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Endoscopic submucosal resection of a rectal carcinoid tumor by cap aspiration - snare resection method

Rektal karsinoid tümörün aspirasyon-rezeksiyon yöntemi ile submukozal rezeksiyonu

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We report a 55-year-old man with a white plaque-like lesion 4 mm in diameter located in the rectum on colonoscopic examination. Biopsy specimens showed carcinoid tumor. Endoscopic submucosal resection (ESMR) of the lesion was successfully performed by using cap aspiration-snare resection method.

Key words: Rectum, carcinoid tumor, endoscopic submucosal resection

55 yaşındaki hastanın kolonoskopik incelemesinde, rektumda yerleşimli, 4 mm çapında, beyaz renkli, plak benzeri lezyon saptanmıştır. Lezyondan alınan biyopsi örnekleri karsinoid tümör tanısı koydurmuştur. Lezyonun, aspirasyon-rezeksiyon yöntemi ile endoskopik submukozal rezeksiyonu başarı ile gerçekleştirilmiştir.

Anahtar kelimeler: Rektum, karsinoid tümör, endoskopik submukozal rezeksiyon

INTRODUCTION

Rectal carcinoids represent approximately 1.3% of rectal tumors and 10% to 17% of all carcinoid tumors (1-3). The majority of rectal carcinoid tumors are small, 66% being less than 1 cm in diameter (4). Small lesions less than 1 cm can be treated by endoscopic resection or local excision (5, 6). However, complete resection of small carcinoids of the rectum by conventional endoscopic mucosal resection (EMR) or endoscopic polypectomy may not be possible because these tumors are generally located in the submucosal layer of the rectal wall (4, 7, 8). Endoscopic treatment for rectal carcinoids requires special techniques for deeper resection. There are few reports in the literature about endoscopic submucosal resection (ESMR) of small rectal carcinoids using different techniques (9-12). We report a case of small rectal carcinoid resected by cap aspiration-snare resection method using the transparent cap of the band ligation device; however, without ligation of the lesion.

CASE REPORT

A 55-year-old male was admitted to our hospital because of lower abdominal discomfort. Total colonoscopic examination demonstrated a white plaque-like lesion 4 mm in size, located in the rectum 7 cm from the anal verge. Biopsies were taken from the lesion and pathological examination showed carcinoid tumor. Endoscopic ultrasonography demonstrated that the carcinoid tumor was located within the submucosal layer. Abdominal ultrasonography did not show pathological lymph node enlargement or any metastatic lesion.

Repeat endoscopy was performed for ESMR of the lesion. For cap aspiration-snare resection method, the transparent cap of the band ligation device was affixed to the distal end of the colonoscope. The tip of the colonoscope was passed in through the widened snare, and the snare was tightly closed around the cap. During the procedure, 8 ml hypertonic saline-adrenaline solution was injected underneath the lesion to separate it from the underlying muscle layer. The elevated lesion was

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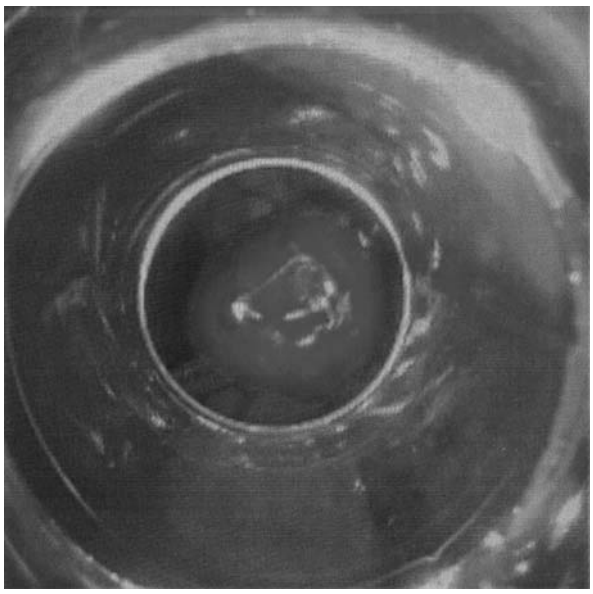

Figure 1. Rectal carcinoid tumor was suctioned by the transparent cap of the band ligation device and then grasped by snare

suctioned into the cap. Snare was slightly widened, pushed to the bottom of the aspirated lesion and then closed. Because the lesion could not be suctioned and grasped totally at the first attempt, the same procedure was repeated. At the second attempt, the lesion was grasped totally and resected electrosurgically (Figures 1, 2). Macroscopically, the lesion was located in the submucosal layer (Figure 3). The mass was white-yellowish, solid and 4 mm in diameter. Microscopically, the tumor was composed of small uniform cells, arranged in small nests and cords with an anastomosing ribbon-like pattern in the submucosal layer with clear resection margins (Figure 4). There were no atypical histopathologic features. Immunohistologically, the tumor cells were positive for neuron specific enolase (Figure 5).

