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Endoscopic Submucosal Dissection (ESD) of Recurrent Tubulovillous Adenoma Twice after Trans-anal Endoscopic Microsurgery (TEMS)

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Abstract

Endoscopic Submucosal Dissection (ESD) has been recently evolved as an ideal method for endoscopic resection of premalignant and early malignant colorectal lesions. ESD is preferred in large, recurrent lesions and lesions with submucosal fibrosis. It provides better en bloc resection, R0 and lower recurrence rates. In addition, higher perforation rates and an increased length of the procedure time have been also observed. Trans-anal Endoscopic Microsurgery (TEMS) is a minimally invasive surgery that proved superiority over traditional surgical techniques in resection rectal lesions even enabling full thickness resection of the rectal wall. Here we present a patient with tubulovillous adenoma with low grade of dysplasia that is recurrent twice after TEMS. We proceeded for ESD after surgery and the follow up of the patient there was no recurrence.

Introduction

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> Received Date: 06 Sep 2019 Accepted Date: 20 Sep 2019 Published Date: 25 Sep 2019

Citation:

Elkholy S, Essam K, El-Sherbiny M. Endoscopic Submucosal Dissection (ESD) of Recurrent Tubulovillous Adenoma Twice after Trans-anal Endoscopic Microsurgery (TEMS). Ann Clin Case Rep. 2019; 4: 1724. ISSN: 2474-1655

Copyright © 2019 Shaimaa Elkholy. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. Endoscopic Submucosal Dissection (ESD) has been recently evolved as an ideal method for endoscopic resection of premalignant and early malignant colorectal lesions [1]. ESD is preferred in large, recurrent lesions and lesions with submucosal fibrosis. It provides better en bloc resection, R0 and lower recurrence rates. In addition, higher perforation rates and an increased length of the procedure time have been also observed [2]. Trans-anal Endoscopic Microsurgery (TEMS) is a minimally invasive surgery that proved superiority over traditional surgical techniques in resection rectal lesions even enabling full thickness resection of the rectal wall [3]. However; it's not clearly mentioned in the guideline which is the preferable method. Besides there are only few retrospective analyses comparing both techniques with no significant superiority of either of them?

Case Presentation

A 42-year-old male patient, who had a history of bleeding per rectum that started 2 years ago. The patient was referred for colonoscopy where he was diagnosed to have a lesion about 5 cm \times 4 cm that was occupying the distal part of the rectum and the proximal part of the anal canal. Biopsies revealed tubulovillous adenoma with high grade of dysplasia. The patient was referred for surgical resection through TEMS. Three months later the patient started to develop bleeding per rectum again. Colonoscopy revealed recurrence of the lesion at the same site with nearly the same size. Then the patient underwent a second attempt of surgical resection through TEMS. One year later the patients started to develop the same bleeding again and another colonoscopy revealed recurrence of the lesion for the second time. The patient was referred to our endoscopy unit for endoscopic resection. After discussing the endoscopic resection with the patient explaining the possibility of failure due to the expected fibrosis and the possibility of perforation; he chose to proceed for ESD.

The procedure was done under general anesthesia, using therapeutic Endoscope (GIF; H190, Olympus, Tokyo, Japan) with working channel of 3.7 mm. A hybrid knife T-type connected to a VIO D 300 electrosurgical unit was used (Erbe Elektromedizin GmbH, Tubingen, Germany) with settings of Endo cut Q (duration 3, effect 3) and forced coagulation (effect 3, 50 watt). The step of classic ESD was performed as shown in Figure 1. First by marking the lesion, then by making a circular incision with few millimeters' safety margin. Then injecting saline mixed with methylene blue in the submucosal space was done. Due to the extensive mucosal fibrosis the lifting was very difficult. But dissection with the hybrid knife enabled continuous injection during dissection added to the cap used from Olympus that could help in separating the lesion from the muscle. Few muscle injuries were encountered during the procedure and they were all closed using resolution clip



(Figure 1A).

Two months follow up after resect the lesion was done showing no residual tissues (Figure1B). Then biopsies were taken from the bed of the lesion and they showed granulation tissues.

Discussion

The European Society of Gastrointestinal Endoscopy (ESGE) guideline states that ESD can be considered for removal of colorectal lesions with high suspicion of limited submucosal invasion, particularly for those greater than 20 mm, or those that otherwise cannot optimally and radically be removed by snare-based techniques [4]. The Japan Gastroenterological Endoscopy Society guideline recommends colorectal ESD for lesions for which en bloc resection with snare based EMR would be difficult, for mucosal tumors with submucosal fibrosis, for locally residual or recurrent early carcinomas, and for sporadic lesions in conditions of chronic inflammation [5]. Head to head comparatives studies (ESD vs. TEMS) are very few and only retrospective studies [1,6]. However; they reported no difference in terms of R0 resection and recurrence rate. Lack of head to head prospective randomized trials still did not prioritize TEMS or ESD for flat rectal lesions. However, ESD is a rising technique that had been globally spreading in the last decades [7] and in this case it's obvious that it can be used in resect lesions where TEMS failed twice to resect.

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