

CASE REPORT

Penile metastasis of rectal cancer: case report

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Received: October 10, 2015

Accepted: November 23, 2015

Online Published: December 4, 2015

DOI: 10.5430/crcp.v3n1p35

URL: <http://dx.doi.org/10.5430/crcp.v3n1p35>

ABSTRACT

Genitourinary and colon tumors which constitutes frequent sources to metastatic tumors of the penis, are relatively more common tumors in the society. Though its rich vascularization, metastatic tumor of the penis is very rare. This can be considered to be a gladsome situation in terms of hopeless survey of metastatic penile tumors. The main goal of treatment is to improve the comfort and quality of life in selected patients while it may not contribute to surveillance.

Key Words: Penile neoplasms, Metastasis, Colon cancer

1. INTRODUCTION

Penile cancers are mostly squamous cell carcinoma, with the incidence rate of 1-2 / 100,000 or less in Europe and the United States, varying due to geographic and cultural features.^[1-3] Primary tumors metastating to penis frequently originates from pelvic urogenital organs, but rarely from rectum and sigmoid. There are about 300 cases of metastatic penile cancer in the literature,^[4] and about 50 of them originated from rectum or sigmoid colon.^[4-8] In this study, we aimed to present our case with penil metastasis of colon cancer.

2. CASE REPORT

The patient, a 74-year-old male, underwent mesorectal excision and colostomy due to approximately 5 cm rectum cancer about 8 months ago. The patient pathology was reported as adenocarcinoma including satellite tumor nodules with mucinous components showing moderate differentiation and no tumor was detected in regional lymph nodes (T3N1cM1b) . The patient received FOLFIRI (fluorouracil, calcium folinat, irinotecan) chemotherapy in metastatic setting by oncology

clinic in the postoperative period and follow up still continues by general surgery and oncology clinics. The admitted patient was observed to have had a painless penile swelling for about 2 months. In physical examination, a solid and fixed mass about 2 cm in dimensions was palpated in the median - left lateral of penis shaft. Symptom Score of Erectile Function was 16, urine output was normal and in penile ultrasound and magnetic resonance (MR) imaging, about 10 mm × 7 mm mass was detected in the left corpus cavernosum of the penis (see Figure 1 A-B). Besides, abdominal MR reported multiple lesions in the liver (5 cm, the largest one) compatible with multiple metastases lymphadenopathies, 15 mm × 11 mm and 18 mm × 19 mm was also reported in the left and right iliac regions, respectively. ECOG score was 0 while serum PSA was 0.6 and CEA was 14.3. Finally, we performed penile mass excision and right cavernosal plication to reduce the possibility of penile curvature (see Figure 1 C-D). Pathology report was consistent with metastasis of adenocarcinoma. Penile deviation was not detected in the postoperative controls and the patient declared that there is no pain in erection.

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Figure 1. A-B: MRI images of the mass in the left corpus cavernosum; C-D: The mass before and after excision.

3. DISCUSSION

Despite its affluent vascularization, metastatic tumors of the penis are rare and usually originate from the genitourinary system with the rates of 29.8% from prostate, 34.7% from bladder, 6.5% from kidney while 15.7% from rectum and sigmoid colon.^[4] On the other hand there are so many papers in the literature about penile metastases originating from lung, ureter, bone, airway, upper gastrointestinal tract.^[5] Primary penile cancers are frequent in the late decades of life.^[5] Low socio-economic condition, cigarette smoking, phimosis and chronic penile inflammation, bad or deficiency of penile hygiene, human papilloma virus (HPV) infection and/or multiple sexual partners, and infection by acquired immune deficiency syndrome (AIDS) are the factors associated with increased risk of primary penile cancer.^[5] Squamous cell carcinoma is the most common type of primary penile cancers. Verrucous carcinoma, condylomatous warty, papillary and basaloid carcinomas are the other frequent subtypes. Other

epithelial cancers include basal cell and transitional cell carcinomas caused by the urethra. Adenocarcinoma, melanoma and Kaposi sarcomas are also the infrequent histological types.^[5]

Including lymphatic spread, arterial embolization and directly local spread, the most common metastatic pathway is through retrograde venous spread.^[6] The most common course of tumor spread is through veins, lymphatics and by direct extension are noticed in the primary malignancy in the pelvic organs and tumor, which spread through prostatic nerves has also been reported.^[7] Other primary malignancies, such as lung or kidney cancer, or hematologic disease, usually spread through the arterial route.^[5] The involvement of corpus cavernosum is mostly common while it is rare in corpus spongiosum and glans penis.^[4,9] In our case, its involvement was in cavernous bodies.

In patients with metastatic penile tumor, clinical symptoms

include malignant priapism (the most frequent symptom), corporal mass, cutaneous nodules, voiding dysfunction, urinary retention, ulceration, perineal pain and swelling.^[4] It is reported that occlusion of the draining veins or secondary to thrombosis in the cavernosal spaces grounded on the infiltrating tumour cells could cause priapism.^[10] It is a common feature in most of the patients with hematologic secondary malignancy.^[11] It was observed that pain is not one of the prominent symptoms in most patients, and when present,

it is partly in the penis and partly in the perineum.^[12] Obstructive voiding symptoms and hematuria are very rarely reported.^[10] Our patient admitted into our clinic because of painless swelling of the penis and urine output was normal. Metastatic tumors are seen simultaneous with primary tumors in 20% of the patients, while they are observed for 2 years after the diagnosis of primary tumor in 50%.^[13] In our case, metastatic tumor was detected 6 months after the diagnosis of primary tumor.

Table 1. Differential diagnosis of metastatic penile lesions

| Category | Related diseases |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-malignant and malignant lesions | squamous cell carcinoma, verrucous carcinoma, bowen's disease, erythroplasia of querat, basal cell carcinoma, melanoma, sarcoma |
| Infectious diseases | tuberculosis, chancroid, syphilitic chancre, cryptococcal infection, rhinosporidiosis, filariasis, candidiasis, cavernositis |
| Benign diseases | non-tumorous priapism, peyronnie's disease, factitious ulcerations (self induced), pseudo tumours (secondary to foreign bodies or injections into penis) |

In the differential diagnosis benign and malign lesions of penis, infective-inflammatory diseases should be kept in mind (see Table 1).^[10] The presence of malignancy history of the patient consulted for the penile lesions could give a hint about the mass.^[14] We first thought that the metastases of the rectum adenocarcinoma to the penis because of the malignancy history. Hence, diagnosis and treatment are planned by this way. In the literature, general opinion is to perform biopsy for the diagnosis of secondary tumor of the penis^[6,13,15] while some authors reported that it is not necessary.^[16] Doppler ultrasonography, MRI, CT cavernosography and fine needle aspiration are recommended while histopathological evaluation is necessary for differential diagnosis.^[13,17]

The treatment plan of penile metastatic tumors primarily consists of the treatment of primary disease and palliation,

and may also vary according to the stage of disease and the patient's performance status.^[18] While treatment options include local excision, penectomy, radiotherapy and chemotherapy, it is not expected for a brilliant survey due to the disseminated metastatic disease in most patients.^[18] We preferred locally excision for metastasectomy. In our patient, there were lesions suggestive of metastases in the liver and intra-abdominal lymphadenopathies, and follow-up still continues by General Surgery and Oncology clinics.

4. CONCLUSION

It is a reality that early recognition and treatment of penile metastatic tumors will not provide contribution to surveillance. However, we believe that it is important at that point to increase protection comfort as well as the the quality of life in appropriate patients.

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