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Letter to the Editor

Epidermoid Metaplasia in Diffuse Esophageal Intramural Pseudodiverticulosis

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Dear Editor,

Diffuse esophageal intramural pseudodiverticulosis (DEIPD) is a rare disease. It is characterized by chronic fibrosing inflammation of the esophagus and the enlargement of its intramural glands that lead to the name-giving pseudodiverticula. Clinical symptoms include dysphagia and food impactions; endoscopic signs are multiple small diverticula openings, "frosted glass look," "faux uni pattern," and "trachealization" of the esophagus [1]. Risk factors for DEIPD are alcohol- and tobacco abuse, but since these are common and the disease is rare, an unknown additional pathomechanism must exist. Little is also known about the histopathologic signs of DEIPD. Often, if at all, they are reported just as "unspecific inflammation" [2, 3].

Now in a recent article, Shintaku et al. [4] present a patient suffering from DEIPD whose esophageal mucosal biopsies show unambiguous signs of epidermoid metaplasia (EM, synonymous epidermization). In this context, one of our own works was quoted as: "two cases showed moderate squamous cell hyperplasia and epidermization" [1], and it was criticized that we did not publish pictures of these conditions. First of all, we have to apologize for being unprecise here: in our own collective of 21 patients, we found 1 case of squamous cell hyperplasia and 1 case of epidermization. We have therefore re-examined the endoscopic photographs and histological slides of this 1 patient – a 58-year-old male European with a history of severe alcohol- and tobacco abuse. Results were as following. Compared to the findings of Shintaku et al. [4], the endoscopic/macroscopic aspect in our patient is not as suggestive of EM as theirs (shown in Fig. 1). Our mucosal biopsies, however, show an impressive similarity to theirs at 2.5 years after first visit (compare Fig. 2c, d in [4]): Multiple fine keratohyalin granules in the superficial layers of the epithelium with rather discrete hints of acanthosis and hyperkeratosis, typical for early stages of EM (shown in Fig. 2) [5, 6]. We did not find the acellular keratin layer they found in their follow-up biopsies, but since that layer is characteristic

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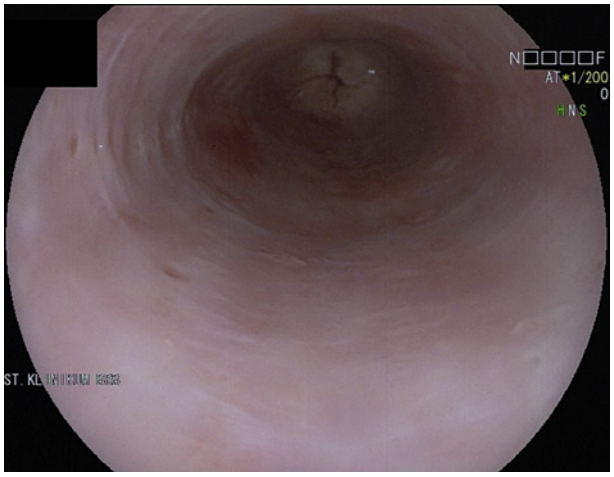

Fig. 1. DEIPD, endoscopic view: frosted glass look (dull-white swelling of mucosa), discrete signs of trachealization (rigid appearance with reduced peristalsis, multiple rings), longitudinally aligned diverticle openings. Fujinon EG-600ZW, VP-4450HD.

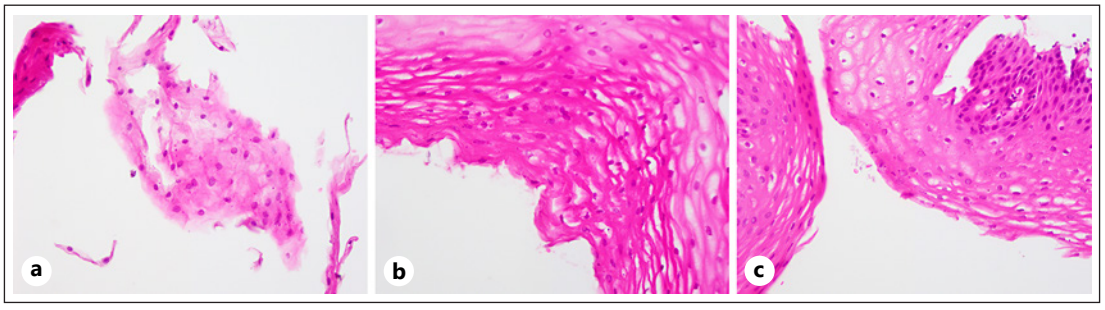

Fig. 2. a–c DEIPD, histologic view of mucosal biopsies: Several fine keratohyalin granules in the superficial layers of the epithelium. Hematoxylin and eosin, ×400.

for later stages of EM, we suspect that, given enough time, it might develop in our patient too. So in general, we can confirm the results of our colleagues.

We have at the moment no explanation why some DEIPD patients develop epidermoid metaplasia and some do not. Still, this would be an interesting question to ask, especially against the background of DEIPD and EM sharing the same risk factors as esophageal squamous cell carcinoma [7–10]. Since our previous study centered on clinical and endoscopic characteristics of DEIPD, histologic data were only collected retrospectively from pathological routine examinations [1]. We are therefore preparing another study re-examining all archived biopsies to specifically look for early signs of epidermization, and we would like to thank Shintaku et al. [4] for pointing us to this topic.

Sincerely yours, Florian Hentschel, Christian Hirschmann, Stefan Lüth.

Statement of Ethics

All procedures reported in this letter and in the original publication were in accordance with the standards of the Institutional and/or National Research Committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Written informed consent or substitute for it was obtained from all patients for publication of the details of their medical information. The Ethics Committee's approval number for the follow-up study is E-01-20191028.

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Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

F.H. performed all endoscopies and wrote the letter. S.H. examined the original slides and re-examined the slides in preparation of the letter. S.L. cared for the patient and edited the draft of the letter.

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