

# CANCER URINARY BLADDER 5 YEAR EXPERIENCE AT CENAR, QUETTA

ROOHULLAH, NUSRAT J, HAM DAN I SRH, Burdy CM, Khurshid A

**Background:** Purpose of this study was to see the incidence, age, sex, geographical distribution, symptoms, personal habits, signs, histo-pathology, early diagnosis and management of cases of Cancer Urinary Bladder (Ca UB) in the patients coming to CTNAR, Quetta, Pakistan. **Methods:** A retrospective study was conducted at CTNAR for a period of 5 years from 1<sup>st</sup> Jan 1993 to 31<sup>st</sup> Dec. 97. In which about 100 cases of cancer of urinary bladder were included, out of which 82 patients were male and 18 were females. **Results:** During our 5-year period of study, 3571 new cases of cancer were registered at CENAR, out of which 100 (2.8% of total No. of cases) were of Ca UB. Hence 20 new cases of Ca UB per year were registered at CTNAR. The maximum number of cases was registered in 1996. **Conclusion:** Our study concluded that Ca UB occurs more in male with a male to female ratio of 4.5:1 and a high incidence after 40 years of age. No patient below 20 was reported. **Histopathologically:** Transitional Cell Carcinoma was dominating (75%). Other histological types seen were squamous cell carcinoma (14%), Adenocarcinoma (13%), UD (5%) and HPNA (10%). A considerable number of patients were using different preparations of tobacco (cigarette smoking (6%), Hubble-Bubble (5%) and Niswar (Snuff) (12%). The patients were mainly treated with Radiotherapy, because at the time of reporting they were already in stage II or beyond (97%). Some patients were also treated by surgery such as TUR, partial or radical cystectomy. A few patients (6%) also received chemotherapy.

## INTRODUCTION

Carcinoma urinary bladder is the 4<sup>th</sup> most common malignancy in men. In the USA 54,500 new cases of Ca UB are reported every year and 11,700 deaths are attributed to this. Incidence peaks in the 7<sup>th</sup> decade. Male to female ratio is 2:1 or 3:1. It is more common in industrialized urban areas. Predisposing factors include cigarette smoking, chronic irritation of bladder i.e. chronic catheterization (e.g. paraplegics), stone and infections (e.g. Schistosoma hematobium). Medicines like Phenacetin containing analgesics & antineoplastic e.g. cyclophosphamide are also linked with Ca UB.

The most common sites are trigone, neck, posterior and lateral walls. Cancer usually spreads directly through bladder wall. Lymphatics drain into external and internal iliac and presacral nodes. Distant metastasis usually involves lung, bone & brain.

Majority of the patients present with painless hematuria, vesical irritability or other nonspecific symptoms. Investigations include complete blood count, Urine detailed report, blood chemistry, chest x-ray, cystoscopy, bimanual LUA (both before & after TUR), IVP, CT scanning and biopsy.

The patients are staged according to the TNM classification, and managed with surgical procedures, radiotherapy with Co-60 after simulation and combination drug chemotherapy.

The purpose of this study is to highlight the pattern of cancer of UB in this part of Pakistan and neighboring

countries, so that early detection and better management could be started.

## MATERIALS AND METHODS

This study was conducted for a period of five years, from 1<sup>st</sup> Jan. 1993 to 31<sup>st</sup> December 1997 at center for Nuclear Medicine and Radiotherapy (CF.NAR) Quetta. This center receives patients from Baluchistan (A province of Pakistan) and Afghanistan. The criteria for selection of patients was a positive biopsy report regardless of age, sex or geographical factors, so that large number of patients could be included in the study and a sufficient data achieved on this subject. A Proforma was prepared for the study that included personal data like name, age, sex, location, occupation, symptoms and signs, personal habits like smoking, niswar (snuff), histopathology, stage of the disease, modality treatment received and history of follow up. Results were compiled from this record.

## RESULTS

The results of this study are given in tables 1- 4.

The total number of patients of all categories registered at CTNAR during our study period 3571. This included 2110 males and 1460 females. Out of these the number of Ca. UB cases was (2.8% of total).

