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TRANSITIONAL CELL CARCINOMA OF BLADDER IN YOUNG PATIENTS: PATTERN AND PECULIARITIES OF OUR PATIENTS

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ABSTRACT

Background. Transitional cell carcinoma is most common pathological type of the urinary bladder malignancy. When it occurs in younger patients, its prognosis is thought to be better if compared with the same occurring in the older population. **Objective:** To study the pattern of transitional cell carcinoma bladder in young population and to study its peculiarities in our population.. med Shaik. **Duration of Study:** Between March 2000 to February 2012. **Material and Methods:** Prospective, descriptive study conducted in Department of Urology Chandka Medical Collage Hospital Larkana from March 2000 to February 2012.We carried out 5993 cystoscopies and diagnosed 1337 bladder cancers and among them 127 were the patients of 40 years or younger. Standard TURBT done in all cases and follow up maintained up to 3 years to detect disease free,progression free and recurrence rate. **Results:** The incidence of tumor in younger age was 9.49% .None of our patient was smoker or had environmental predisposition .49.60 % cases had Ta disease, 4.72% were having Tis disease and 29.92% had T1 disease. The patients with invasive disease (T2 and T3) were referred for radical cystectomy. More than half of the patients had grade I lesion. Multifocal disease was present in 3 cases. 3.85%. Recurrence in Ta and Tis lesions is lesser as compared to T1 lesions patients. **Conclusions:** Transitional cell carcinoma of bladder has fairly higher incidence in our younger population as compared to rest of the studies .Smoking and environmental exposures are not observed in young patients with transitional cell carcinoma (TCC) bladder. The presentation, staging and grading status are same as in previous studies. High resolution ultrasound may be used for the surveillance rather than regular cystoscopy.

Key Word: Bladder cancer, Transitional cell carcinoma and young adults.

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INTRODUCTION

Bladder cancer is the most common urological malignancy and transitional cell carcinoma (TCC) being the predominant histopathological type[1].

Statistic from United States estimated about 69000 new cases of transitional cell carcinoma (TCC) bladder diagnosed during the 2008 with approximately 14000 deaths [2].

Transitional cell carcinoma (TCC) bladder has been associated with the cigarette smoking and various occupational exposures and being typically diagnosed in older individuals, with the median age at diagnosis of 69 years[3]. Before the fourth decade of life, incidence of transitional cell carcinoma (TCC) bladder in children and young adults is very low, i.e<1-4%[4]. In contrast to the malignancy in rest of human body, the transitional cell carcinoma (TCC) occurring in young adults has good prognosis. Krestschneretal in 1934 reported prior concepts that the transitional cell carcinoma (TCCs) bladder occurring at the extreme of age was more malignant than those occurring at the peak atransitional cell carcinoma (TCC) or the transitional cell carcinoma (TCC) bladder [5]. In this retrospective study, we evaluated our patients who were 40 years or younger and were diagnosed having transitional cell carcinoma (TCC) bladder. Our study will be a novel addition to the literature on transitional cell carcinoma (TCC) bladder in young adults, as it is a medium scale retrospective study, incorporating various demographic, clinical and therapeutic variables and outcomes.

MATERIAL & METHODS

We conducted this study from March 2000 to February 2012. The design was retrospective, descriptive and the sampling technique was randomized purpose. The study was conducted at the Department of Urology Chandka Medical Collage Hospital Larkana and the Larkana Medical Center Larkana. During this period, 5993 cystoscopies were performed for various purposes on patients of various ages and either sex. Out of these 1337 patients were diagnosed having transitional cell carcinoma (TCC) and among them 127(9.49%). Patients were of 40 years or younger and were included in the study.

The data regarding different variables was collected on the pre-designed proforma. After initial diagnosis and treatment i.e. transurethral resections of tumour (TUBT), patients were closely followed –up in the clinics and check-cystoscopy was performed regularly after 3 months. The outcome was measured as, disease free, recurrence free, progression free and recurrence. The SPSS version 13 was utilized to calculate the data.

