A STUDY ON DIFFERENT TYPES OF THE PROSTATE CARCINOMAS

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ABSTRACT

BACKGROUND

Prostate cancer is becoming a significant international health problem. There is a significant variation in incidence of clinical prostate cancer worldwide. We wanted to study the incidence of carcinoma of the prostate, its clinical presentation and different histopathological patterns including rare variants. We also wanted to grade prostatic carcinoma by Gleason system and study the correlation of prostate specific antigen levels with carcinoma whenever possible.

METHODS

This prospective study was performed for a period of 3 years from April 2015 to May 2018. The specimens were collected from Government Medical College Hospital Kadapa, private hospitals and nursing homes in and around Kadapa. The material is collected in 10% formalin. Grossing of suprapubic prostatectomy specimen is done as follows- weight of specimen, shape, colour and consistency, presence of hyperplastic nodules, cyst, areas suspicious of carcinoma.

RESULTS

The results of present study showed that conventional adenocarcinoma was the most common type of prostate carcinoma constituting 88% of cases, 4% of cases were diagnosed as ductal adenocarcinoma, 2% as transitional cell carcinoma, mucin adenocarcinoma, signet ring cell carcinoma and small cell carcinoma. Among these patients 19% graded as score 4 of Gleason's grading, system 4% as score 5, 10% as score 6, 18% as each score of 7 and 8, 21% as score 9 and 10% as score 10. The highest level of PSA seen is in signet ring cell carcinoma.

CONCLUSIONS

In the present study, conventional adenocarcinoma was the commonest type of prostatic carcinoma. Gleason's score 8-10 of Gleason's grading system was the commonest score of the patients with adenocarcinoma of prostate.

KEYWORDS

Prostate Cancer, Adenocarcinoma, Conventional Carcinoma, PSA, Gleason's Grading System.

HOW TO CITE THIS ARTICLE: Sridhar Reddy K, Venkata Ramana P, Vineetha N, et al. A study on different types of the prostate carcinomas. J. Evid. Based Med. Healthc. 2019; 6(27), 1863-1869. DOI: 10.18410/jebmh/2019/380

BACKGROUND

Prostate cancer is becoming a significant international health problem. Prostate cancer is diagnosed in about 30000 & 200000 men each year in UK & USA respectively. There is a significant variation in incidence of clinical prostate cancer worldwide. It is relatively high in northern Europe and North America, intermediate in southern Europe and South America and low in the Far East and Asia. The highest incidence is found in African – American men and the lowest in Chinese men.[1] At present time the prostatic biopsies are received in two forms: needle biopsy, transurethral resection of prostate (TURP). The recognition of limited carcinoma and the prevention of false negative are very important with the needle biopsy. The under diagnosis of limited adenocarcinoma of prostate on needle biopsy is one of the most frequent problems in prostate pathology. Evaluating needle biopsies of the prostate should be methodical taken into consideration architectural features, nuclear features, cytoplasmic features, intraluminal contents. Whereas nuclear features play a prominent role in diagnosis adenocarcinoma of prostate on needle biopsy material, they are often not as helpful in diagnosis of low-grade adenocarcinoma on transurethral resection specimen. A problem unique to material removed by transurethral resection is cautery artefact. Use of immunohistochemistry may help in case where pathologist may not feel comfortable diagnosing as adenocarcinoma on H & E staining sections. Gleason's grading system is the most widely used and officially system for scoring prostatic adenocarcinoma. Correlation with prostate specific antigen level in the serum is an easily available tumour marker

Financial or Other, Competing Interest: None.
Submission 19-06-2019, Peer Review 23-06-2019,
Acceptance 03-07-2019, Published 08-07-2019.
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DOI: 10.18410/jebmh/2019/380

study.[2] The present histopathology study evaluates both needle biopsy material and transurethral resection.

Aims and Objectives

- To study the incidence of carcinoma of the prostate, its clinical presentation and different histopathological patterns including rare variants.
- To grade prostatic carcinoma by Gleason system.
- Correlation of prostate specific antigen levels with carcinoma whenever possible.

METHODS

This prospective study was performed for a period of 3 years from April 2015 to May 2018. The specimens were collected from Government medical college hospital Kadapa, Private hospitals and nursing homes in and around Kadapa. The material is collected in 10% formalin. Grossing of suprapubic prostatectomy specimen is done as follows

- Weight of specimen.
- Shape, colour and consistency.
- Presence of hyperplastic nodules, cyst, areas suspicious of carcinoma.

