

# Esophageal Squamous Papilloma Associated with Human Papillomavirus

Mohamed Saad Eldin<sup>1,2,\*</sup>, David Bassily<sup>1,2</sup>, Khaled Awad<sup>1,2</sup>, Salah Aldergash<sup>1,2</sup>

<sup>1</sup>Department of Internal Medicine, Temple University, Philadelphia, PA, USA

<sup>2</sup>Department of Internal Medicine, Conemaugh Memorial Medical Center, Johnstown, PA, USA

\*Corresponding author: [msaadeld@conemaugh.org](mailto:msaadeld@conemaugh.org)

Received October 12, 2018; Revised November 23, 2018; Accepted December 10, 2018

**Abstract** Esophageal squamous papilloma (ESP) is a rare benign tumor of the esophagus. Human papillomavirus is known to infect the genitourinary tract, the anal canal, the respiratory tract, and the skin. It is associated with benign, precancerous and cancerous lesions. Esophageal papillomas, including HPV-induced squamous cell papillomas of the esophagus, are rare, with an incidence ranging from 0.01 to 0.04 percent. We present a case of esophageal HPV induced squamous cell papilloma. A 59-year-old male presented to the clinic with epigastric abdominal pain radiating to the chest, he was treated empirically with Pantoprazole with the resolution of symptoms. The patient underwent Positron Emission Tomography (PET) scan as part of follow-up surveillance for stage IV adenocarcinoma of the lung that was resected two years ago, it showed hypermetabolic focus involving the gastroesophageal junction. Biopsy of the lesion was consistent with the involvement of human papillomavirus with no evidence of dysplasia. This case illustrates the recognizing the role of human papillomavirus in squamous cell papilloma of the esophagus and its association with GERD.

**Keywords:** Human papillomavirus, esophageal squamous papilloma, GERD

**Cite This Article:** Mohamed Saad Eldin, David Bassily, Khaled Awad, and Salah Aldergash, "Esophageal Squamous Papilloma Associated with Human Papillomavirus." *American Journal of Medical Case Reports*, vol. 6, no. 11 (2018): 226-227. doi: 10.12691/ajmcr-6-11-3.

## 1. Introduction

Esophageal squamous papilloma (ESP) is an uncommon benign squamous epithelial polypoid tumor, mostly asymptomatic, occupying the middle or upper segment of the esophagus [1].

Human papillomavirus infection is known to infect the genitourinary tract, the anal canal, respiratory tract, and the skin. It is associated with benign, precancerous and cancerous lesions.

Esophageal papillomas including HPV-induced squamous cell papillomas of the esophagus are rare, with an incidence ranging from 0.01 to 0.04 percent [2].

We describe a patient who presented with gastroesophageal reflux disease (GERD) symptoms and was found to have HPV squamous cell papilloma of the distal esophagus with associated esophagitis.

## 2. Case Presentation

A 59-year-old male presented to the clinic with epigastric abdominal pain radiating to the chest. The patient was prescribed pantoprazole 40 mg daily with subsequent resolution of the symptoms. The patient's medical history was significant of stage IV adenocarcinoma

of the lung that was resected two years ago. He completed four cycles of chemotherapy therapy at that time. The patient also had a history of deep venous thrombosis and pulmonary embolism and was under long-term anticoagulation. He has also coronary artery disease and Diabetes Mellitus type II. The patient underwent a CT scan of the chest as part of follow-up surveillance, which showed new right side multiple small nodular pleural lesions. He then underwent Positron Emission Tomography (PET) scan which showed hypermetabolic focus involving the gastroesophageal junction (Figure 1). Subsequently, the patient underwent an upper gastrointestinal endoscopy which showed a 7-millimeter distal esophageal polyp, (Figure 2) located just above the gastroesophageal junction and Los Angeles class A esophagitis. Biopsies were obtained. The pathology report was consistent with squamous cell papilloma. A p16 immunostaining was positive and consistent with the involvement of human papillomavirus. A ki67-stain was positive in the basal layer, showing no evidence for dysplasia.

## 3. Discussion

Esophageal HPV papilloma is a rare disease of the esophagus, usually discovered incidentally by endoscopy for investigating esophageal symptoms. The pathogenesis of esophageal papilloma is thought to be either due to

chronic irritation and inflammation from conditions like GERD and esophagitis [2], or due to infection by HPV [3]. Our patient had esophageal reflux symptoms with evidence of inflammation by endoscopy and confirmation of HPV infection by biopsy. There is a strong association between HPV virus and cervical cancer, however, its role in esophageal cancer is not established. Although HPV has been detected in esophageal squamous cell carcinoma, there is no evidence of malignant transformation of esophageal HPV papilloma [4].



**Figure 1.** PET scan of the chest showing hyper metabolic focus in the gastroesophageal junction



**Figure 2.** Distal esophageal polyp, a sessile polyp with smooth border

## 4. Conclusion

Esophageal papillomas are benign lesions that are usually discovered incidentally in patients who have acid reflux symptoms. It is important to recognize HPV as an important cause of these lesions.

## Acknowledgements

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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