

KNOWLEDGE OF PROSTATE CANCER AND ITS SCREENING AMONG MALES ATTENDING UROLOGY OPD IN A TERTIARY CARE HOSPITAL IN KATHMANDU

Neeraj Subedi, Mohan Khadka and Suman Adhikari

¹Department of Urology, Nepal Medical College Teaching Hospital, Attarkhel, Gokarneshwor-8, Kathmandu, Nepal

ABSTRACT

Prostate cancer is a global burden on public health and it has been ranked as the second most common cancer in males worldwide. The incidence of prostate cancer generally increases with age and men with family history of prostate cancer have an increased risk of getting prostate cancer. The incidence varies across the world, where developed countries have a higher incidence as compared to developing countries. It is well known that early detection of certain grades of prostate cancer leads to a higher remission rate. Starting the screening for prostate cancer at the age of 40 for specific population provides the only way to reduce mortality from prostate cancer. A cross sectional hospital study was conducted using Consecutive sampling of eligible patients in the Urology Outpatient Department (OPD) of a tertiary care hospital in Kathmandu. A total of 378 patients attending Urology OPD were included in the study. A structured questionnaire which was sectioned into sociodemographic characteristics, knowledge of prostate cancer and its screening practices was administered to all the participants. Male more than 60 years of age attending Urology OPD were more (33.3%) followed by age group less than 40 years of age (28.6%). The majority of the patients visiting Urology UPD were from Province 3 (73.0%) and Province 1 (11.1%). Most of these patients were literate (34.9%) but the education level of college or higher were less (17.7%). When knowledge of prostate cancer among the participants were assessed, 55.6% participants replied that they have heard about the prostate cancer and among them, the majority of the participants (28.6%) had heard it from media like TV, radio and internet. The most common symptoms chosen by patients were hematuria (80.2%) and weight loss (72.0%). When asked about the prevention and cure of prostate cancer, 61.1% and 78.6% of them did not know about the prevention and its cure respectively. When knowledge on screening of prostate cancer was assessed, more than half of the participants were found to be aware of screening test and among them 94.4% chose blood test, Serum Prostate Specific Antigen (PSA) as the screening test. Majority of the patients (61.4%) had chosen the age for screening as <40 years and many more (91.3%) wanted to go for screening. Overall, 55.6% had heard about prostate cancer and 30.7% did not know any symptoms of prostate cancer. This study identifies some deficits in knowledge of prostate cancer and screening among participants which can be addressed to increase the knowledge related to prostate cancer. It is thus important that these participants and other men be educated more on these important domains of prostate cancer.

KEYWORDS

Prostate cancer, screening, questionnaire, serum prostatic specific antigen (PSA)

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CORRESPONDING AUTHOR

Dr. Neeraj Subedi,
Associate Professor,
Department of Urology,
Nepal Medical College Teaching Hospital,
Attarkhel, Gokarneshwor-8, Kathmandu, Nepal
Email: nsubedi76@gmail.com
Orcid No: <https://orcid.org/0000-0001-5467-4375>
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INTRODUCTION

Prostate cancer is a global burden on public health and it has been ranked as the second most common cancer in males worldwide.¹⁻⁵ The incidence of prostate cancer generally increases with age and the men with family history of prostate cancer have an increased risk of getting prostate cancer.^{2,6} By 2030, new cases of prostate cancer is predicted to increase to 1,700,000 worldwide per year, with around 500,000 deaths due to this disease.¹

The incidence varies across the world, where developed countries have a higher incidence compared to developing countries. This variation might be due to prostate-specific antigen (PSA) testing.^{1,2} The incidence of Prostate cancer varies with race and ethnicity in the United States and black men in particular have higher preponderance. The disparities might be related to differences in the environment, genetic background and physiologic status.³ An American study found a positive relationship between low level income and low levels of knowledge about prostate cancer.² In contrast, an African American study found that the higher the level of school education and income, the lesser the knowledge of Prostate cancer.⁷

It is well known that early detection of certain grades of prostate cancer leads to a higher remission rate. Starting the screening for prostate cancer at the age of 40 for specific population provides the only way to reduce mortality from prostate cancer.¹ There are also more debates surrounding the benefits of prostate cancer screening than other types of cancer screening. Though many controversies associated with routine prostate cancer screening are going on evidence suggests that screening is beneficial in men with high risks or at least with one first-degree relative with prostate cancer.⁴

In this study, our aim was to assess the extent of knowledge of prostate cancer and its screening among males visiting Urology OPD.