Step section in specimen in to 3 mm slices, either in the fresh state or after formalin Fixation. Examine each slice carefully for areas suspicious of carcinoma (yellow areas or foci that are harder or softer than the rest of the specimen).[3]

RESULTS

The results of this study showed 51 cases, in which conventional adenocarinoma was the commonest type of prostatic carcinoma constituting 45(88%) cases. There were 2(4%) cases of ductal adenocarcinoma. Transitional cell carcinoma was seen in 1(2%) cases. 1(2%) case each of mucin producing adenocarcinoma. Signet ring cell carcinoma, small cell carcinoma were found. Cases of adenosquamous carcinoma, Squamous carcinoma, basaloid and cystic carcinoma, sarcomatoid carcinoma,lymphoepithelioma-like carcinoma, undifferentiated carcinoma were not seen in this study.

Subtypes	Total No.	Percentage
Conventional Adenocarcinoma	45	88.23
Ductal Adenocarcinoma	2	3.92
Mucin Producing Adenocarcinoma	1	1.96
Signet Ring Cell Carcinoma	1	1.96
Small Cell Carcinoma	1	1.96
Transitional Cell Carcinoma	1	1.96

Table 1. Distribution Pattern and Percentage of Prostatic Carcinoma Subtypes

Procedure	Total No.	Percentage
TURP	23	45.07
Needle Biopsy	28	54.93

Table 2. Distribution Pattern and Percentage of Prostatic Biopsies

Age group of patients included in this study was between 53-91 years. Mean of the age was 68 years. Incidence of prostatic carcinoma was found to be highest in 7th and 8th decades. Lowest incidence of prostatic carcinoma was seen in patients aged above 80 years old.

Age Group	Total No.	Percentage
50-59	7	13.72
60-69	20	39.22
70-79	19	37.26
80-89	4	7.84
90-99	1	1.96

Table 3. Age Distribution of Prostatic Carcinoma and Its Percentage

The mean age of patients diagnosed as ductal adenocarcinoma was the highest (73 years) followed by conventional adenocarcinoma (69 years) and the lowest mean age were seen in mucinous producing adenocarcinoma (54 years) and transitional cell carcinoma (57 years).

Subtypes	Age
Conventional Carcinoma	69
Ductal Adenocarcinoma	73
Mucin Producing Adenocarcinoma	54
Signet Ring Cell Carcinoma	61
Small Cell Carcinoma	63
Transitional Cell Carcinoma	57

Table 4. Mean Age of Prostatic Carcinoma Subtypes

As shown in the table score 9 had the highest number of patients (11 cases, 21.56%) followed by score 4 (10 cases, 19.6%). Number of patients with score 5 was lowest in this study (2 cases, 3.92%).

Score	Total No.	Percentage
Score 4	10	19.6%
Score 5	2	3.92%
Score 6	5	9.8%
Score 7	9	17.66%
Score 8	9	17.66%
Score 9	11	21.56%
Score 10	5	9.80%

Table 5. Distribution of Gleason's Score and its percentage

Most number of cases had a PSA between 100-199, 10-19, followed by the PSA in the range of 20-29 and 30-39 respectively.

PSA	Total No.	Percentage
0-9	4	7.84
10-19	10	19.6
20-29	9	17.65
30-39	7	13.73
40-49	2	3.92
50-59	1	1.96
60-69	1	1.96
70-79	1	1.96
80-89	2	3.92
90-99	3	5.89
100-199	10	19.60
>200	1	1.96

Table 6. Distribution of Serum PSA Level and its Percentage

The highest mean PSA of the patients in this study belongs to signet ring cell carcinoma (160) followed by small cell carcinoma (94) and ductal carcinoma (63). The patients

diagnosed as mucin producing adenocarcinoma had the least mean PSA in this study.

