

CASE STUDY IN GASTROENTEROLOGY & HEPATOLOGY

Esophageal Squamous Cell Papilloma: A Not-So-Rare Cause of Dysphagia

Alhareth M. Al Juboori, MD¹
Zeeshan Afzal, MD²
Nisar Ahmed, MD³

¹University of Nevada School of Medicine, Reno, Nevada; ²University of Texas Rio Grande Valley, McAllen, Texas; ³Park Plaza Hospital and The Methodist Hospital, Houston, Texas

A 59-year-old white woman presented with a 2-month history of intermittent nonprogressive dysphagia for solids and liquids as well as symptoms of dyspepsia including heartburn, chest pain, and metallic taste. Despite use of over-the-counter antacids and proton pump inhibitors, she did not attain complete resolution of her dysphagia and heartburn.

The patient's medical history was significant for ulcerative colitis, Sjögren syndrome, mitral valve prolapse, and osteoporosis. She had a remote history of temporomandibular joint surgery and bone graft surgery for a herniated cervical disc without complications. She had no history of gastrointestinal surgery or tobacco use. The patient reported drinking alcohol only on social occasions. Her medications included oral corticosteroids and alendronate, and her family history was negative for gastroesophageal reflux disease (GERD) and gastrointestinal malignancy.

Due to persistence of symptoms despite medical therapy, the patient underwent an esophagogastroduodenoscopy, which demonstrated a pale pink, nonulcerated, polypoid, mucosal lesion located in the middle third of the esophagus, approximately 25 cm from the superior incisors (Figure). The lesion was completely resected by a hot biopsy. Pathology showed squamous esophageal mucosa with prominent papillae, which was consistent with benign squamous cell papilloma.

The patient was discharged with a 3-month course of daily omeprazole and a 2-week course of sucralfate 4 times daily. A follow-up endoscopy performed after 1 year was negative for recurrence of papilloma or any other lesion.

Address correspondence to:

Dr Zeeshan Afzal, McAllen Family Medicine Residency Program,
205 East Toronto Ave, McAllen, TX 78503; Tel: 956-687-6155;
E-mail: DrZeeshanAfzal@gmail.com



Figure. An endoscopic view of a polypoid verrucous sessile lesion in the midesophagus that is highly reminiscent of a skin wart.

Discussion

Esophageal squamous papilloma (ESP) is a rare benign epithelial tumor that is usually asymptomatic but can present with pyrosis and epigastric discomfort with or without dysphagia. In a study by Mosca and colleagues, papilloma was incidentally found in 9 patients, and no patients were reported to have dysphagia.¹

ESP is most commonly diagnosed in patients aged 43 to 50 years.¹⁻⁴ The male-to-female ratio is variable.²⁻⁹ ESPs are usually solitary but have been reported as multiple lesions or, in a few cases, papillomatosis.^{10,11} They are small in size, ranging between 2 and 6 mm^{6,12}; however, Zeabart and colleagues¹³ did report a 2-cm squamous papilloma, which was characterized by increased severity and a pattern of dysphagia.

Histopathologically, ESP has fingerlike projections lined with acanthotic stratified squamous epithelium with

conservation of normal cellular morphology, with or without cellular atypia. A study by Takeshita and colleagues demonstrated the presence of neutrophils in papilloma biopsies obtained from the lower esophagus, suggesting the presence of chronic inflammation, possibly due to GERD.¹⁴ No neutrophils were isolated from biopsies of the upper and middle third of the esophagus.¹⁴ The patient's biopsy specimen was obtained from the middle third of the esophagus and did not demonstrate neutrophils. This suggests that papilloma development in the patient was not likely due to chronic inflammation from GERD.

The exact etiology of ESP is still uncertain, but some etiologic factors have been proposed. These are classified as chemical, mechanical, and viral agents. The suspected chemical and mechanical factors result in mucosal injury with a hyperregenerative response such as in GERD.^{2,3,6,13,15} This may explain why two-thirds of the reported cases of ESP have been localized to the lower third of the esophagus, a site exposed to chronic irritation from gastric acid reflux. Other reported sources of trauma include mechanical sources (eg, self-expanding metal stents, bougienage use for benign strictures, nasogastric tubes, and previous gastroesophageal surgeries^{16,17}).

The human papilloma virus (HPV) has been isolated in squamous cell papillomas in several studies that have collected data from Asia and Europe. According to a study by Takeshita and colleagues, 10% of ESPs were positive for HPV, and all were found in the middle third of the esophagus.¹⁴ The malignant potential of ESP is still debatable, but there are several case reports of documented papillomas that have been complicated by carcinoma.^{10,18,19} If HPV is a source of ESP, some doctors believe that this infection may explain cases of malignant conversion, as HPV is a known cause of squamous cell cancer.^{2,20,21}

Based on this case report, we recommend that ESP should be considered in the differential diagnosis of any patient between 40 and 50 years who presents with intermittent, nonprogressive dysphagia or GERD resistant to medical therapy. ESP can occur sporadically, as it is likely to have occurred in this patient, given the absence of any significant mechanical, chemical, or viral risk factors; HPV serology in this patient was negative, and histopathology of ESP was not consistent with GERD-induced injury. The presence of the aforementioned risk factors should increase the suspicion for ESPs. These unusual, frequently benign lesions should be completely resected upon identification, given their malignant potential. Biopsies should be screened for HPV via polymerase chain reaction or in situ hybridization, especially if lesions are found in the middle third of the esophagus. Furthermore, if HPV is isolated from a biopsy, other anatomic sites where squamous cell papilloma is known to occur, such as the nasopharynx, oropharynx, larynx, vulva, vagina, and anal canal, should undergo appropriate evaluation.

