Partial cystectomy as bladder adenocarcinoma management


ABSTRACT

Bladder adenocarcinoma is a bladder neoplasia not frequently seen in urology service consultations. Its clinical presentation varies and its origin can be extravesical. Treatment is predominantly radical and life expectancy is quite variable.

The case presented here is a male patient in the seventh decade of life with adenocarcinoma in the bladder dome, who was studied and treated with partial cystectomy and bilateral lymphadenectomy. His progression has been favorable and there is no recurrence data or tumor activity at one-year follow-up.

Key words: Bladder adenocarcinoma, urachus, bladder-conserving therapy, chemotherapy, radiotherapy, partial cystectomy, Mexico.

INTRODUCTION

Primary bladder adenocarcinoma makes up 0.5-2% of bladder neoplasms. It is the most frequent tumor in patients presenting with extrophy of the bladder and is more frequent in areas where schistosomiasis is endemic.1,2

In Mexico, it is not common in isolated form. Differential diagnosis with primary tumor outside the...
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Urinary tract should be made, especially those originating in the digestive tract. Primary bladder adenocarcinoma presents more frequently in the bladder dome or in the anterior bladder wall. When tumor is intramural and extends to the bladder it may originate in the urachus. The urachus is a 5 cm vestigial structure connecting the bladder dome with the umbilicus. In the fetus, it unites the bladder dome with the allantois. After birth it becomes the median umbilical ligament. Its remnants are seen in 50% of infant autopsies and 3% of adult autopsies. Bladder adenocarcinoma is classified according to its site of origin into primary bladder, urachus, secondary or metastatic adenocarcinoma. There are also more aggressive variants such as signet ring cell and hepatoid adenocarcinoma. When origin is outside of the bladder it can be a local extension of colon, prostate or ovarian cancer tumor.

### CLINICAL CASE

The patient is a 61-year-old man with a history of deep vein insufficiency, appendectomy and adenoectomy. Initial symptoms were irritative lower urinary tract symptoms characterized by dysuria and increase in urinary frequency associated with moderate, intermittent and oppressive left lumbar pain with no other manifestations. International Prostate Symptom Score (IPSS) was 6. Abdominal palpation revealed no tumor mass or visceromegaly. Digital rectal examination (DRE) exhibited a soft prostate with no suspicion of cancer. Laboratory work-up results were: Full blood chemistry: creatinine 1.01 mg/dL, glucose 97 mg/dL, and blood urea nitrogen (BUN) 13.7 mg/dL. Urinalysis: density 1.020, pH 6, negative erythrocytes, negative leukocytes, amorphous urate ++ and mucin +. Five urinary cytology series were negative. Tumor markers: ACE 2.2 ng/ml, cancer antigen (CA) 125 13 U/ml, PSA 0.72 ng/ml and carbohydrate antigen (CA) 19-9 7.3U/ml. Imaging studies: Ultrasound showed a solid lesion in the anterior wall of the bladder. Abdominal and pelvic computed axial tomography (CAT) showed bladder tumor in anterior portion of the bladder dome that did not pass through the bladder wall. There were no visible lymph nodes or tumors in other organs. Cystoscopy: solid polypoid vegetative lesion in anterior portion of the bladder.

Transurethral resection of bladder tumor was carried out. Histopathological study confirmed non-urachal bladder adenocarcinoma associated with cystitis glandularis and squamous metaplasia. After transurethral resection of the bladder (TURB), bladder mapping was done and no alterations were found. No tumor lesions were found during endoscopy or colonoscopy. Partial cystectomy with bilateral pelvic lymphadenectomy was performed. Final postoperative diagnosis was 2 cm ulcerated, non-urachal, enteric adenocarcinoma with negative surgical borders and no neoplastic activity in right and left lymph nodes. Urachal area was negative for neoplasia.

Patient progression was good and there were no signs of recurrence at 12-month follow-up. Control cystoscopy showed no tumor activity and bladder capacity was 300 ml.

