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Case Report

Adenocarcinoma of Urethra Presenting Metastasis to Eyes: a Case Report

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Abstract

Introduction: Primary urethral carcinoma is extremely rare, accounting for less than 1% of all female genitourinary tract cancers. To the best of our knowledge, this patient is the first reported case of primary urethral carcinoma presenting metastasis to eyes. The diagnosis of metastasis involving the choroids should be suspected in patient with history of carcinoma and a decreased visual acuity or any other visual symptom. **Case presentation**: A 43-year-old woman underwent a total hysterectomy, cystectomy and bilateral pelvic lymphadenectomy due a primary adenocarcinoma of the proximal urethra. Adjuvant pelvic radiotherapy and six cycles of chemotherapy using cisplatin were performed. The patient made follow-up with no evidence of oncologic disease. However, nine months later, the patient reported visual alterations. Ophthalmoloscopic examination showed choroid lesions in both eyes that were compatible with metastatic choroids tumor and nuclear magnetic resonance suggested bilateral retinal metastasis and left meningioma parasagittal inparietal region. She was undergoing a new paliative chemotherapy, but the disease developed and there were metastasis to bone four months later. The patient died fourteen months after the surgery.

Keywords: Urethra. Neoplasm Metastasis. Adenocarcinoma. Eyes.

Introduction

Primary urethral carcinoma is extremely rare and occurs more commonly in women accounting for less than 1% of all female genito urinary tract cancers.[1] Most of these tumors arise from squamous or transitional cells and only 10% are adenocarcinomas.[2]

The clinical stage and the location of the lesion determine clinical management. Tumors placed at distal urethra may be diagnosed when relatively small because of their tendency to cause bleeding, presenting cure rates in the range of 70% to 90%. Proximal urethral tumors may become large before symptoms occur. Small lesions in the distal urethra are treated with surgery or radiotherapy. Larger lesions need combinations of extensive surgery, radiotherapy and chemotherapy.[1,3-6] However, due its rarity, there is no large scale experience on which to base treatment recommendations. The majority of the studies represent single case reports and reviews of the literature.[2]

Most tumors associated with regional lymph node metastases or distant metastases are incurable.[5] The main sites of distant metastases are the lungs, liver, bone and brains.[1] To the best of our knowledge, this patient is the first reported case of primary urethral carcinoma presenting metastasis to eyes.

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Case Presentation

A 43-year-old woman presented with urinary incontinence and subsequently developed urinary retention. Biopsy of ulcerated lesion in proximal urethra revealed adenocarcinoma. She underwent a total hysterectomy, cystectomy and bilateral pelvic lymphadenectomy. The urinary tract reconstruction was perfomed by bilateral cutaneous ureteroenterostomy technique (Bricker surgery). The tumor was measured 2,0 x 2,0 x 2,0 cm in size. Histopatological study showed vascular, lymphatic and perineural invasion. Vaginal cuff presented compromised margins and two of twenty four dissected lymph nodes presented metastasis. The immunohistochemical showed expression of Cytokeratin 7 (CK 7), suggesting adenocarcinoma moderately differentiated. Adjuvant pelvic radiotherapy and six cycles of chemotherapy using cisplatin were performed.

The patient made follow-up with no evidence of oncologic disease. However, nine months later, the patient reported visual alterations. Ophthalmoloscopic examination showed choroid lesions in both eyes that were compatible with metastatic choroids tumor (Figure 1). Nuclear magnetic resonance suggested bilateral retinal metastasis and left meningioma parasagittal in parietal region. The patient presented visual acuity quite decreased and she was undergoing a new paliative chemotherapy cycle (gemcitabine and cisplatin). There was not successful response. The disease developed and there were metastasis to skull, hip, rips and sternum four months later. Paliative radiotherapy was performed, but the patient died one month later.

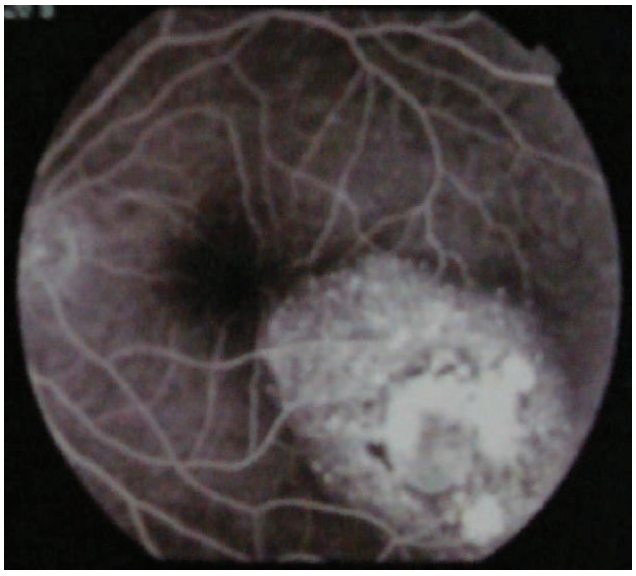

Figure 1- Retinography demonstrates metastases involving the choroids

Discussion

Despite the fact that the male urethra is longer and more complex, primary carcinoma is the only shared urinary tract malignancy more prevalent in women. The disease often appears to be associated with chronic irritation, urinary tract infections and urethral diverticula and the age at diagnosis is primarily between 50 and 79 years.[7-8] According to some series of cases (Table 1), the commonest presenting symptoms are hematuria, irritation, dysuria, urinary retention and urethral incontinence.[1-2,4-5,7,9]

