A 69-year-old man who had a history of a distal gastrectomy for a hemorrhagic duodenal ulcer 50 years earlier was referred to our hospital with an esophageal lesion. The lesion had been detected by esophagogastroduodenoscopy during health screening. The results of his physical examination were normal. He smoked 20 cigarettes daily and drank alcohol almost every day.

Endoscopy revealed white, plaque-like lesions distributed in a semi-circumferential arrangement from the middle to the distal esophagus (Fig. 1a). On narrow-band imaging, the white plaques had a nodular pattern at lower magnification (Fig. 1b) and a characteristic appearance, similar to that of goose flesh, at higher magnification (Fig. 1c). After iodine staining, a well-demarcated unstained area was seen (Fig. 1d). The appearance of biopsy specimens taken from the lesion and stained with hematoxylin and eosin led to a diagnosis of epidermoid metaplasia with hyperkeratotic and granular layers in the epithelium, mimicking the corneal layer of the epidermis (Fig. 2).

Epidermoid metaplasia of the esophagus is a rare condition affecting the middle to distal esophagus in middle-aged to elderly persons [1]. This lesion and several similar lesions, including esophageal hyperkeratosis [2] and papillomatosis [3], are considered to develop as an unusual response to chemical or mechanical irritation, such as acid reflux [4]. One report suggested alcohol abuse to be a possible cause of esophageal epidermal metaplasia, and this lesion has also been suggested to be strongly associated with squamous cell carcinoma (of the esophagus and oropharynx) [5], although the etiology remains unclear.

Because the endoscopic features of epidermoid metaplasia (i.e., slightly elevated shape, translucent white color, scaly or shaggy surface, and clear area after iodine staining) resemble those of superficial esophageal cancer [5], it is recommended that endoscopists pay more attention to this unique lesion. Detailed investigations of larger numbers of patients are required.

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Shinji Kitamura¹, Yasuyuki Okada¹, Naoki Muguruma¹, Hiroshi Miyamoto¹, Yoshimi Bando², Rika Aoki³, Tetsuji Takayama¹

¹ Department of Gastroenterology and Oncology, The University of Tokushima Graduate School, Tokushima, Japan
² Division of Pathology, Tokushima University Hospital, Tokushima, Japan
³ Tokushima Health Screening Center, Tokushima, Japan
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Corresponding author

Naoki Muguruma, MD, PhD
Department of Gastroenterology and Oncology
The University of Tokushima Graduate School
3-18-15, Kuramoto-cho
Tokushima City, 770-8503
Japan
Fax: +81-88-633-9235
muguruma.clin.med@gmail.com