### DISCUSSION

Histopathologically, bladder adenocarcinoma is defined as a differentiated malignant tumor with a tendency to similarity with colonic mucosa cancer. It is predominant in men and it most commonly presents in patients 68 years of age. It presents most frequently as macro- or microscopic hematuria. Due to the different types of adenocarcinoma it is necessary to identify it as follows: in situ, urachal (1/3 do not involve part of the bladder), non-urachal (2/3) and clear cell (the most aggressive variant). Two thirds of these tumors are single tumors and are characterized by exophytic masses that invade...
the bladder wall and ulcerate the mucosa. Approximately 30% of cases are multiple tumors.8-11

Adenocarcinoma is always invasive. Only two cases of patients with superficial tumor and a survival rate of 51 and 61 months after TURB have been documented.8,12,13

Tumor surface is commonly covered with mucinous and gelatinous matter. Microscopically there is a predominant glandular component reminiscent of colonic mucosa in that it also produces mucin and invades the muscularis propria and so is considered to be of high grade differentiation when diagnosed by cytology. Since adenocarcinoma cannot be differentiated glandularly, the study is not very useful. Special immunohistochemical staining was positive for the tumor markers CK7, CEA, EMA and CDX2 and negative for PSA, vimentin, PAP, CA-125 and CK20.4-6

Hematuria is the most frequent clinical symptom and can be associated with irritative lower urinary tract symptoms. Occasionally mucus is reported in urinalysis which is a very specific datum for this pathology. In these cases cystoscopy is used as the specialized urological diagnostic method. Adenocarcinoma can be located in any part of the bladder – side walls, trigone, dome or anterior portion of the bladder wall. Criteria for differentiating urachal from non-urachal adenocarcinoma are central tumor localization in the anterior portion of the bladder or in the bladder dome, invasion from the exterior to the interior of the bladder, intact or ulcerated bladder mucosa, no in situ carcinoma, cystitis glandularis or glandular metaplasia and tumor growth between the umbilicus and the bladder.2,3,14

Non-urachal adenocarcinoma is characterized by its origin in the bladder mucosa, passing large quantities of mucus and localization in lateral sides of bladder and trigone. Non-urachal adenocarcinoma may present in the dome or anterior wall of the bladder, but first urachal adenocarcinoma must be ruled out. Sixty percent of non-urachal adenocarcinoma originates in extensive intestinal metaplasia (cystitis glandularis) that is commonly found in the trigone and is frequently enteric. It can also derive from diverticuli, exstrophy of the bladder and endometriosis as well as from parasites such as Schistosoma haematobium.3,4,7,9

The patient should be thoroughly checked to rule out tumor, especially in the digestive tract. Digestive tract panendoscopy and tumor markers rule out tumor metastatic origin. Initial treatment is TURB-biopsy in which extirpated tumor is identified and its depth is determined.8 Therapeutic options after TURB, with or without radiotherapy, do not appear to be successful.8 Partial cystectomy is performed in selected patients.5,15

In their series, Anderström and collaborators report a survival rate of 50% at 5-year follow-up, justifying the performance of partial resection since with radical cystectomy, mortality at 5 years does not reach 20%.4 Adenocarcinoma is not radio-sensitive, survival rate at 5 years with external radiotherapy alone is only 20%. A study carried out on 34 patients and another on 25 patients both reported no survival improvement with preoperative radiotherapy.5,8,15 Experience with the use of chemotherapy as adenocarcinoma treatment is limited. Chemotherapy with 5-Fluorouracil has been studied the most, but in association with gastrointestinal adenocarcinoma, and response has been poor. Radical cystectomy with or without adjuvant therapy has been reported as a therapy of choice. However, various of these studies have been carried out on a reduced number of patients and with a very short follow-up period.5,10,15 Primary bladder adenocarcinoma has a very bad prognosis regardless of the treatment modalities employed. Survival rate at 5 years ranges from 0-31%.15

CONCLUSIONS

Medical management of patients with bladder tumors is a challenge for the urologist both diagnostically and treatment-wise. There are different treatment modalities that offer adequate disease control. Bladder-conserving management offers the patient advantages in relation to quality of life from the possibility of conserving the patient’s own bladder. However, there
are few studies on conservative management of bladder adenocarcinoma. In general oncological approach tends to carry out more radical treatment. Nevertheless, patient quality of life and expectations justify a less aggressive management. An integral evaluation of each case must be carried out, defining adequate treatment adherence and postoperative follow-up that are fundamental for adequate survival.

**BIBLIOGRAPHY**