Subtypes	Mean PSA
Conventional Adenocarcinoma	57
Ductal Adenocarcinoma	63
Mucin Producing Adenocarcinoma	13
Signet Ring Cell Carcinoma	160
Small Cell Carcinoma	94
Transitional Cell Carcinoma	34

Table 7. Mean PSA of Prostatic Carcinoma Subtypes

Conventional Adenocarcinoma

There were 45 cases of conventional adenocarcinoma out of 51 cases. It formed 88% of all prostatic carcinomas in this study. Age group of patients diagnosed as conventional adenocarcinoma was between 53 to 91 years. Mean age was 69 years. Patients in age group 50-59 years constituted 5 (11.11%) cases. Patients in age group 60- 69 years, 70-79 years, 80-89 years and 90-99 years constituting 18 (40%) cases, 17(37,78%) cases, 4 (8.89%) cases, 1 (2.22) cases of the patients respectively. Specimens were taken by TURP 20 (44.44%) cases and needle biopsy in 25(55.56%) cases. Patients diagnosed as conventional adenocarcinoma had mean PSA of 57 Mean Gleason's score of the patients with conventional adenocarcinoma in this study was 7, which was the lowest mean score of the patients. Of the patients diagnosed as conventional adenocarcinoma (9 cases, 20%) had score 4, (2 cases, 4.44%), (5 cases, 11.11%), (8 cases, 17.78%), (7 cases, 15.56%), (10 cases, 22.22%) and (4 cases, 8.89) had score 5, 6, 7, 8, 9, 10 respectively. Majority of patients diagnosed as conventional adenocarcinoma had graded as score 9 (10 cases, 22.22%) followed by score 4 (9 cases, 20%). Number of patients with score 5 was lowest in this study.

Prostatic Ductal Adenocarcinoma

Prostatic ducal adenocarcinoma was seen in 2 cases. It formed 4 % of all cases of prostatic carcinoma in this study. Of the patients diagnosed as ductal adenocarcinoma, 1 case is in age group 70-79 yrs., while one was in age group 60-69 yrs. Mean age of cases of prostatic ductal adenocarcinoma was 73 yrs. All 2 cases were diagnosed by needle biopsy. Mean PSA of this group of patients was 63.

Mucin Producing Adenocarcinoma

The patient diagnosed as mucin producing adenocarcinoma was 54 yrs. old with PSA of 13 Gleason's score 8. The patient underwent TURP for diagnosis. PAS (periodic acid Schiff) was positive for this case.

Signet Ring Cell Carcinoma

There was only one case diagnosed as signet ring cell carcinoma. Patient was 61 years old and his PSA was 160. Specimen was taken from this patient by TURP. Gleason's score was 10 for this case.

Transitional Cell Carcinoma

1 case of transitional cell carcinoma found in this study in 6th decade of age, with PSA of 34. Specimen is taken from patient by TURP.

Small Cell Carcinoma

There was a 63 yrs. old patient diagnosed as small cell carcinoma. Patients PSA was 94 and the specimen was taken by needle biopsy.

DISCUSSION

The present study comprises of 51 cases of carcinoma of prostate in a period of 3 years from May-2015 to April- 2018. The specimens are collected from Government medical college hospital Kadapa, Private hospitals and nursing homes in and around Kadapa.

The age incidence range from 53 to 91 years. The youngest patient was 53 years the oldest patient was 91 years. The peak incidence was in 7th decade Shimada H. et. Al.[4] Found in their study highest incidence of carcinoma above the 65 years. In the present study, the peak incidence was above 65 years. Bostwick DG et.[5] Al. Found in their study the carcinoma of prostate was rare before 40 years and they found incidence of carcinoma of prostate 10% at 50 years of age, the incidence raised to 80% by 80 years of age. Sakr WA et Al [6] found carcinoma of prostate in 34% of cases in 50 years of age. All of the patients included in this study were above 50 years old. Ekman P [7] found 70% incidence of prostatic carcinoma in 70-80 years.

Authors	Age Incidence
Bostwick DG et al[5]	10%
Sakr W.A et. al[6]	34%
Present Study	0%

Table 8. Showing Age Incidence of Prostate Carcinoma

Gleason score observed in prostate cancer patients of Chavan P. R. et Al.[8] Study was in the range of 2-9. No malignant case was observed with Gleason score 1 and 10. The distribution of patients was 2.5%, 5%, 11.3%, 12.5%, 18.8%, 31.3%, 12.5% and 6.3% with Gleason score 2, 3, 4, 5, 6, 7, 8 and 9 respectively. In the present study,, the Gleason score observed was in the range of 4-10. The cases with Gleason's score below 4 were not found in the present study. The distribution of patients was 19%, 4%, 10%, 18%, 18%, 21%, 10% in Gleason score 4, 5, 6, 7, 8, 9, 10 respectively.

