

# A Rare Bladder Tumor in a Young Pregnant Woman: Case Report

## Genç Bir Gebede Nadir Mesane Tümörü

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**ABSTRACT** Urothelial cancers, most common tumors of urinary system, are frequently localized in the bladder. These tumors which are generally detected at superficial phase and have papillary structure can be also rarely seen during pregnancy. Our knowledge on time and method of the treatment about this extremely rare situation is rather limited. We share the results of bipolar transurethral resection technique that we applied in a thirteen weeks pregnant patient with papillary urothelial carcinoma which we had diagnosed through clinical and ultrasonographic findings.

**Key Words:** Urinary bladder neoplasms; pregnancy; hematuria; cytology

**ÖZET** Üriner sistemin en sık gözlenen tümörü olan ürotelyal kanserler sıklıkla mesanede yerleşirler. Genellikle yüzeysel aşamada saptanan ve papiller vasıflı olan bu tümörler çok nadiren gebelikte de saptanabilmektedir. Bu son derece nadir durumda tedavinin zamanı ve yöntemi konusundaki bilgilerimiz nispeten sınırlıdır. Biz de on üç haftalık gebe bir hastada klinik ve ultrasonografik bulgularla tespit ettiğimiz papiller ürotelyal karsinom gebesinde uyguladığımız bipolar transüretal rezeksiyon tekniğinin sonuçlarını paylaştık.

**Anahtar Kelimeler:** Mesane neoplazileri; gebelik; hematüri; sitoloji

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According to American Cancer Society (ACS) data, rate of new cases with urothelial carcinoma is 6% in men and 2% in women, while urothelial carcinomas rank 4<sup>th</sup> place in all cancers in men and 9<sup>th</sup> place in women.<sup>1,2</sup> In a recent study it was reported that the bladder tumor incidence increased with the decrease of the age of first pregnancy and parity.<sup>3</sup> Although there are data suggesting that bladder tumors in women tend to be more advanced stage at the time of the diagnosis and recurrence and progression rates are higher compared to men, our knowledge on incidence and clinical course of urothelial carcinoma in pregnancy is limited to a few simultaneous cases. With the opinion that bladder might be fragile secondary to hormonal changes in pregnancy, we aimed to share the result of bipolar resection technique that we used considering localization of the tumor.

## CASE REPORT

Thirty-two-years old second pregnancy, thirteen weeks pregnant patient admitted to our clinic with complaint of painless-coagulum-stained bleeding in urine and sense of burning during urination for a week. In her history, it was revealed that she was a house-wife, never exposed to chemical carcinogens and did not smoke. Physical exam revealed a palpable uterus consistent with pregnancy week. Blood count and biochemical laboratory analysis were within normal limits. Urine culture was sterile. An ultrasonographic examination was requested. Upper urinary system was normal on ultrasound. Hydronephrosis was not detected. A papillary mass was detected in right lateral wall of the bladder with dimensions of approximately 20x15 mm and protruding toward the lumen (Figure 1a). Computerized tomography and magnetic resonance imaging were not needed. Following preoperative assessment, OB/GYN clinic reported that no contraindication was present for operation and patient was recommended to have

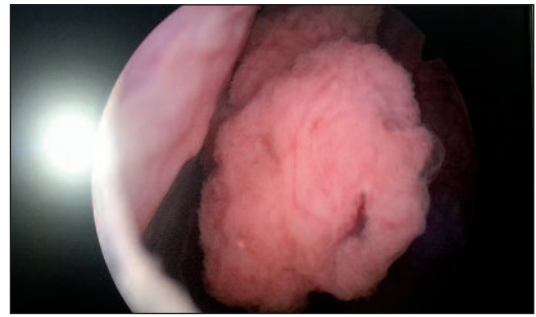


FIGURE 2a: Endoscopic view of the bladder tumor.



FIGURE 2b: Macroscopic appearance of the specimen after resection.



FIGURE 1a: Mass in bladder in a 32 year old woman.