**Table-1: Incidence of a. Urinary Bladder in Period 1993 – 1997 (Reg. Cases 3571, Ca UB = 100)**

Sex	No.	% of Regd. No	% of Ca U.B
Male	82	3%	82%
Female	18	0.50%	18%
Total	100	2.80%	100%

**Table – 2: Age Incidence of Ca. Urinary Bladder in Period 1993 – 1997 (Regd. Cases = 3571, Ca. UB =100)**

Age (Yrs)	No.	% of Regd. Cases	% of Ca U.B
0 - 20	Nil	Nil	Nil
21 - 30	4	0.1	4
31 - 40	7	0.19	7
41 - 50	36	1.0	36
50 - 60	26	0.7	26
61 - Beyond	27	0.7	27

**Table – 3 Country of Origin of the Ca. UB Patients Reporting at CENAR from 1993 – 1997**

Location	No	% of Regd. No.	% of Ca. UB
Pakistan	87	2.4	87
Afghanistan	13	0.3	1.3
Total	100	2.7	100

**Table – 4: Incidence and Type of Tobacco Usage in Ca. UB Patients Reporting at CENAR from 1993 – 1997 (n = 100)**

Type of Tobacco	No	Percentage of Total
Cigarette	6	6
Niswar (Snuff)	12	12
Hubble - Bubble	5	5

## DISCUSSION

Male to female ratio of 4.5:1 was noted, whereas the ratio of male to female in most of the studies in western countries is 2:1 to 3:1. In the west it is the 4<sup>th</sup> most prevalent malignancy in men. During our study, when we prepared the charts for 10 most common tumors, in males, females and both sexes combined, Ca U.B. was the 7<sup>th</sup> in males, constituting about 3.8 % of malignancies among males. Whereas in females it was the 11<sup>th</sup> most common tumor, constituting about 1.2% of malignant cases. In both sexes it is the 9<sup>th</sup> most common tumor here.

One possibility of the difference of male female ratio in our study and others may be social trend of this area as females avoid exposing the disease of genital tract areas to someone else.

In USA, the incidence peaks in the 7<sup>th</sup> decade of life and less than 1% of urinary bladder cancers occur in people younger than 20 years<sup>4</sup>. Whereas our study shows that majority of patients belong to 5<sup>th</sup> to 7<sup>th</sup> decade of life. No case of cancer of urinary bladder was noted before the age of 20.

Youngest case was seen at the age of 23 and the oldest case was seen in a mule at the age of 78.

Many case control studies have consistently demonstrated a twofold to threefold increase in bladder cancer among cigarette smokers, compared with non-smokers<sup>1</sup>In our study, out of 100, about 1/4 of patients were using some form of tobacco.

A number of occupations including rubber, dye, leather, paint, organic chemicals, textiles, printing and electronic cable industries have been linked to the development of bladder cancer to our study more than 70% patients were agriculture workers where different types of insecticide are used.

In west 75% to 85% of new bladder cancer are superficial<sup>4</sup>, whereas in our study majority of patients presented late in stage II or beyond. Out of 100 patients only 3 patients (3%) presented early with stage-1.

Majority of patients presented with gross haematuria, bladder irritability, lower abdominal mass and weight loss. Prior to hospital visit very few patients were under treatment of qualified GPs and majority were taking treatment from Hakeems (Herbal medicine) and peer sahibs (spiritual treatment).

As majority patients presented late with advanced disease, they were mainly treated with radiation therapy. Although there are different techniques, it is usually given in 2 phases 45-50 Gy/22 -25 fractions through AP/PA portals on Co-60 followed by 15-20 Gy/8-10 fractions through 3 field - one anterior and 2 opposing laterals.

Some patients had gone through surgery also, (TUR-4 cases, subtotal cystectomy-2 cases and excisional biopsy-4 cases). 6 patients received chemotherapy.

Due to lack of education & health awareness majority patients could not be followed up for longer periods. Maximum period of follow up was upto 24 months. About 50% of patients had 2 years follow up. 10 patients came with local recurrence with various degrees of hematuria and dysuria. 5 patients with radiation fibrosis of suprapubic soft tissues leading to adenoma of suprapubic region and gross scrotal hydrocele, 5 patients with unilateral or bilateral hydronephrosis and chronic kidney failure. 3 patients with unilateral leg adenoma and 2 patients with bilateral leg adenoma. 25 patients had asymptomatic follow up.

Ca bladder is 9<sup>th</sup> commonest tumor if both the sexes are taken together. It is 7<sup>th</sup> most common in male an 11<sup>th</sup> most common in females. Peak incidence occurs in 5<sup>th</sup> to 7<sup>th</sup> decade of life. Probable predisposing factors include tobacco (in form of Naswar, cigarette, Hubble-Bubble) and insecticides

used in agriculture Majority of the patients present with advanced disease (stage II & beyond) and are treated with radiotherapy, surgery or chemotherapy. A lot can be done if patients are given education and health awareness and predisposing factors removed from society & initial reporting is stressed through media etc.

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