The authors have no relevant conflicts of interest to disclose.

References

1. Mosca S, Manes G, Monaco R, Bellomo PF, Bottino V, Balzano A. Squamous papilloma of the esophagus: long-term follow up. *J Gastroenterol Hepatol*. 2001;16(8):857-861.
2. Odze R, Antonioli D, Shocket D, Noble-Topham S, Goldman H, Upton M. Esophageal squamous papillomas. A clinicopathologic study of 38 lesions and analysis for human papillomavirus by the polymerase chain reaction. *Am J Surg Pathol*. 1993;17(8):803-812.
3. Carr NJ, Monihan JM, Sobin LH. Squamous cell papilloma of the esophagus: a clinicopathologic and follow-up study of 25 cases. *Am J Gastroenterol*. 1994;89(2):245-248.
4. Quitadamo M, Benson J. Squamous papilloma of the esophagus: a case report and review of the literature. *Am J Gastroenterol*. 1988;83(2):194-201.
5. Bohn OL, Navarro L, Saldivar J, Sanchez-Sosa S. Identification of human papillomavirus in esophageal squamous papillomas. *World J Gastroenterol*. 2008;14(46):7107-7111.
6. Franzin G, Musola R, Zamboni G, Nicolis A, Manfrini C, Fratton A. Squamous papillomas of the esophagus. *Gastrointest Endosc*. 1983;29(2):104-106.
7. Chang F, Janatuinen E, Pikkarainen P, Syrjänen S, Syrjänen K. Esophageal squamous cell papillomas. Failure to detect human papillomavirus DNA by in situ hybridization and polymerase chain reaction. *J Gastroenterol*. 1994;89:434-437.
8. Silvers WS, Levine JS, Poole JA, Naar E, Weber RW. Inlet patch of gastric mucosa in upper esophagus causing chronic cough and vocal cord dysfunction. *Ann Allergy Asthma Immunol*. 2006;96(1):112-115.
9. Javdan P, Pitman ER. Squamous papilloma of esophagus. *Dig Dis Sci*. 1984;29(4):317-320.
10. Attila T, Fu A, Gopinath N, Streutker CJ, Marcon NE. Esophageal papillomatosis complicated by squamous cell carcinoma. *Can J Gastroenterol*. 2009;23(6):415-419.
11. Kao PC, Vecchio JA, Schned LM, Blaszyk H. Esophageal squamous papillomatosis. *Eur J Gastroenterol Hepatol*. 2005;17(11):1233-1237.
12. Berkelhammer C, Bhagavan M, Templeton A, Raines R, Walloch J. Gastric inlet patch containing submucosally infiltrating adenocarcinoma. *J Clin Gastroenterol*. 1997;25(4):678-681.
13. Zeabart LE, Fabian J, Nord HJ. Squamous papilloma of the esophagus: a report of 3 cases. *Gastrointest Endosc*. 1979;25(1):18-20.
14. Takeshita K, Murata S, Mitsufuji S, et al. Clinicopathological characteristics of esophageal squamous papillomas in Japanese patients—with comparison of findings from Western countries. *Acta Histochem Cytochem*. 2006;39(1):23-30.
15. Yamada Y, Ninomiya M, Kato T, et al. Human papillomavirus type 16-positive esophageal papilloma at an endoscopic injection sclerotherapy site. *Gastroenterology*. 1995;108(2):550-553.
16. Karras PJ, Barawi M, Webb B, Michalos A. Squamous cell papillomatosis of esophagus following placement of a self-expanding metal stent. *Dig Dis Sci*. 1999;44(3):457-461.
17. Parnell SA, Peppercorn MA, Antonioli DA, Cohen MA, Joffe N. Squamous cell papilloma of the esophagus. Report of a case after peptic esophagitis and repeated bougienage with review of the literature. *Gastroenterology*. 1978;74(5 pt 1):910-913.
18. de Borges RJ, Acevedo F, Miralles E, Mijares P. Squamous papilloma of the esophagus diagnosed by cytology. Report of a case with concurrent occult epidermoid carcinoma. *Acta Cytol*. 1986;30(5):487-490.
19. Reynoso J, Davis RE, Daniels WW, Awad ZT, Gatalica Z, Filipi CJ. Esophageal papillomatosis complicated by squamous cell carcinoma in situ. *Dis Esophagus*. 2004;17(4):345-347.
20. Syrjänen K, Pyrhönen S, Aukee S, Koskela E. Squamous cell papilloma of the esophagus: a tumour probably caused by human papilloma virus (HPV). *Diagn Histopathol*. 1982;5(4):291-296.
21. Lavergne D, de Villiers EM. Papillomavirus in esophageal papillomas and carcinomas. *Int J Cancer*. 1999;80(5):681-684.