FIGURE 1b: Fetus in a 32 year old woman.

endoscopic transurethral tumor resection as a minimal invasive treatment option. The patient accepted the endoscopic treatment. After that the approval form was signed by the patient. Fetus was healthy and intrauterine growth was consistent with gestational age (Figure 1b). Under spinal anesthesia, the papillary tumor was resected with olympus bipolar resectoscope (Figure 2a, b). No complication was observed intraoperatively. Hemorrhage control was perfect. Patient was discharged without any problem after removal of urinary catheter on post operative day 1. Post-operative early immunotherapy was not applied. In pathologic evaluation, mass was reported as “papillary urothelial neoplasm of low malignant potential (PUNLMP)”. Re TUR-T was not planned. A flexible cystoscopy was performed on post operative 3<sup>rd</sup> month and no pathology was detected. Patient who was followed up by urine cytology, urine culture and uriner ultrasound every third month had a healthy normal delivery at term. No anomaly was detected in the newborn. Hematuria was not detected during post operative period.

## DISCUSSION

Incidence of malignant tumors is extremely low in pregnancy, with general incidence of approximately 2,35/10.000.<sup>4</sup> Most common tumor in pregnancy is malign melanoma, followed by cancer of cervix and breast.<sup>5</sup> In a single review on bladder tumors associated with pregnancy, 27 patients were analyzed and muscle invasion was detected in only 5 of these patients. Transitional cell carcinoma (TCC) was found in 74% of the cases in pathologic examination.<sup>6</sup> In general population however, over 90% of the bladder tumors are diagnosed as TCC and over 85% of the patients who had a recent diagnosis have superficial bladder tumor.<sup>7</sup> PUNLMP, which is reported among the non invasive papillary pathologies, was detected in our case.

In WHO 2004 classification in addition to 1998 classification, lesions with minimal cytologic atypia among non invasive papillary pathologies were excluded from the carcinoma class in order to underline their biological behavior and were defined as "papillary urothelial neoplasm of low malignant potential (PUNLMP). As far as we know, our case is the first one who was diagnosed as PUNLMP among the bladder tumors detected during pregnancy. In general literature, although opinion about necessity of acceptance of PUNLMPs as benign because of their minimal cytologic atypia, low risk for progression and non invasive nature, there are many articles stating that these cases should be monitored like the cases with bladder tumors since recurrence rate is 25-42%, even if most of them are local.<sup>8,9</sup> The first cystoscopy control is recommended 3 months after resection in low-risk, non-muscle-invasive bladder cancer.<sup>10</sup> We performed first cystoscopy control three-month after the resection with flexible cystoscopy under local anesthesia. No recurrence was seen and any pathology was detected. We decided to perform the second control cystoscopy on ninth month and then annually as suggested in the European Association of Urology (EAU) guidelines.<sup>10</sup> We did not detect any pathology during cystoscopy in our case and it was decided between patient and physician that further follow up should be done using combina-

tion of cytology and urinary ultrasound. Cytology positivity was not detected during follow up. Although it is reported that urinary ultrasound detects only half of the cases with bladder tumor, large size and localization of the tumor made the diagnosis easy in our case.<sup>6,11</sup> Certainly, gold standard in the diagnosis of bladder tumor is cystoscopy performed under local anesthesia even if the patient is pregnant.<sup>12</sup> Although it is known that since most of the bladder tumors diagnosed by cystoscopy are superficial, they can be effectively treated with transurethral resection at any time during pregnancy however, some studies report that treatment can be delayed until post partum period particularly in low grade bladder tumors.<sup>6,13</sup> Resection of bladder tumor by using bipolar resectoscope during pregnancy did not cause any intraoperative or postoperative fetal repercussions.<sup>14</sup> So we decided to perform resection at the time of diagnosis taking the patient's desire into account and considering the size of the mass, and we shared the results of the our first bipolar resection technique done in a pregnant patient with the thought that better hemostasis could be attained due to possible obturator reflex. No problem was encountered during the resection procedure and hemostasis control was perfect. We preferred not to perform intracavitary treatment because we believed that we achieved resection completely and we planned to perform post operative 3<sup>rd</sup> month follow up with cystoscopy and there was not any data on use of mitomycin C in pregnancy.

## COMMENT

Although there is no consensus on diagnosis, treatment, treatment time and treatment alternatives of bladder tumors diagnosed during pregnancy, our knowledge suggests that bladder tumors diagnosed especially during second trimester of the pregnancy and thereafter can be treated effectively and reliably by bipolar transurethral resection. We believe that it would be helpful consulting obstetrician who cares for the pregnant as well as considering mutual decision of parents and physician on type and method of treatment.

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