyspnea, and chest pain. The patient described falls from syncopal episodes. Physical exam was notable for a 4cmx13cm right jaw mass with necrotic tissue and purulent drainage, admitted for suspected osteomyelitis.

Admission workup showed leukocytosis, and a mass extending and destroying the mandible. During the second day of admission, Telemetry recorded an asymptomatic episode of sinus bradycardia with an R-R pause that lasted 2-3 seconds. The next night, the patient had symptomatic bradycardia on ambulation. During the fourth night of admission, another episode was recorded with a rate of 44 bpm, for 2.6 seconds. Cardiology was consulted and placed a Holter monitor for 48 hours. EKG showed normal sinus rhythm with right bundle branch block, with no indication for Pacemaker.<sup>[1]</sup>

During the fifth night, the patient had an episode of symptomatic bradycardia that lasted 4.056 seconds, with an R-R pause, and with HR of 29 bpm. Cardiology reviewed the case and planned for Pacemaker placement. The patient continued to have similar episodes throughout the day. The next day a Pacemaker was placed, and the patient was discharged home with no complications. Due to lack of social support the patient was lost to follow-up after discharge.

## **Conclusion**

The diagnostic evaluation of syncope should be tailored according to the patient's history and physical exam. Despite being a diagnostic and management challenge physicians should have a low threshold of suspicion for CSS in patients with HNSCC presenting with syncope with no clear etiology. More data is needed to aid in the management of this patient population.