Distant urethral carcinoma metastasis is a very rare event. However, 30% to 50% of these patients ultimately die of distant metastasis in the lungs, liver, bone and brain.[1,9-11] We did not find any report case of urethral carcinoma metastatic to eyes in the literature. Physical examination, chest x-ray, bone scan, liver scan and computed tomography are used to identify distant metastases. Regional lymph node involvement is most

Table 1- Clinical symptoms and findings at presentation of women with primary urethral carcinoma in series of cases.

Reference	n	Symptoms
Meis et al.[2]	22	Bleeding/hematuria (45%), obstruction (41%) frequency of urination (18%), dysuria (14%), incontinence (14%)
Mayer et al.[5]	21	Hematuria (48%) irritative voiding symptoms (33%) urinary retention (33%) dysuria (24%) urethral bleeding (10%), perineal pain (10%)
Ali et al.[7]	14	Bleeding (85%) urinary frequency (56%) pain (42%) dysuria (35%) urinary incontinence (28%)
Grigsby.[4]	44	Bleeding (61%) obstructive symptoms (32%) dysuria (30%) pelvic pain (11%) urinary tract infection (5%)
Milosevic et al.[9]	34	Hematuria (58%) urinary frequency (55%) dysuria (42%) urethral obstruction (39%) local pain (24%), urinary incontinence (10%)
DiMarco et al.[1]	53	Irritative or obstructive voiding (51%), gross hematuria (22%) meatal or vaginal mass (34%) vaginal/perineal spotting (10%)

frequent and also is associated with worst prognostic - positive lymph nodes on pathology were predictive of both cancer recurrence and survival.[1,5]

Meis et al.[2] found 55% patients with metastases to abdominal/pelvic lymph nodes, 18% with pulmonary involvement and 9% with liver metastases and Grigsby[4] found metastases to the lungs in 4,5%. Mirzayan et al.[10] documented the first case of a distant bony metastasis in a patient with urethral adenocarcinoma and reviewed 12 reports about this uncommon condition. Urethral carcinoma metastasis to bone should be suspected in patients with a known primary who present with localized pain and palpable masses if the bone is superficial.

Malignant disease metastatic to the eye is a common entity afflicting patients with cancer. Breast carcinoma is the most common carcinoma responsible for ocular metastases, followed by lung cancer and adenocarcinoma of unknown primary site. Most intraocular metastases involve the choroids. The diagnosis should be suspected in patient with history of carcinoma and a decreased visual acuity or any other visual symptom.[12-13] The typical presentation is a homogeneous creamy yellow choroidal lesion, which is often complicated by secondary retinal detachment. The differential diagnosis with other ocular lesions can be made by clinical evaluation, including a previous cancer history, ophthalmoloscopic examination, ultrasonography, computed tomography and fluorescein angiography. Fine-needle aspiration biopsy is only used in patients with no detectable primary or other metastatic cancer.[13-14] In this case report, the patient had presented only primary adenocarcinoma of urethra, so we can state that the choroidal metastasis was from this cancer.

Female urethral cancers are aggressive with poor 5 and 10-year survival and high local recurrence rates.[1] The prognosis has been reported to correlate with clinical stage of disease. The series reviewed confirmed the importance of the tumor location: distal lesions were more frequent on earlier clinical stages when diagnosed and had an overall better prognosis than proximal lesions that were diagnosed at more advanced stages.[2-4,6-8,15]

DiMarco et al. showed tumor stage as a strong predictor of local failure.[1] According to Grigsby,[4] tumor size and histology (adenocarcinoma faired poorly) are independent prognostic factors, while Meis et al.[2] found no relationship between tumor size and prognosis in their series. Ali et al.[7] and Garden et al.[15] demonstrated that the histologic types do not influence the outcome of urethral cancer.

For patients with choroidal metastases, there are many treatment options too, as such chemotherapy, external beam radiation, plaque radiation, hormone therapy, resection, observation and combination therapy. The choice of which depends on many factors, including the patient's systemic state, the presence of visual symptoms, tumor activity, tumor size and location, primary site, and whether the patient is currently receiving chemotherapy.[13-14]

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