Gleason Score									
Authors	2	3	4	5	6	7	8	9	10
Chavan P. R[8]	2.5%	5%	11.3%	12.5%	18.8%	31.3%	12.5%	6.3%	0
Present Study	0	0	19%	4%	10%	18%	18%	21%	10%

Table 9. Comparison of Distribution of Gleason's Score with Other Study

Range of PSA of the patients with prostatic carcinoma in the study done by Igwe CU et al.[9] Was 10.6±4.4 while Chavan PR et al.[8] found in their study the mean PSA level as 267.9±558.1. Doherty AP et al.[10] showed in their study of 200 patients with prostatic carcinoma the mean serum

level of PSA as 13.3 ng/ml. (range 18-59 ng/ml). Around half of the patients has PSA level of >10 ng/ml. The mean level of PSA in present study was 58.66 (range 2-256 ng/ml). 92% of patients had PSA levels >10 ng/ml.

Authors	Mean PSA
Igwe CU et al.[9]	10.6±4.4
Chavan PR et al.[8]	267.9±558.1
Doherty AP et al.[10]	13.3
Present study	58.66

Table 10. Comparison of Mean Serum PSA Level with Other Study

In Chavan PR et al.[8] study, the detection range of prostate cancer according to the PSA level was 0.6%, 2.3%, 2.5%, 34.1% and 54.9% in the PSA range of 0-4, 4-10, 10-20, 20-50 and >50 ng/ml respectively. The level of PSA in present study in range of 0-4, 4-10, 10-20, 20-50 and >50 ng/ml was 3.22%, 4.62%, 19.6%, 35.3%, 37.26% respectively.

	PSA Range				
Authors	0-4	4-10	10-20	20-50	>50
Chavan PR et al.[8]	0.6%	2.3%	2.5%	34.1%	54.9%
Present study	3.22%	4.62%	19.6%	35.3%	37.26%

Table 11. Comparison of Distribution of Serum PSA Level with Other Study

Clements R[11] and Randolph TL[12] et al and Epstein JI[13] found that approximately 95% of prostatic cancers are adenocarcinoma. In the present study, near 88% of the patients are diagnosed as conventional adenocarcinoma.

Authors	Incidence of Carcinoma
Clements R[11]	95%
Randolph TL et a[12]	95%
Epstein JI[13]	>95%
Present Study	88%

Table 12. Comparison of Incidence of Adenocarcinoma with Other Studies

Johnson et al.[14] reported in their study of 414 men diagnosed with adenocarcinoma of the prostate in the age between 53-94 years and mean age at diagnosis 74.4 years. Cross CK et al[15] reported in their large series of 2036 patients of adenocarcinoma, the mean age of 162 African-American patients 60 years and 1874 white American patients 62 years. The mean age of patients in present study was 69 years and the patients were in the range of 53-91 years. According to Bostwick DG et al.[5] the incidence of ductal adenocarcinoma of prostate is between 0.2-0.8%. In the present study, the incidence of ductal adenocarcinoma was 4%.

Authors	Incidence of Ductal Adenocarcinoma
Bostwick DG et al.[5]	0.4-0.8%
Epstein JI et al. [13]	0.4-0.8%
Green LF et al.	0.4-0.8%
Randolph et al. [12]	0.2-0.8%
Present study	4%

Table 13. Comparison of Incidence of Ductal Adenocarcinoma with Other Studies

Mean age of prostatic ductal adenocarcinoma was reported 65 yrs. by RO JY et al,[16] Bostwick DG et al.[5] and Epstein JI et al.[13] (Age range from 50-86 years). Mean age of patients in the study done by Tavora et al.[17] was 68 years (Age range from 50-91 yrs.). Brinker DA et al.[18] showed the mean age of patients diagnosed as prostatic ductal adenocarcinoma as 69 years (Age range from 50-89 yrs.). In the present study, there was 2 patients diagnosed as ductal adenocarcinoma with mean age of 73 years (Age range from 63 to 78 yrs.).

Authors	Age Range	Mean Range
RO JY et al.[16]	50-86 yrs.	65 yrs.
Bostwick DG et al.[5]	50-86 yrs.	65 yrs.
Epstein JI et al.[13]	50-86 yrs.	65 yrs.
Tavoran et al.[17]	50-91 yrs.	68 yrs.
Brinker DA et al.[18]	50-89 yrs.	69 yrs.
Present Study	63-78 yrs.	73 yrs.

