

# Carcinoma of the Rectum with a Single Penile Metastasis

B K T Tan, D C N K Nyam, Y H Ho

## ABSTRACT

**Metastatic disease of colon and rectal carcinoma accounts for a high proportion of cancer related deaths. The common organs involved in metastatic diseases include liver, lung, brain and bone. Although, theoretically possible, metastasis to the other organs are rare. We report the first case of carcinoma of the rectum with a solitary metastasis to the glans penis.**

**Keywords:** adenocarcinoma, rectum, penile, metastasis

*Singapore Med J 2002 Vol 43(1):039-040*

## INTRODUCTION

Metastatic disease of colon and rectal carcinoma account for a high proportion of cancer related deaths. The common organs involved in metastatic diseases include liver, lung, brain and bone<sup>(1)</sup>. Although, theoretically possible, metastasis to the other organs are rare.

There has been no reports of carcinoma of the rectum metastasizing to the penis in the English literature. We report the first case of carcinoma of the rectum with a solitary metastasis to the glans penis.

## CASE REPORT

A 53-year-old man presented with a four months' history of change of bowel habits associated with significant loss of appetite and weight. In addition, he had an asymptomatic painless penile ulcer which appeared a week prior to admission. There was no discharge per urethra and no history of high risk sexual exposure.

Per rectal examination revealed a circumferential ulcerative tumour 4 cm from the anal verge. The tumour was fixed laterally and was invading the anal sphincters. There was a 1 cm non-tender indurated ulcer on the dorsum of the glans penis. No inguinal lymph nodes were palpable.

Sigmoidoscopic biopsies of the tumour confirmed an adenocarcinoma. The serum CEA levels was raised to 656 ug/L. CT scan of the abdomen and chest X-ray showed no signs of distant metastasis. Swabs taken

from the penile ulcer for Gram-stain, acid fast bacilli were negative. Specimens taken for cultures did not grow any organisms. Serological studies for VDRL, TPHA and HIV were non-reactive.

At surgery, a large locally advanced carcinoma of the rectum with multiple metastatic nodules was found in the pelvis. The tumour had perforated the rectum and invaded the lateral pelvic walls as well as the pelvic floor necessitating an abdominoperineal resection. The ulcer at the dorsum of the glans penis was biopsied. Histology revealed a moderately differentiated adenocarcinoma invading into the peri-rectal fat with perineural and vascular invasion. All the 37 lymph nodes along the pericolic and lymphovascular pedicle in the resected specimen were involved with metastatic disease. Histology from the penile ulcer showed a metastatic adenocarcinoma.

## DISCUSSION

Dissemination of rectal carcinoma along the lymphatic system usually involves the paracolic lymph nodes early and with cephalic spread along the perivascular lymph nodes<sup>(2-5)</sup> to glands which accompany the superior rectal and inferior mesenteric vessels. Caudal spread and lateral spread were rare<sup>(6-8)</sup>. It is postulated that caudal spread occurs when the glands along the superior rectal vessels are obstructed by metastatic disease causing retrograde spread to the subcutaneous lymphatics in the groin.

Haematogenous dissemination most commonly affects the liver, followed by lung and less frequently bone and brain. This patient did have extensive lymph node disease in the abdomen which may have caused retrograde dissemination caudally to the perineum and inguinal region. However, there was no inguinal lymphadenopathy. Hematogenous spread may therefore be a more plausible explanation for the metastatic deposit on the glans penis in this patient. In addition, a CEA titre of 656 ug/L is highly suggestive of micrometastatic deposits in this patient.

The treatment of the patient posed a dilemma. There are two options for this clinical scenario. If it is believed that the lesion in the glans is the only deposit

Department of  
Colorectal Surgery  
and Department of  
Pathology  
Singapore General  
Hospital  
Outram Road  
Singapore 169608

B K T Tan,  
MBBS, MRCS,  
MMed (Surgery)  
Registrar

D C N K Nyam,  
MBBS, FRCS,  
MMed (Surgery)  
Consultant

Y H Ho, MBBS, FRCS,  
FRACS  
Senior Consultant

Correspondence to:  
Dr Denis C N K Nyam  
Tel: (65) 321 4677  
Fax: (65) 226 2009

of tumour left, then an aggressive approach would be the option of choice. However, although excision of solitary metastasis in the liver and lung has been shown to improve survival, the patient was unwilling to accept the cosmetic results of a similar approach. In addition, the presence of poor prognostic features like the poor grade and extensive abdominal disease both locally and in the lymph nodes prompted us to treat the penile ulcer with radiotherapy along with palliative systemic chemotherapy. The penile ulcer regressed partially and was asymptomatic with the radiotherapy and chemotherapy.

## REFERENCES

1. Galandiuk S, Wieand HS, Moertel CG, et al. Patterns of recurrence after curative resection of carcinoma of the colon and rectum. *Surg Gynecol Obstet* 1992; 174:27-32.
2. Dukes CE. The spread of cancer of the rectum. *Br J Surg* 1930; 17:643-648.
3. Westhues H. Uber Die Entstehung and Vermeidung des localen Rektumkarzinom Rezidius. *Arch Klim Chir* 1930; 161:582.
4. Wood WQ, Wilkie DPD. Carcinoma of rectum on anatomic pathological study. *Edin Med J* 1933; 40:321-43.
5. Gabriel WB, Dukes C & Bussey HJR. Lymphatic spread in cancer of the rectum. *Br Surg* 1935; 23:395.
6. Glover RP, Waugh JM. Retrograde lymphatic spread of carcinoma of the rectosigmoid region: its influence on surgical procedures. *Surg Gynecol Obstet* 1945; 80:434.
7. Goligher JC, Dukes CE & Bussey HJR. Local recurrences after sphincter saving excision for carcinoma of the rectum and rectosigmoid. *Br J Surg* 1951; 39:199.
8. Williams NS, Dixon MF, Johnston D. Re-appraisal of the 5 cm rule of distal intramural spread and of patients' survival. *Br J Surg* 1983; 70:150-4.