Multiple Esophageal Squamous Papillomas

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ABSTRACT

We report a rare case of multiple esophageal squamous papillomas (ESPs). A 42-year-old man underwent a medical examination, and abnormalities of multiple elevated lesions were noted using an esophagogastroduodenoscope. He underwent upper gastrointestinal tract radiography with an orally ingested barium sulfate and gastrointestinal endoscopy, which revealed multiple elevated lesions in the esophagus, predominantly on the distal esophagus. We performed an endoscopic esophageal mucosal resection using a cap-fitted esophagogastroduodenoscope to obtain sufficient specimens. Based on the pathological findings, we diagnosed multiple ESPs. Although single ESPs or a few ESPs in a patient are often encountered, multiple ESP cases are rare.

INTRODUCTION

Esophageal squamous papilloma (ESP) is classified as a benign epithelial tumor of the esophagus, but ESPs are said to have strong reactive hyperplasia, and to not be a true tumor. We encountered a rare case of multiple ESPs, which we describe herein along with a brief review of the relevant literature.

CASE REPORT

A 42-year-old man who had no significant gastrointestinal symptoms underwent esophagogastroduodenoscopy as a medical checkup. The esophagogastroduodenoscopy showed abnormalities of multiple elevated lesions in the esophagus. He had no relevant medical history nor other clinical disorder at that time, and laboratory tests were unremarkable. Upper gastrointestinal tract radiography with an orally ingested barium sulfate that was performed to evaluate the lesion localization showed many elevated lesions distributed throughout the esophagus (Figure 1). The lesions had a major diameter of ≤5 mm. The esophageal caliber and barium passage were normal.

Second esophageal endoscopy using narrow-band imaging revealed multiple elevated lesions were present in the esophagus deeper than the dental arch at 25 cm, showing no abnormal blood vessels. The lesions showed no abnormal staining after spraying of Lugol solution (Figure 2). These findings did not suggest the lesion with malignancy such as squamous cell carcinomas. A biopsy specimen taken via endoscopy failed to diagnose because of insufficient material volume. After obtaining an informed consent from the patient, we conducted an endoscopic esophageal mucosal resection using a cap-fitted esophagogastroduodenoscope to obtain sufficient specimens. The pathological specimen showed that the subsidiary raised area was composed of irregularly thickened stratified squamous epithelium and a core of fibrovascular tissue (Figure 3). The surface of the lesions was relatively smooth, and thick rete-like epithelial projections extended in the stromal core. Thickening of the basal and parabasal cell layers was observed with mild increases in the nuclear size and nucleocytoplasmic ratio, associated with prominent eosinophilic infiltrate and intercellular edema. The nuclear size and chromatin pattern were relatively uniform, and immunohistochemically, MIB-1- and p53-positive cells were restricted in the lower layers of the epithelium. Monoclonal antihuman papillomavirus (Dako, Carpinteria, CA) showed negative immunostaining. These pathological findings suggested the lesions be diagnosed as ESPs. He underwent a follow-up endoscopy 1 year later, and the lesions revealed no major interval changes.

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DISCUSSION

ESP is classified as a benign epithelial tumor of the esophagus, with an endoscopic incidence of 0.01%–0.45%. Although the etiology of ESP is unknown, it is suspected to have causes or contributing factors that include chronic irritation due to gastric acid reflux, smoking, alcohol, and human papillomavirus. In the present case, there were no findings such as esophagitis or esophageal hiatal hernia, and the involvement of human papillomavirus was negative in the pathological findings. ESP usually shows an incidental finding as a small (<0.5 cm) single lesion, most commonly located in the distal esophagus. In this rare case, multiple ESPs were present predominantly in the distal esophagus.

ESP is typically reported as fleshy pink in color, with a soft to warty texture; it usually exists in either a sessile or pedunculated form. ESP is difficult to diagnose based on a biopsy, and a sufficient amount of specimen is necessary for diagnosis. In the past, surgery was performed for the diagnosis, but now, less-invasive endoscopic mucosal resection is often recommended. We performed an endoscopic esophageal mucosal resection using a cap-fitted esophagogastroduodenoscope to obtain sufficient volume of samples. There have been no reports of ESP that could be diagnosed by the biopsy method to date.

Three main histologic patterns of ESP have been described. It is generally classified as the exophytic type (fingerlike squamous papillae overlying fibrovascular cores of lamina propria), the endophytic type (a round, smooth surface contour and an inverted papillomatous appearance), and the spiked type (a verrucoid appearance, a corrugated surface, hyperkeratosis, and a prominent granular cell layer). The exophytic type is more common although the present case led to its classification as the endophytic type. Prominent eosinophilic infiltrate to the epithelium was observed in this case, which may be also diagnosed as an eosinophilic esophagitis. A case of ESP associated with Goltz syndrome with eosinophilic esophagitis has been reported, but according to that report, eosinophilic esophagitis is considered as a disorder that related to connective tissue disease, and its association with ESP is unknown.

ESP is benign but may be associated with cancer although extremely rare. However, whether these lesions represent de novo carcinomas from the onset or true malignant degeneration of a squamous papilloma is unknown. In addition, Cowden disease causing gastrointestinal polyposis could be an alternative diagnosis for the present case. However, it was denied by the physical findings, family history, and pathological findings.
(glycogenic acanthosis seen with Cowden disease). ESP often merges with Goltz syndrome, but the present case was totally different in terms of the absence of birth defects or skin symptoms.7,8

Small isolated lesions have been commonly and successfully treated by endoscopic resection. Because of the paucity of reported cases, however, the best clinical management of extensive ESP has remained unclear.2 ESPs should be considered as a differential diagnosis for esophageal polyps that even manifest as multiple polyps such as polyposis (eg, Cowden disease) in the esophagus.

**DISCLOSURES**

Author contributions: S. Makise and K. Hiraka wrote the manuscript. H. Watanabe, K. Atsumi, K. Inoue, K. Miyajima, K. Makisumi, A. Mizushima, T. Sasaguri, D. Tsurumaru, H. Honda edited the manuscript. S. Makise is the article guarantor.

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