MATERIALS AND METHODS

A cross sectional descriptive study was carried out in the Department of Urology of Nepal Medical College Teaching Hospital (NMCTH) using consecutive sampling of eligible patients. The study was conducted for a period of six months (August 2022 to January 2023). Ethical approval was taken from Institutional Review Committee (IRC) of NMCTH. A total of 378 patients attending Urology OPD were included in the study. Inclusion criteria includes- males, 30 years and above visiting Urology OPD having or not having prostate symptoms. Males less than 30 years of age and those who do not give consent were excluded from the study.

Data Collection: A structured questionnaire was administered to all the participants. A valid well-structured questionnaire, adapted from a previous studies^{2,6,8} was used after obtaining consent from all participants. The questionnaire was sectioned into sociodemographic characteristics (age, place of origin, educational level, marital status, occupation) - 5 questions, knowledge of prostate cancer (location, sex predilection, familial inheritance, symptoms, prevention, cure etc.) - 8 questions and its screening practices (screening test, screening age and willingness to do screening) - 4 questions. The questions were asked by the Principal and Co- investigators to the male patients visiting Urology OPD of NMCTH. Collected data were then entered in Excel sheet and analyzed.

Ethical consideration: Ethical clearance was taken from Institutional Review Committee (IRC) of Nepal Medical College.

RESULTS

A total of 378 patients were enrolled in the study. There were 5 questions on sociodemographic characteristics (Table 1).

Table 1: Sociodemographic characteristics

Sociodemographic variables	n (378)	%
Age (years)		
< 40	108	28.6
40-49	60	15.9
50-59	84	22.2
>60	126	33.3
Place of origin		
Province 1	42	11.1
Province 2	27	7.1
Province 3	276	73
Province 4	21	5.6
Province 5	6	1.6
Province 6	6	1.6
Education level		
None	108	28.6
Literate	132	34.9
Primary and secondary	71	18.8
College or higher	67	17.7
Marital status		
Single	84	22.2
Married	186	49.2
Divorced	15	4.0
Widowed	93	24.6
Occupation		
Student	9	2.4
Unemployed	156	41.3
Employed	151	39.9
Pensioner	62	16.4

The most common age group visiting Urology OPD was more than 60 years (33.3%). The patients were from different regions of Nepal. Most of them were from Province 3. Looking at the education level of participants, most of them are literate (34.9%) and the participants with education level of college or higher was low (17.7%).

One hundred and eighty-six (49.2%) participants were married, 93 (24.6%) were widowed, 84 (22.2%) were single and 15 (4.0%) were divorced. This study has shown that large number of participants (41.3%) were unemployed though majority of the participants were under 60 years of age. Pensioners were 62 (16.4%) and students were 9 (2.4%). Among these, the number of employed participants were 151 (39.9%).

There were 8 questions on knowledge of Prostate cancer (Table 2). One hundred and seventy-two (45.5%) participants have idea regarding the location/ site of the prostate gland and 206 (54.5%) did not have any idea regarding the location of prostate gland. The question was asked if they have heard about the prostate cancer and 210 (55.6%) participants replied that they have heard about it. Third question was asked to those who said they have heard about prostate cancer. So, 96 (45%) participants said that they have heard about prostate cancer from relatives/ friends, 60 (28.6%) participants had heard from Doctors/ nurses and 54 (25.7%) had known about prostate cancer from media like TV, radio and internet.