RESULTS

Out of total 1337 cases of transitional cell carcinoma (TCC) bladder, 127 (9.49%) were 40 years or younger and were included in the study. Males was 111 males and 16 females, with male to female ratio of 6.9:1.Age ranged from 16 to 40 years while mean age at presentation was 33.6 years SD+8.23 years.None of our patient was cigarette smoker and inviromental exposure.116 (91.33%) presented with frank hematuria, while 11 (98.66%) presented with the occult hematuria. Hematuria being diagnosed during other investigations for non- urological purposes. Trans-abdominal ultrasound revealed bladder growth in 59 (46.45%) patients.Cystoscopy revealed multifocal disease in 43 (33.85%) patients. At first cystoscopy, all visible tumor were resected completely and submitted for the histopathological examination. None of the patient had visible residual tumour.The hisopathological stage and grade of these patients is shown in the Fig.No.2-3. After initial cystoscopy and diagnosis, the 20 patients with invasive disease were subjected to radical cystectomy.

DISCUSSION

transitional cell carcinoma (TCC) bladder is one of the common urological malignancies, associated with variable prognosis according to age at diagnosis, stage and grade of the disease.[2.4.5]. The disease is less prevalent in the patients younger than 40 years i.e. between 1-4%. Previous studies have shown that the stage and grade of the disease both are early at the time of diagnosis in young patients, hence better prognosis is seen. [5.6] We analyzing the outcome of 5993 cystoscopies, among which transitional cell carcinoma (TCC) was diagnosed in 1337 patients and 127 patients were 40 years or younger. Our data confirms the result as of previous studies but the incidence we recorded was 9.49%. This is significantly higher than that of the available studies [5-7.] Presenting complain in most of our patients was hematuria, which is same as compared with other studies of transitional cell carcinoma (TCC) bladder in young and old population [1]. transitional cell carcinoma (TCC) bladder has strong correlation with the cigarette smoking. Previous studies by lewthwaite and Graham have revealed almost 45% of their young patients with transitional cell carcinoma (TCC) bladder were regular smoker8.But again different from the world literature; none of our patient was

