

# Recurrence on 1<sup>st</sup> Check Cystoscopy in Patient's with Superficial Bladder Tumor after TUR(BT)

M M TAHIR MIQBAL A N BHATTI S HUSAIN M AHMED N AHMED

Department of Urology, Jinnah Hospital, Lahore

Correspondence to: Dr. Muhammad Muzamil Tahir,

Bladder tumor is second most common urological malignancy. At the time of initial presentation, 65 to 85% cases belong to superficial bladder tumor and the rest are the deep or invasive bladder cancer. This prospective study was conducted at the department of urology, Jinnah hospital Lahore from January 1996 to June 1998 to see the recurrence on 1<sup>st</sup> check cystoscopy at 3 month after transurethral resection of the bladder tumor TUR(BT). Thirty four patients were included in the study, four patient dropped out, while thirty patients turned up for first check cystoscopy. The patient's age ranged from 31 to 70 years. At the time of primary transurethral resection of the bladder tumor 18 (60%) had tumor size 0-2.5 cm and 12 patients (40%) had tumor size 2.6-5 cm. On histopathological examination 6 (20%) patients belong to PTA stage and 24 patients (80%) belong to Pt1 stage. Three patients (10%) had G1 tumor and 27 (90%) had G2 tumors. At the time of first check cystoscopy 21 patients (70%) were tumor free, while 9 patients (30%) showed recurrence.

**Key Words;** Bladder tumor, superficial, recurrence, 1<sup>st</sup> check cystoscopy.

Superficial Bladder Cancer is devastating disease both for the patient and the treating staff. It is the second most common urological malignancy. New cases of bladder tumor presenting with symptoms, 65 to 85% are superficial (stage PTA or pt1) and usually papillary, 10 to 20% are invasive and usually solid<sup>1</sup>. The incidence of residual tumor after TUR is 35%<sup>2</sup>. Tumor grade at initial presentation has a pronounced effect on the natural history of superficial bladder cancer. The result of the 3-month check cystoscopy is the single most important prognostic indicator<sup>3</sup>. In patients presenting for the first time with small solitary, non-invasive, moderately or well differentiated TCC of bladder, 80% of patients, who did not develop recurrence within 3 months remain clear in the 1st year<sup>3</sup>. Identification of the patients, who will develop recurrence in superficial bladder cancer, is unpredictable. Solitary small tumor confined to mucosa has recurrence approximately 40% in 3 year of follow up, where as patients with multiple tumors, 75% develop recurrence with in 3 year<sup>4</sup>.

The incidence of recurrence on first check cystoscopy is 15.5% after TUR (BT). The outcome of the result depends on the stage, grade, size, and multicentricity in cystoscopically normal appearing urothelium<sup>5</sup>. Approximately 80% of all Transitional cell carcinoma (TCC) are histopathologically G1 or G2 and 20% are G3 at initial presentation. 15% of all tumors are multifocal and progress to invasive disease, nearly 40% recur with in 1 to 5 year<sup>6</sup>. The study was conducted to see the recurrence on 1st check cystoscopy after TUR(BT).

## Material and methods

From Jan 1996 to June 1998 a prospective study was carried out. Total 34 patients with following criteria on initial cystoscopy and histopathological finding that is,

superficial bladder cancer, patients who had single tumor, size not more than 5cm in greater dimension, well & moderately differentiated tumor were included in our study. While the patients who had received chemotherapy, radiotherapy, under gone previously resection of the tumor, patients with multiple growth, tumor size more than 5cm in greater dimension and the patients with carcinoma in situ were excluded from study. The tumor were classified, Ta papillary non-invasive, Cis carcinoma in situ, T1 lamina propria invasion. Tumor were graded as highly differentiated (G1) moderately (G2) and poorly differentiated (G3)<sup>7</sup>.

