

TREATMENT OF RECTAL CARCINOID TUMOR BY ENDOSCOPIC SUBMUCOZAL RESECTION WITH A LIGATION DEVICE; A CASE REPORT

REKTAL KARSİNOİD TÜMÖRÜN LİGASYON ALETLİ ENDOSKOPİK SUBMUKOZAL RESEKSİYON İLE TEDAVİSİ; BİR OLGU SUNUMU

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Abstract

Rectal carcinoid tumors smaller than 1 cm in diameter can be successfully treated by local excision, such as that using endoscop, because they infrequently metastasize. We report on a patient with rectal carcinoid tumour, who was treated successfully by endoscopic submucosal resection with a ligation device (ESMR-L). (Anatol J Clin Investig 2010;4(1):44-46).

Özet

Bir cm'den daha küçük rektal karsinoid tümörler endoskopi kullanarak lokal eksizyonla başarılı bir şekilde tedavi edilebilir, çünkü metatstazlar oldukça nadirdir. Biz bu makalede ligasyon aletli endoskopik submukozal rezeksiyonu ile başarılı bir şekilde tedavi edilen rektal karsinoid tümürlü bir hastayı sunduk. (Anatol J Clin Investig 2010;4(1):44-46).

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Seventy-four percent of all carcinoid tumors occur in the GI tract, although carcinoids of the rectum are uncommon lesions [1]. Only 16 cases were found in a series of more than 21,525 colonoscopies [2]. Approximately 50% of the patients with rectal carcinoids are asymptomatic [3,4]. Symptoms include bleeding, constipation, rectal pain and tenesmus. Carcinoid syndrome is virtually unknown with rectal carcinoids [5]. Therefore, rectal carcinoid tumors tend to be detected incidentally by digital examination, proctoscope or sigmoidoscopic examination as the distinctive yellow, submucosal appearance with very firm or hard, discrete, smooth and mobile feel [3,5]. Recent progress in colonoscopic examination has facilitated the diagnosis of many rectal carcinoid tumors at an early stage [6] Seventy-two percent of the rectal carcinoids are reported to be a localized disease [7]. Rectal carcinoid tumors smaller than 1 cm in diameter can be successfully treated by local excision, such as that using endoscop, because they infrequently metastasize [7,8]. We report on

a patient with rectal carcinoid tumour, who was treated successfully by endoscopic submucosal resection with a ligation device (ESMR-L).

Case

A 52 years old male was admitted to our hospital due to constipation. Physical examination and laboratory data including serum tumor markers and hormones such as urinary 5-hydroxyindoleacetic acid (5-HIAA) were normal.

Total colonoscopic examination demonstrated a polypoid lesion 4 mm in size, located in the rectum 12 cm from the anal verge. Biopsies were taken from the lesion and pathological examination showed carcinoid tumor. ESMR-L was carried out with a conventional single-channel endoscope (Pentax EC-3840) with attached band-ligator device. ESMR-L was performed as follows (Figur 1A, 1B, 1C) submucosal saline solution was injected beneath the tumor to elevate. The lesion was then aspirated into the ligator device, followed by deployment of the elastic band and snare resection was performed below the band by using blended electrosurgical current.. The resection specimen was then removed by foreign body forceps. Macroscopically, the lesion was located in the submucosal layer.. Microscopically, the tumor was composed of small uniform cells,

arranged in small nests and cords and with an anastomosing ribbon-like pattern in the submucosal layer. There were no atypical histopathologic features such as mitosis or nuclear atypism. Immunohistologically, the tumor cells were positive for neuron specific enolase (NSE) and chromogranin A, but were negative for p53 and Ki67. (Figure 1D)