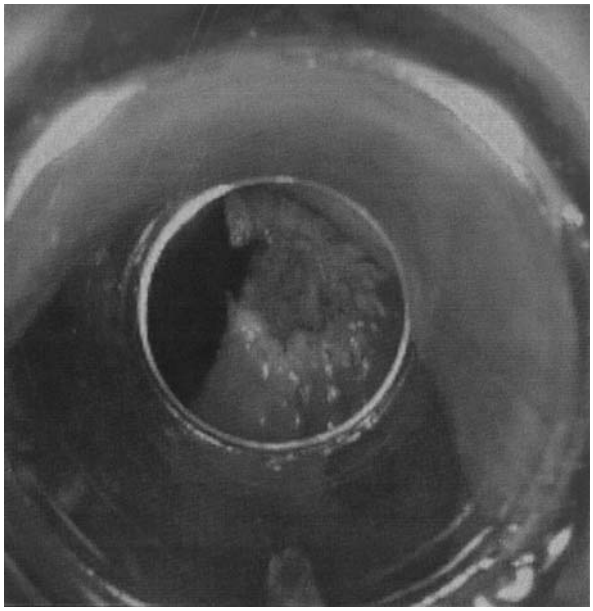

Figure 2. The site of the lesion after electrosurgical resection

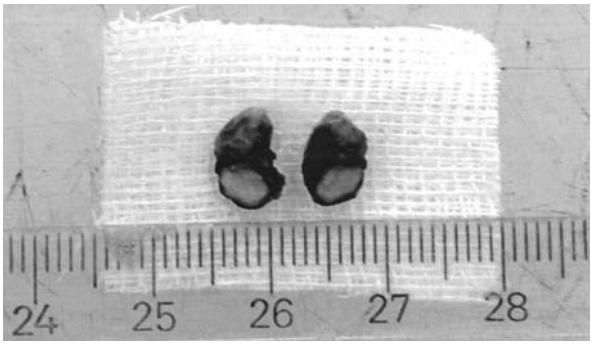

Figure 3. Macroscopically, the lesion was located in the submucosal layer

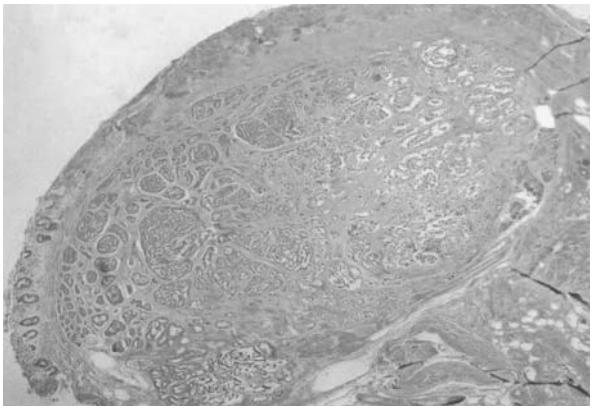

Figure 4. Microscopically, the lesion had a ribbon-like pattern with clear resection margins

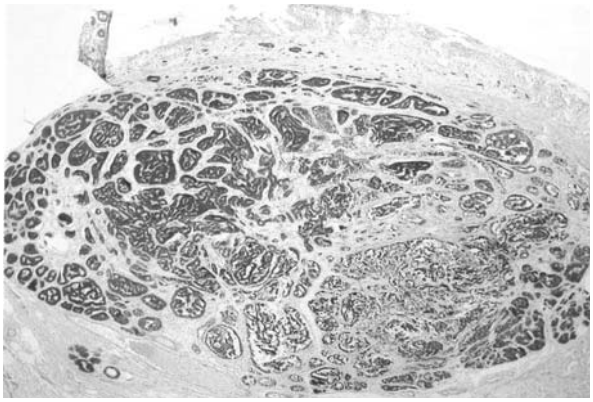

Figure 5. Tumor cells were positive for neuron specific enolase

DISCUSSION

Rectal carcinoid tumors are often small, less than 1 cm in diameter. The size of the lesion is important to predict its prognosis. Tumors less than 1 cm rarely metastasize and local treatment is considered as curative. However, rectal carcinoid tumors generally locate in submucosa and techniques such as conventional EMR and polypectomy may not be adequate to provide clear resection margins. Deeper resection is possible using aspiration and banding technique followed by snare resection. Ono et al. (11) demonstrated that endoscopic submucosal resection with a ligation device (ESMR-L) provides a deeper resection margin compared with conventional EMR and polypectomy for rectal carcinoid tumors. The comparative study of Kajiyama et al. (13) showed the superiority of aspiration technique to injection-lifting technique for gastrointestinal submucosal lesions. The disadvantage of band-snare resection method might be its irreversibility. However, in the aspiration method, it might be possible to loosen the snare and repeat the same procedure if the lesion can not be suctioned and/or grasped totally at the first attempt. In our patient, we used cap aspiration-snare resection method by using the transparent cap of the band ligation device, and achieved complete local resection of the lesion with clear resection margins.

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