When the question related to sex predilection, 225, (59.0%) said that it occurs in male and only 6 (1.6%) said that it occurs in both the sexes. One hundred forty-seven (38.9%) participants replied as do not know. About the family inheritance, majority, 249 (65.9%) said they do not know. Seventy-five (19.8%) participants said it runs in families and 54 (14.3%) said it does not run in families. When it came to symptoms of prostate cancer, 262 participants chose for single or multiple answers. The most common symptoms chosen by participants were blood in urine (80.2%) followed by weight loss (72.5%). When asked about the prevention of prostate cancer, 231(61.1%) did not know about the prevention, 51 (13.5%) participants thought it is preventable and 96 (25.4%) participants thought it is not preventable. Similarly for question related to its cure, 297 (78.6%) participants said they do not know the answer, 54 (14.3%) participants thought it is curable and 27 (7.1%) participants thought it is not curable.

Four questions were asked to assess their knowledge on screening of prostate cancer (Table 3). More than half of the participants 213 (56.3%) said that they were aware of screening test and 165 (43.7%) participants do not know about the screening test. The second question about the type of screening test with

Table 2: Knowledge of Prostate cancer

Where is the prostate located? (any idea)	n (378)	%
Yes	172	45.5
No	26	54.5
Have you heard of prostate cancer before?	n (378)	%
Yes	210	55.6
No	168	44.4
Where did you hear prostate cancer from?	*n (210)	%
TV/ radio/ internet	54	25.7
Doctor/nurse	60	28.6
Relatives/friends	96	45.7
Does it affect both men and women?	n (378)	%
Male	225	59.5
Both	06	1.6
Do not know	147	38.9
Does it run in family?	n (378)	%
Yes	75	19.8
No	54	14.3
Do not know	249	65.9
What are the symptoms of prostate cancer?	**n (262)	%
Blood in urine	210	80.2
Infertility	18	6.9
Difficulty in passing urine	78	29.8
Loss of sex drive	15	5.7
Weight loss	190	72.5
Is prostate cancer preventable?	n (378)	%
Yes	51	13.5
No	96	25.4
Do not Know	231	61.1
Is prostate cancer curable?	n (378)	%
Yes	54	14.3
No	27	7.1
Do not know	297	78.6

* Only 210 out of 378 answered this 3rd question

** Only 262 out of 378 participants chose the answer regarding the disease symptoms. It was single and multiple answers.

Table 3: Knowledge on screening

Do you know any screening test for prostate cancer?	n (378)	%
Yes	213	56.3
No	165	43.7
If yes, which screening test you are aware of?	*n (213)	%
Blood test – Se PSA	201	94.4
DRE	12	5.6
At what age should screening for prostate cancer commence?	n (378)	%
<40 years	232	61.4
>40 years	146	38.6
Do you want to get screened for prostate cancer?	n (378)	%
Yes	345	91.3
No	33	8.7

*213 out of 378 participants answered to this question.

options of blood test (serum PSA) and DRE was asked to those participants who said they were aware of the screening test. Two hundred and one (94.4%) participants chose blood test as a screening test and 12 (5.6%) participants chose DRE as a screening test for prostate cancer. For the question regarding the age to commence screening, 232 (61.4%) participants chose for less than 40 years and 146 (38.6%) participants chose for more than 40 years. When the participants were asked if they would like to go for screening and 345 (91.3%) of them answered yes.

DISCUSSION

Prostate cancer is one of the leading causes of cancer related deaths among males globally. Prostate cancer is characterized by both physical and psychological symptoms. Early-stage prostate cancer is usually asymptomatic. More advanced disease has similar symptoms with benign prostate conditions such as weak or interrupted urine flow, hesitancy, frequency, nocturia, hematuria or dysuria. Late-stage prostate cancer commonly spreads to bones and cause pain in the hips, spine or ribs.⁸ In the developed world the probability of being diagnosed with cancer is more than twice as high as in developing countries. A common challenge encountered is late presentation by the affected patients.⁹ This has been attributed mainly to poor awareness, inadequate health education, lack of screening programs for prostate cancer, poverty, poor healthcare

facilities and paucity of specialist urological care.¹⁰

Prostate cancer screening is an attempt to diagnose prostate cancer in asymptomatic men.⁵ The two commonly used screening methods for prostate cancer are DRE and blood test, serum PSA.^{5,8} Large population-based studies have shown increased survival benefits in the early treatment of prostate cancer when compared with no active therapy in men with moderately and poorly differentiated disease.⁵

