

Impact of endoscopic submucosal dissection of an anal squamous intraepithelial lesion with indistinct border

A 35-year-old woman, with negative results from a human immunodeficiency virus (HIV) antibody test, underwent colonoscopy that revealed whitish nodules and elevated papillary lesions of various sizes situated in the anal transitional zone (► **Fig. 1**). Biopsy of the whitish nodules revealed high grade squamous intraepithelial lesions. The protruding lesions were distributed almost circumferentially. It was difficult to identify the lateral margins of the high grade squamous intraepithelial lesions with magnified narrow band imaging (NBI) (► **Fig. 1 c**, ► **Fig. 2 a, b**) and indigo carmine dye spraying (► **Fig. 1 b**).

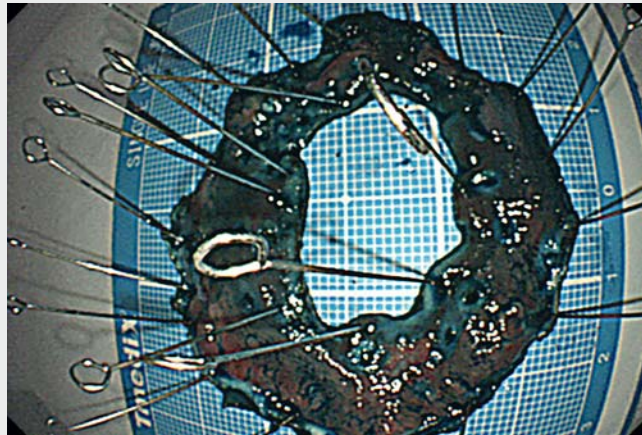
We performed diagnostic circumferential resection of the involved area via endoscopic submucosal dissection (ESD) (► **Video 1**).

The procedure was done using a gastroscope (Olympus, Japan) capped with a small-caliber tip attachment (ST Hood short type; Fujifilm, Japan). For local anesthesia a 1:1 mixture of 1% lidocaine and Glyceol (10% glycerol and 5% fructose in normal saline solution; Chugai Pharmaceutical, Japan) was injected into the anal aspect of the lesion. ESD was performed using a bipolar needle-knife with

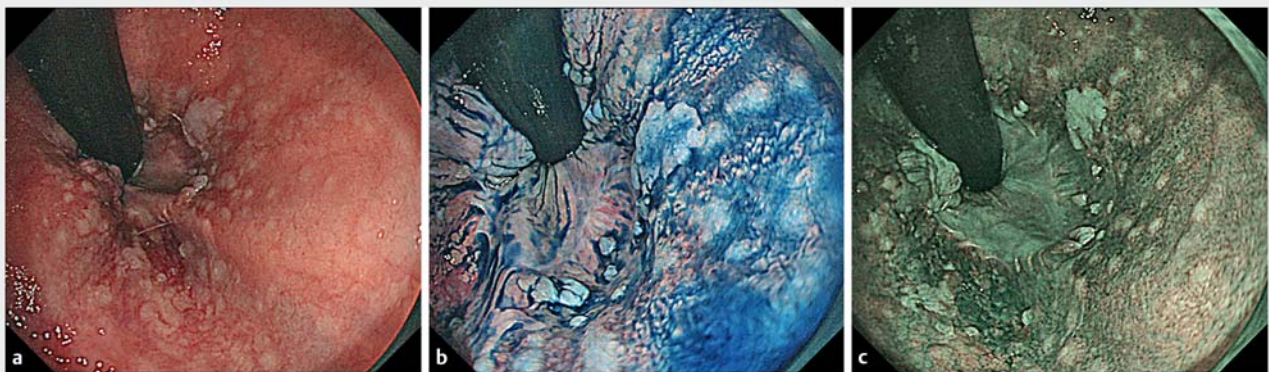
a waterjet function (Jet B-knife; Xemex, Japan) and an insulated-tip electro-surgical knife (IT-knife nano; Olympus). The lesion was resected en bloc, uneventfully. The pathological findings were of low grade squamous intraepithelial lesion in the protruding lesions and high grade squamous intraepithelial lesion in the flat area (► **Fig. 3**, ► **Fig. 4**). The vertical

margin was free of tumor, but the anal horizontal margin was difficult to evaluate because of epithelial exfoliation. There was no lymphovascular invasion. Follow-up colonoscopy in 1 year is scheduled.