FIG 1:
OCCUPATION OF THE PATIENTS

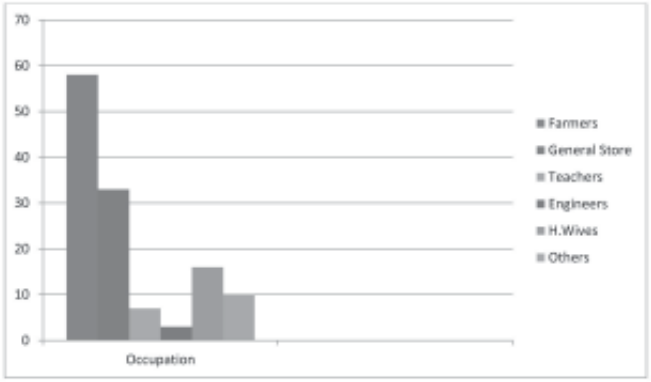


FIG 2:
HISTOPATHOLOGICAL STAGING OF THE DISEASE

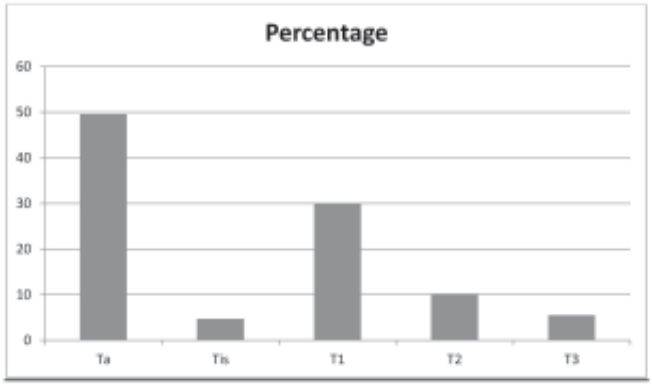


FIG 3:
GRADES OF THE DISEASE

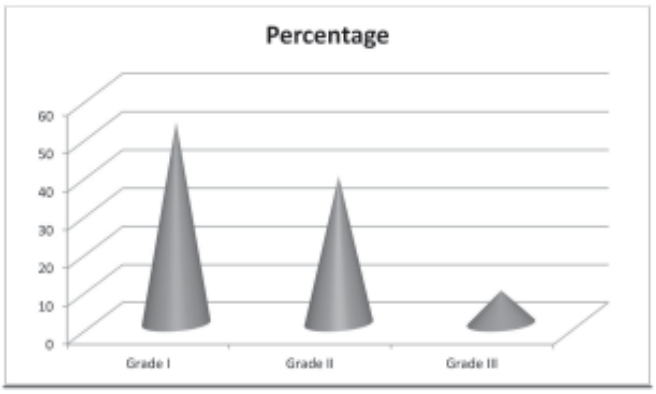
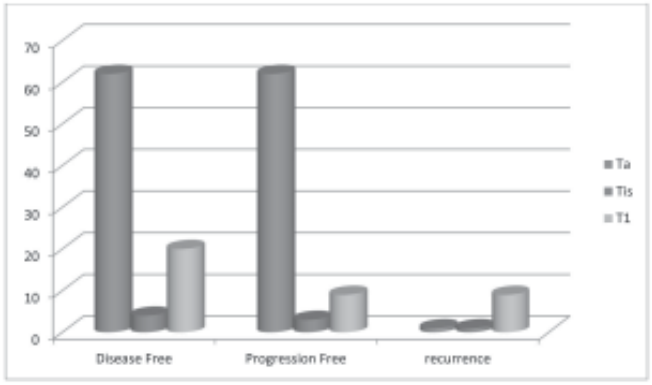


FIG 4:
OUTCOME OF THE PATIENTS



smoker/ regular smoker. Similarly, none of our patient had occupational or environment exposure to carcinogens again totally different from the past studies (Fig.No.1). Benton and Henderson had found 6 out of 9 young patients with transitional cell carcinoma (TCC) bladder had history of exposure to environmental carcinogens [9]. In our study, majority of the patients were males which is comparable with the study by Mc Guire et al and others [10]. Previous studies have concluded that the multi-focality is rare in TCC bladder of young patients (Johnsons and Hillis) [11]. In our study, 43 out of 127 patients had multifocal TCC, which is 33.89% of total transitional cell carcinoma (TCC) we diagnosed during the study period.

The stage and grade pattern amongst our patients was comparable to those of the available studies of Prout et al, Torti et al, won and Grossman[12-14]. All studies, as well as ours, have revealed that the disease is both of low grade and early stage and of better prognosis in younger population. Our 20 patients had invasive disease. These patients were referred to the higher centers where radical cystectomy is regularly performed. All patients in our study underwent TURBT and all the visible tumour was resected and subjected to the hisopathological examination. The disease free progression free and recurrence was noted in Ta , The disease free progression free and recurrence in Tis and the disease free progression free and recurrence was noted in T1. This low recurrence rate is comparable with the series by prout et al and others[12,13] Fig.No.4. Paduano and Chiella reported that 2 of 3 patients with recurrence were asymptomatic and were noted only on check/ follow-up cystoscopy and on this basis interval cystoscopy has been advocated [14].But the repeated cystoscopy has associated with risk of urethral damage as well necessity of anaesthesia so the interval cystoscopy has been argued. Though we also used cystoscopy for surveillance, a high resolution

probe ultrasound may be used for this purpose.

CONCLUSION

Transitional cell carcinoma of bladder has fairly higher incidence in our younger population as compared to rest of the studies. Smoking and environmental exposures are not observed in young patients with transitional cell carcinoma (TCC) bladder. The presentation, staging and grading status are same as in previous studies. High resolution ultrasound may be used for the surveillance rather than regular cystoscopy

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Authors Contribution:
* Supervision & Manuscript Review / Work done
** Manuscript Writing / Work done *** Contribution Data Collection **** Data Collection, Biblography.

Conflict of Interest: None