Table 14. Comparison of Age Distribution of Ductal Adenocarcinoma with Other Studies

Epstein JI et al.[13] and RO JY et al.[16] reported that the incidence of mucinous adenocarcinoma prostate was approximately 0.4% of all prostatic adenocarcinoma. Varghase SL et al.[19] reported the incidence of mucinous adenocarcinoma of prostate between 0.1 to 2.0% of prostatic surgical specimens. In the present study there was only one case of mucinous adenocarcinoma constituting 2% of cases.

Authors	Incidence of Mucinous Adenocarcinoma
Epstein JI et al.[13]	0.4%
RO JY et al.[16]	0.4%
Varghese SL et al.[19]	0.1-2.0%
Present study	2%

Table 15. Comparison of Incidence of Mucinous Adenocarcinoma with Other Studies

The patients diagnosed as mucinous adenocarcinoma of prostate by Osunkoya AO et al.[20] had mean age 56 years at diagnosis (Age range 44-69 years). A case reported by Change JJM et al.[21] was 46 years old. Ronald et al.[22] reported most patients diagnosed as mucinous adenocarcinoma prostate in the range of 51 to 60 years. The patient diagnosed as mucinous adenocarcinoma of prostate in this study was 54 years old.

Authors	Mean Age
Osunkoya AO et al.[20]	56 yrs.
Chang JM et al.[21]	70 yrs.
Werthman et al.[23]	46 yrs.
Ronald et al.[22]	56 yrs.
Present Study	54 yrs.

Table 16. Comparison of Mean Age of Mucinous Adenocarcinoma with Other Studies

Gleason's score of the patients diagnosed as mucinous adenocarcinoma of prostate in the study of Vicidialers et al.[24] was in the range of 6-8 (mean score 7). The mean Gleason score of the patients diagnosed as mucinous adenocarcinoma of the prostate in the study of Osunkoya AO et al.[20] was 7. In the present study Gleason score of the

patient diagnosed as mucinous adenocarcinoma prostate was 8.

Authors	Mean Gleason's Score of Mucinous Adenocarcinoma
Vicidialers et al.[23]	7
Osunkoya AO et al.[20]	7
Present study	8

Table 17. Comparison of Mean Gleason's Score of Mucinous Adenocarcinoma with Other Studies

Werthman et al.[23] reported a case of mucinous adenocarcinoma of prostate whose level of PSA was 2.23 ng/ml. In a case reported as mucinous adenocarcinoma prostate by Chang JM et al.[21] level of serum PSA was 16.27 ng/ml. According to Osunkoya AO et al.[20] mean PSA level was 9 ng/ml. (range 1, 9 to 34.3 ng/ml) in the patients diagnosed as mucinous adenocarcinoma prostate. Serum level of PSA of the patient in present study was 13.

Authors	PSA Level in Mucinous Adenocarcinoma Prostate
Werthman et al.[23]	2.23
Chang JM et al.[21]	16.27
Osunkoya AO et al. [20]	9
Present Study	13

Table 18. Comparison of Serum PSA Level in Mucinous Adenocarcinoma with Other Studies

Wang J et al.[25] reported the incidence of small cell carcinoma of prostate as 0.04% of all prostate cancers, while the incidence of small cell carcinoma was reported 1-2% in the study of Sinan et al.[26] Wagner DG [27] mentioned the incidence of small cell carcinoma of prostate less than 1% of all prostatic cancers. Help ap B et al.[28] with the literature reported the incidence of small cell carcinoma prostate in the range of 0.5-2%. In the present study, there was only one case of small cell carcinoma constituting 2% of the patients.

Authors	Incidence of Carcinoma
Wang J et al[25]	0.04%
Sinan et al[26]	1-2%
Wagner DG[27]	1%
Helpap B et al[28]	0.5%-2%
Present Study	2%

Table 19. Comparison of Incidence of Small Cell Carcinoma with Other Studies

The age of most affected patients of small cell carcinoma of prostate was reported over 50 yrs. (median age, 67 yrs.). In the study of Schron DS et al.[29] and ghali V.S. et al.[30] wang J et al.[25] reported mean age of the patients with small cell carcinoma prostate in the range of 30-95 years with mean age of 71 years, Wagner DG et al.[27] reported mean age of patients with small cell carcinoma prostate 65-69 years. The patient diagnosed as small cell carcinoma in present study was 63 years old.

Authors	Age Range of Small Cell Carcinoma
Schron DS et al[29]	>50 yrs.
Ghali VS et al[30]	>50 yrs.
Wang J et al[25]	30-95 yrs.
Wanger DG et al[27]	65-69 yrs.
Present Study	63 yrs.