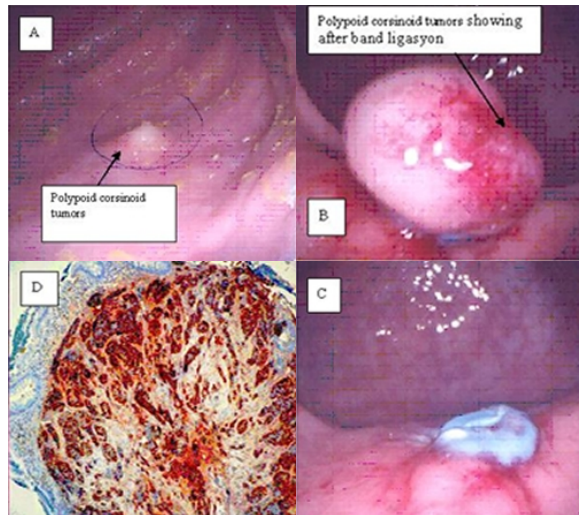


Figure 1 A. Endoscopic view of polypoid rectal carcinoid tumor. B. Band-ligation of polypoid rectal carcinoid tumor showing a 8 mm carcinoid polypoid tumors protruding from surrounding mound of benign banded tissue. C. Endoscopic view of mucosectomy site after resection of polypoid carcinoid tumor. D. Tumor cells were positive for chromogranin A.

Discussion

Gastrointestinal carcinoid is regarded as a tumor arising from subepithelial neuroendocrine cells or the totipotential crypt cells in the deep mucosa, usually presenting as a submucosal tumor. In a study, rectal carcinoid tumors represented 55% of primary GI carcinoid tumors [9]. Carcinoid tumors of the rectum usually occur singly and almost all of these tumors are situated between 4 and 13 cm above the dentate line [3-5]. The majority of rectal carcinoid tumors is small, 66% being less than 1 cm in diameter [4]. The size of carcinoid has been accepted as an important factor predicting its prognosis and metastases. The incidence of metastases for rectal carcinoid tumors 1 cm or smaller is low, ranging from 0% to 5.5% [4,10]. Tumors greater than or equal to 2.0 cm have 60–80% incidence of metastasis, tumors measuring from 1.0 to 1.9 cm have a 10–15% incidence of metastasis [11]. When the tumor is smaller than 1 cm, the risk of metastatic disease is extremely low, and local treatment is

considered curative. Recently, endoscopic treatment has been applied for gastrointestinal tumors including carcinoids. There are few reports in the literature about endoscopic submucosal resection (ESMR) of small rectal carcinoids using different techniques

Various endoscopic resection procedures, such as endoscopic polypectomy, strip biopsy and different endoscopic submucosal resection techniques (aspiration resection, band-snare resection, endoscopic submucosal resection with a ligation device and endosonography probe-guided band ligation) have been described as effective treatments for early rectal carcinoid tumors [12-17].

Conventional endoscopic mucosal resection (EMR) and polypectomy may not provide adequate resection margins, because rectal carcinoid tumors are submucosal lesions, with only a portion of the tumor projecting above the plane of the mucosal surface. When small rectal carcinoids are treated by standard polypectomy, there is a high incidence of residual tumor or tumor near the resection margin and half of patients who underwent polypectomy required additional surgical intervention [2,18,19]. For submucosal lesions, such as rectal carcinoid tumors, endoscopic treatment requires special techniques for deeper resection to achieve clear margins. Deeper resection is possible using aspiration and banding technique followed by snare resection. This can be done by lifting the lesion, either with submucosal injection of saline solution as in conventional EMR or by aspiration and banding as in ESMR-L, followed by snare resection. Ono et al. [18] 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 and has not been determined perforation or significant bleeding encountered in the patients. In this study not observed recurrence of any carcinoid tumor after ESMR-L at a median follow-up of 10.5 months.

ESMR-L provides a significantly deeper vertical resection margin and, theoretically, a higher rate of curative resection. In our patient, we used cap endoscopic submucosal resection with a ligation device, and achieved complete local resection of the lesion with clear resection margins.

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