

A Young Woman with Rectal Bleeding

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Abstract : Rectal cancer is a common malignancy in Thailand. A case of 39-year-old female with rectal bleeding caused by adenocarcinoma of rectum is reported here. Successful treatment was achieved by preoperative chemoradiation therapy and low anterior resection. She is now symptom free and has good sphincter control. The history, physical examination, investigations, diagnosis and treatment are discussed.

เรื่องย่อ : ผู้ป่วยหญิงอายุน้อยที่มีเลือดออกทางทวารหนัก
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มะเร็งทวารหนักเป็นมะเร็งที่พบบ่อยในประเทศไทย ผู้ป่วยหญิงอายุ 39 ปีที่รายงานนี้มีอาการเลือดออกทางทวารหนักจากมะเร็งอะดีโนคาร์ซิโนมาของทวารหนัก ได้รับการรักษาโดยการฉายรังสีก่อนตามด้วยการผ่าตัด ขณะนี้ผู้ป่วยไม่มีอาการแล้ว และมีชีวิตอยู่ด้วยหน้าที่ของอวัยวะที่ปกติ สำหรับประวัติ การตรวจสืบค้นสาเหตุ การวินิจฉัยและการรักษาจะได้กล่าวต่อไป

INTRODUCTION

Rectal cancer is a common malignancy in Thailand. Surgical resection and radiation therapy (RT) are used to improve the outcome and quality of life of patients with this disease. RT can play an important role in the treatment of patients with low-

lying but clinically favorable tumor who may be suitable candidates for sphincter-preserving surgery. We reported a young female patient who underwent preoperative chemoradiation therapy and surgery without morbidity from treatment.

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CASE REPORT

A 39-year-old woman presented with a 2-month history of passing bloody stool with mucus. Physical examination revealed a circumferential mass located on posterior wall of rectum with partial obstruction at posterior wall of rectum. Complete blood count and blood chemistry test were within normal limits. Carcinoembryonic antigen was 5.3 ng/

ml. Double contrast barium enema showed circumferential narrowing with mucosal irregularity in the wall of rectum, 6 cm above the anal verge representing a mucosal carcinoma (Figure 1, 2). On endoscopic examination, ulceroproliferative mass lying in the posterior 2/3 of rectum 7 to 11 cm from the anal verge was seen.



Figure 1, 2. Double contrast barium enema showing circumferential narrowing with mucosal irregularity of the rectal wall, 6 cm above the anal verge representing a mucosal carcinoma.

Computed tomography (CT) of whole abdomen revealed mucosal wall thickening in an opacified rectum with soft tissue strandings into the perirectal fat plane (Figure 3). A chest film was negative for pulmonary metastases. The patient was diagnosed with a moderately-differentiated adenocarcinoma of rectum. The clinical stage of this patient was T3N1M0 according to TNM classification.

The patient was treated by preoperative radiation with 2-opposing anteroposterior pelvic field with a total dose of 4,500 cGy (180 cGy/fraction, 5 fraction/week) given concurrently with Capecitabine 1,800 mg/m² per day.

After preoperative chemoradiation therapy was completed, transrectal ultrasound (TRUS) examination was done. The tumor is seen as hypoechoic mass invading the perirectal tissue with an enlarged lymph node (Figure 4).

A month after treatment was completed, a CT scan showed mass at the rectosigmoid obliterating the surrounding fat plane. A low anterior resection was performed 6 weeks after completing radiation therapy. The operative findings showed an ulceroproliferative mass 3 cm in size on the posterior wall of rectum, 6 cm from the anal verge. The pathological report showed rectal mass sized 1.3*1.2*2 cm with transmural invasion into subserosa with 1 out of 7 lymph nodes involved. The resected margin was disease free. Therefore, the pathological staging was T3N1M0 or B2 according to Astler-Coller's modified Dukes' classification. No surgical complication were seen. She also received adjuvant chemotherapy (5FU plus Leucovorin). She is currently well and has been scheduled to attend follow-up clinic at 1-month interval.

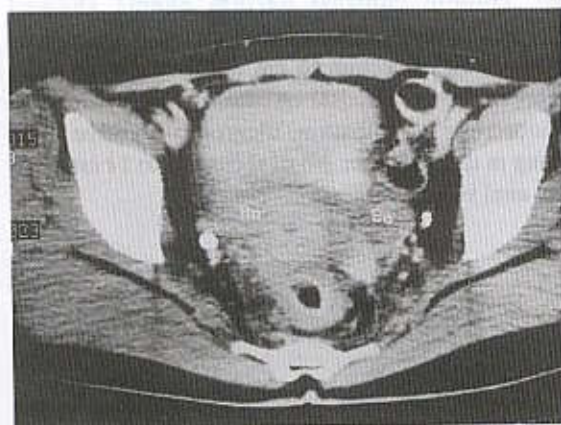


Figure 3. Computed tomography (CT) of whole abdomen revealed mucosal wall thickening in an opacified rectum with soft tissue stranding into the perirectal fat plane.