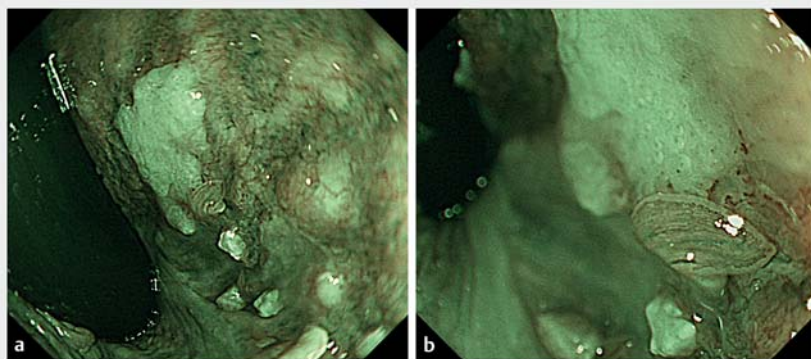
High grade squamous intraepithelial lesions are precancerous lesions which may progress to invasive cancer [1], and



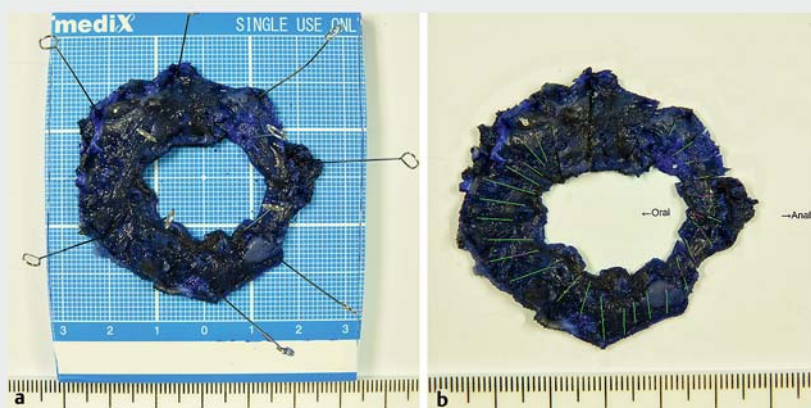
► **Video 1** Endoscopic submucosal dissection (ESD) of an anal squamous intraepithelial lesion with an indistinct border.



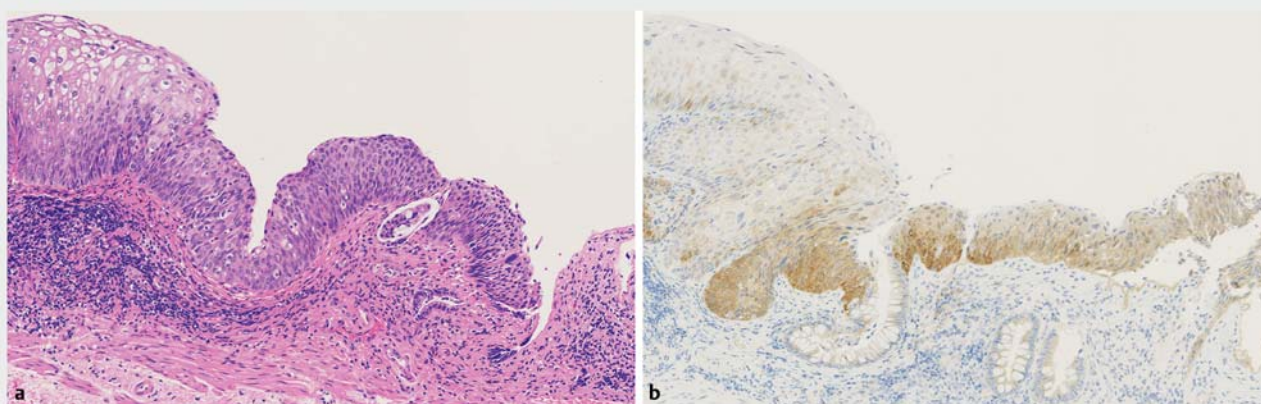
► **Fig. 1** Endoscopic images showing whitish nodules and elevated papillary lesions of various sizes in the anal transitional zone: **a** white light; **b** chromoendoscopy; **c** narrow-band imaging (NBI).



► **Fig. 2** **a, b** Narrow-band imaging (NBI) and zoom magnification did not show an abnormal vessel pattern such as intraepithelial papillary capillary loop (IPCL) microvessels.



► **Fig. 3** Histological examination of the resected specimen. **a** The specimen is donut-like, and the inner edge is the rectal side, the outer edge is the skin side. **b** Distribution of the lesions: green lines indicate low grade squamous intraepithelial lesion; pink lines indicate high grade squamous intraepithelial lesion.



► **Fig. 4** The border between the high and low grade squamous intraepithelial lesion. **a** Hematoxylin and eosin (H&E) stains, the elevated area on the left side is low grade squamous intraepithelial lesion and shows koilocytosis. In contrast, the area of high grade squamous intraepithelial lesion is rather flat. **b** Immunohistochemical staining for p16 shows a block-positive pattern in the area of high grade squamous intraepithelial lesion.

their management has not been established [2]. We have previously reported the efficacy of performing ESD on early anal canal cancer [3]. Chromoendoscopy and NBI with magnification are useful in delineating the margins of early anal canal cancer [4, 5]. However, it was difficult to delineate the margin even using both methods in this case. The recognition of high grade squamous intraepithelial lesions with indistinct borders, as in this case, is paramount in the prevention of advanced cancer.

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Competing interests

None

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