At the time of admission an elaborate questionnaire includes biographic data, presenting feature, time interval between initial presentation of symptoms and admission in the hospital, family and socioeconomic history was taken. A detailed physical examination and investigation includes complete blood examination, urine analysis, random blood glucose level, blood urea, serum creatinin, X ray chest, ultrasound abdomen of all patients, regarding size, site, nature of the growth, and intravenous urogram was taken. The TUR(BT) under appropriate anesthesia was performed. Pre and postoperative bimanual palpation was performed in all patient. Biopsy was taken separately from the mass, base of growth and from the normal appearing mucosa for histopathology to exclude the carcinoma in situ (Cis).

Patients were followed at 2-week interval for constitutional symptoms and second visit was advised 3 month after the first operation and check cystoscopy was performed using the standard protocol. Tumor if any resected and again tissue from the growth and its base was taken to assess its staging and grading. Histopathology was performed. All the patients were put on regular follow up.



## Results

Of the 34 patients evaluated, 4 declined. 30 patients reported for 1st check cystoscopy. 24(80%) were male and 6 (20%) patients were female. 9 (30%) were in the age group 31 to 40 years, 3 (10%) fall in the age group 41 to 50 years, 12 (40%) were in the age group 51 to 60 years and the remaining 6 (20%) were in the age group 61 to 70 years. 6 (20%) patients were factory workers (leather, steel, motor workshop). 12 (40%) were farmers, 6 (20%) were Office workers, 6(20%) female were housewives, 12(40%) were smokers, and 18(60%) were non-smokers. 24(80%) patients presented with painless and remaining 20% with painful hematuria. As far as the time interval between first appearance of the symptoms and primary TUR (BT) is concerned, 60% of the patients presented within 12 months, 30% within 13 to 24 months, while 10% appear between 25 to 35 months. In patients with primary tumor 12(40%) presented with tumor on right lateral wall of the bladder, while 6(20%) presented with tumor on posterior and left lateral wall each, and the 20% were on the dome. 12(40%) have tumor size less than 2.5cm & 18(60%) have tumor size in the range of 2.6 to 5 cm. 6 (20%) of the patients presented in stage Pta and 24(80%) of the patients presented in stage Pt1. 27(90%) patients presented with G2 and only 3(10%) presented G1 grade. On bimanual palpation no mass was palpable pre and post operatively in all patients included in this study.

On 1st check cystoscopy 21(70%) patients showed no recurrence, while in 9(30%) patients recurrence was noted. Out of nine patients who developed recurrence, all were male, 6 (66%) were in the age group 51 to 60 Years and the remaining patients fall in the age group 31 to 40 years. 6 (66%) were smoker and the remaining 33% were non-smoker. 6 (66%) were industrial worker while 3 (33%) were farmer. All patients who develop recurrence were in Pt1 G2.

## Discussion

TCC is the most common neoplasm in the urinary tract. Nearly 80% of all TCC are histopathologically G1 or G2 at initial presentation. Pta behaves less aggressively than Pt1 tumor<sup>3</sup>. Globally it is recognized that after the primary treatment, which is TUR, in patients with superficial bladder tumor, 60 to 70% of superficial bladder tumor will recur in 5-year time<sup>7,8</sup>.

The incidence of the residual tumor is nearly 35% after complete TUR (BT)<sup>2</sup>. However there are many factors that confound adequacy of resection, including multiplicity of disease, capability of the resectionist, quality of the specimen provided and pathological analysis. None of the variables is addressed in this report nor could they be and current result should be interpreted with them in mind. In our study TUR(BT) was performed by different persons having variable experience. So, the incidence of residual tumor could not be standardized. However complete transurethral resection may be neither

feasible nor possible in all cases even in the best of hands. No body can say that T1 tumor has been completely resected. To avoid the incidence of residual tumor, study has been conducted to have repeat transurethral resection after 4-6 week of initial resection, but it also does not guarantee complete resection, it only reduces the uncertainty of clinical understaging<sup>9</sup>. Parmar et al (cancer working party) showed that 3 factors, grade, stage, maximum diameter are strongly associated with the result of 3 month check cystoscopy. They observed that 84.5% of the patients remained tumor free on 1st check cystoscopy after TUR (BT), while in our study 70% remained tumor free on 1st check cystoscopy. Table 1.