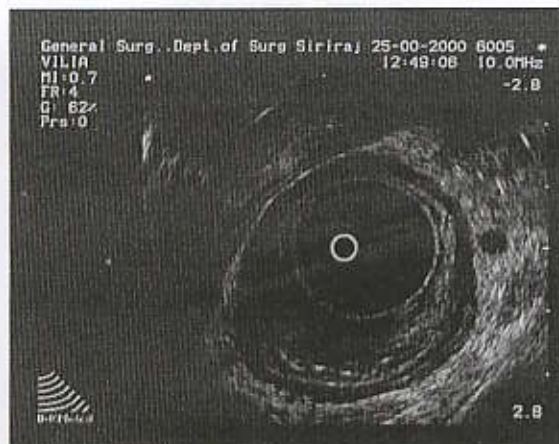


Figure 4. Transrectal ultrasound showing hypoechoic mass invading perirectal tissue with an enlarged lymph node.

DISCUSSION

The diagnosis of rectal cancer is based on history, physical examination and imaging studies. At present, staging for rectal cancer is according to TNM classification using depth of tumor invasion into the rectal wall, extension to adjacent structure, number of regional lymph node involved and the presence or absence of distant metastases. Surgery is the mainstay of treatment for rectal cancer, preoperative staging is crucial in determining treatment.

TRUS gives the best accuracy for preoperative T and N staging of the tumor when compared to other imaging modalities, including CT scan. The accuracy rate of TRUS in determining wall invasion and regional lymph node involvement has been reported to be 81-91% and 58-83% respectively¹.

Surgical techniques for rectal cancer range from local excision to radical operation such as low anterior resection (LAR) and abdominoperineal resection (APR). There has been a gradual evolution of surgical management based on the concept that a more complete resection of perirectal soft tissue lead to lower local recurrence rate and improved survival.

In spite of improved surgical technique, local recurrence with and without distant metastasis

is still a significant problem after curative resection. High risk factors for locoregional recurrence include tumor invading through bowel wall and involved regional lymph nodes. Several randomized studies have been reported that RT decreased loco-regional recurrence after curative surgery and improved survival.^{2,3} RT can be delivered by either postoperative or preoperative methods with different advantages. Preoperative RT with or without chemotherapy is used to down stage extensive tumor to be suitable for resection. It also decreases complications of RT comparing to that of postoperative RT.

In addition to curative aim for disease, organ-preserving therapy have gained more accepted in several cancers at present including rectal cancer. For clinically resectable distal tumor, sphincter-preserving surgery combining with preoperative RT can be used in the patient with tumor invading to muscularis propria or with involved lymph nodes as an alternative to APR. For RT technique, conventional dose 4,500-5,040 cGy at 180 cGy/ fraction are recommended to allow for recovery from acute radiation side effects and enhance tumor downstaging. Surgery should be performed within 4-6 weeks after complete RT. Combined chemotherapy

to RT is suggested in disease with T3 based on extrapolation significantly improved local control and survival in T3, N1-3 disease. For chemotherapy regimen, phase I/II trials are in progress to compare the effectiveness of new agents to that of 5FU-based regimen. This study showed an example of patient with rectal cancer treated for this purpose.

Seven prospective studies have reported results of preoperative RT with or without chemotherapy in patients with resectable rectal cancer who were declared to need APR. Five of these showed that approximately 75% of patients are able to undergo sphincter preserving surgery. Local failure varied from 0 to 17% and survival ranged from 100% at 2 year to 72% at 5 year. Most of the patients had good to excellent functional results⁴⁻¹⁰.

In conclusion, RT is the standard adjuvant treatment in high-risk patients with rectal cancer. The results of preoperative RT with chemotherapy on

improvement of both local control and survival rate are awaited.

COMMENT

This case report is a good example of the collaboration of different modes of treatment with good results for the patient. The preoperative chemoradiation therapy limited the growth and invasion of the tumor using TRUS at the diagnostic tools (with the use of 3-dimensional scan and virtual endoscopy so that the lesion can be visualized similarly to that seen by rectosigmoidoscope) and a tissue diagnosis is obtained from the pathologist. The lesion can be resected safely with a low anterior resection that used a new instrument for end to end anastomosis with a stapling gun in performing an end to end anastomosis and preserving the anal sphincter so that a colostomy is not needed.

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