Table 20. Comparison of Age Distribution of Small Cell Carcinoma with Other Studies

In a case reported by brown JR et al.[31] as small cell carcinoma, serum level of PSA was 10.7 ng/ml PSA serum level of small cell carcinoma reported by Trotz C[32] was 1.3 ng/ml and in a case reported by Sinan[33] 1.6 ng/ml. Present study showed the level of serum PSA of the patient diagnosed as small cell carcinoma 94 ng/ml.

Authors	Level of PSA in Small Cell Carcinoma
Brown JR et al.[31] (1 case reported)	10.7
Trotz C[32] (1 case reported)	1.3
Sinan et al.[33]	Case 1 70.4
	Case 2 1.6
Present Study (1 case reported)	94

Table 21. Comparison of Serum PSA Level in Small Cell Carcinoma with Other Studies

According to Randolph T et al.[22] and Epstein JI al[13] about two dozen cases of signet ring cell carcinoma have been reported in the literature, while Fogita et al.[34] reviewed 42 cases of signet ring cell carcinoma. There was a case of signet ring cell carcinoma prostate in the present study which is constituting 2% of cases.

Mean age of patients reported as signet ring cell carcinoma by RO JY et al.[16] was 67.5 years (range from 50-80 yrs.). Also, a case of signet ring cell carcinoma is reported by Fogita K et al.[34] who was a 75 years old man. There was only one case of signet ring cell carcinoma of prostate in present study who was a 61 years old patient.

Authors	Age Distribution of Signet Ring Cell Carcinoma
RO JY et al.[16] (review of literature)	Mean age: 67.5 yrs.
Fojita K et al.[34] (1 case reported)	75 yrs.
Present Study	61 yrs.

Table 22. Comparison of Age Distribution of Signet Ring Cell Carcinoma with Other Studies

According to RO JY et al.[16] and Giltman AI et al[35] this tumour was considered as Gleason's pattern 5. Gleason's pattern for the patient diagnosed as signet ring cell carcinoma in present study was 10.

Authors	Gleason's Score of Signet Ring Cell Carcinoma
RO JY et al.[16]	10
Giltman LI et al.[35]	10
Present study	10

Table 23. Comparison of Gleason's Score of Signet Ring Cell Carcinoma with Other Studies

Serum level of PSA in a patient reported by Fogita K et al.[34] was 9.3 ng/ml while serum level of PSA in the patients diagnosed as signet ring cell carcinoma was 160 in present study.

Authors	Level of PSA in Signet Ring Cell Carcinoma
Fogita K et al.[34]	9.3
Present study	160

Table 24. Comparison of Serum PSA Level of Signet Ring Cell Carcinoma with Other Studies

Gaobbels R et al.[36] reported the incidence of transitional cell carcinoma of prostate varied from 1% to 5% of all prostatic carcinomas. According to green LF et al,[37] Johnson DE et al.[38] The frequency of primary transitional cell carcinoma ranged from 0.7 to 2.8% of prostatic tumours in adults. In the study of Varghese SL et al.[39] incidence of primary transitional cell carcinoma accounted for only 2 to 4% of all prostate cancers. In the present study, the incidence of transition cell carcinoma of the prostate was 2%.

Authors	Incidence of Transitional Cell Carcinoma
Goebbels R et al[36]	1-5%
Green LF et al[37]	0.7-2.8%
Johnson DE et al[38]	0.7-2.8%
Varghese SL et al[17]	2-4%
Present Study	2%

Table 25. Comparison of Incidence of Transitional Cell Carcinoma with Other Studies

Green LF et al.[37] n review of literatures found most patients are older with a similar age distribution to urothelial carcinoma of the bladder (range 45-90 years). In the present study, there were 1 patient diagnosed as transitional cell carcinoma (57 years old).

Authors	Age Range of TCC of Prostate
Green LF et al.[37]	45-90 yrs.
Present Study (2 cases)	57 yrs.

Table 26. Comparison of Age Distribution of Transitional Cell Carcinoma with Other Studies

CONCLUSIONS

In the present study, conventional adenocarcinoma was the commonest type of prostatic carcinoma. Gleason's score 8-10 of Gleason's grading system was the commonest score of the patients with adenocarcinoma of prostate. Most of the patients had PSA serum level more than 20 ng/ml.

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