Table 1. Comparison between parmar et al (1989)<sup>5</sup> and present study

	Parmar et al (1989)	Present study (1997)
Size		
0-2.5cm	70.3%	40%
2.6-5cm	29.7%	60%
Grade		
G1	62.32%	10%
G2	37.7%	90%
Stage		
Pta	49.5%	20%
Pt1	50.5%	80%
Recurrence	15.5%	30%

In present study the tumor were higher in size, grade and stage at initial presentation and these three factors are highly associated with the recurrence. However views exist that grade, category are not always accurate in the prediction of the behavior of the bladder tumor. The grade and stage as determined by conventional histopathological means does not provide information on the biological behavior of the tumor<sup>10</sup>. However in spite of these sporadic views by Smith et al there is almost unanimous agreement that grade, site, size are strongly associated with the progression and recurrence of the tumor. Illiteracy in society, decreased awareness about the disease, mistrust on the modern health care system and poverty in general are other factor that are associated with late appearance for treatment.

## Conclusion

Bladder tumor differs from other tumor in the body, that 5-year survival rate for superficial bladder tumor with regular follows up is quite high. Modern technologies like ultrasound, which is cheaper and easily available everywhere has improved a lot in the early detection of the bladder tumor.

The recurrence on 1<sup>st</sup> check cystoscopy is almost double than other international studies, Which is quite high. Public awareness about the disease is needed. Early consultation with doctor when the first symptom appear and availability of the endoscopic equipment at gross root

level of the health care system will improve a lot its outcome.

#### Reference

1. Britton JP, Dowell AC, Whelan P, Harrij S. A community study of bladder cancer. Screening by the detection of occult urinary bleeding. *J Urol* 1992; 148: 788-90
2. Kolozsy Z. Histopathological self control in TUR of bladder tumors. *Br J Urol* 1991; 67: 162-64.
3. Morris SB, Shearer RJ, Gordon EM, Woodhouse CR. Superficial bladder cancer: For how long should a tumor free patients have check cystoscopies. *Br J Urol* 1995; 75(2): 193-96.
4. Kiemeny LALM, Witjes JA, Heijbroek RP. Predictability of recurrence and progressive disease in individual patients with primary superficial bladder cancer. *J Urol* 1993; 150: 60-64.
5. Parmar MKB, Freedman LS, Hargreave TB, Tolley DA. Prognostic factors for recurrence and follow up policies in the treatment of superficial bladder cancer: report from the British Medical Research Council subgroup on superficial bladder cancer (Urology cancer working party). *J Urol* 1989; 142:284-88.
6. Mora LB, Santo VB, Pow sang JM, et al. Ancillary techniques in the follow up of transitional cell carcinoma: A comparison of cytology, histology and Deoxyribonucleic acid image analysis cystometry in 91 patients. *J Urol* 1996;156:48-55.
7. Union Internationale Contre le Cancer 1992. The TNM Classification of tumours. Geneva: UICC.
8. Shaharyar. Farooqui Z. Alauddin Z et al. Concomitant radiotherapy and cisplatin chemotherapy for locally advanced carcinoma of the urinary bladder, *J College of Phys Surg Pak* 1997; 7(3): 92-94.
9. Harry W Herr. The value of a second Transurethral Resection in evaluating patients with bladder Tumors. *J Urol* 1999; 162,74-76.
10. Smith NW, Strutton SM, Walsh MD, et al. Transferin receptor expression in primary superficial human bladder tumor identifies patients who develop recurrence. *Br J Urol* 1990; 65: 339-44.