There was a total of 378 patients enrolled in the study with 33.3% patients falling in the age group more than 60 years. Age less than 40 years comprises the second common age group in our study. Contrast to this, in African study only 15.3% were in the age group 65 and older.² Most of the patients visiting Urology OPD were from Province 3 (73.0%) which is the second most populous province of Nepal. All the patients were willing to answer the questions asked in the Urology OPD. A study done in Jamaica, revealed that 88.0% of the participants have a positive attitude towards screening of prostate cancer.¹¹

Looking at the education level of participants, most of them are literate (34.9%) and the participants with education level of college or higher was low (17.7%). One hundred and eighty-six (49.2%) participants were married, 93 (24.6%) were widowed, 84 (22.2%) were single and 15 (4.0%) were divorced. In a study done in Texas, 44.0% patients were single.⁴ This is quite high compared to our study. In our study, large number of participants (41.3%) were unemployed even though when the majority of the participants were under 60 years of age. Pensioner were 62 (16.4%) and students were 9 (2.4%). Among these, the number of employed participants were 151 (39.9%). An African American study found that the higher the level of school education and income, the lesser the knowledge of prostate cancer.⁷ In a study done in Texas, 19.0% of the patients reported the highest level of education.⁴

When asked about the knowledge of prostate gland and its cancer to our participants, 172 (45.5%) participants have idea regarding the location/ site of the prostate gland and 210 (55.6%) participants replied that they have heard about prostate cancer. In a similar type of study done by Mofolol *et al*,² 73.4% of participants said they had heard about prostate cancer.² In our study, among the participants who had heard about prostate cancer, 96 (45%) participants said they had heard about prostate cancer from relatives/ friends and 54 (25.7%)

had known about prostate cancer from media like TV, radio and internet. In a study in South Africa, type of media exposure was asked in relation to knowledge of prostate cancer and it was found that 71.7% were exposed to TV and 66.8% were exposed to radio.²

In a study done in Jamaica, it was seen that 84.0% participants had moderate knowledge of prostate cancer.¹¹ Similarly, in studies done in Turkey, Italy and Kenya 88.4%, 82.1% and 80.0% of the participants showed good knowledge of prostate cancer respectively.¹²⁻¹⁴ In contrast to these studies, only 47.3% of the participants were aware about prostate cancer in a study done by Ogundele *et al*¹⁵ in Nigeria. In another study done in a Teaching Hospital of Zambia, 33.5% participants had heard about prostate cancer.⁸ Studies found out that high knowledge of prostate cancer is associated with good perceptions and positive attitude towards prostate cancer.¹⁶ In our study, only 225 (59.0%) participants were aware that it occurs in male. Also, majority of the participants 249 (65.9%) did not know about family inheritance. However, studies have shown that the family history of prostate cancer is known risk factor for prostate cancer.^{2,16}

Most of the patient had chosen multiple answers when we asked about the presenting symptoms. The most common symptom chosen by participants were blood in urine 210 (80.2%) followed by weight loss 190 (72.5%). In contrast to our study, a study done in South Africa, participants chose difficulty in passing urine, 85 (53.8%) as the most common symptom of prostate cancer followed by blood in the urine, 46 (29.1%).² Similar to this, a survey done in Europe most of the participants identified urinary problems (86.0%) as the chief complaint followed by blood in the urine (77.0%).¹⁷

Fifty one (13.5%) participants thought that prostate cancer is preventable and only 54 (14.3%) participants thought it is curable in our study. Participants from other studies believed that prostate cancer is curable.^{2,17} More than half of the participants from our study were aware of screening test and most of the (94.4%) participants had chosen blood test as a screening test and very few (5.6%) had chosen DRE as a screening test for prostate cancer. Study showed that in Nigeria, most of the respondents displayed a positive attitude toward prostate cancer screening and treatment but this was in contrast to the finding from the Ugandan study.⁵ In another study done in Ghana, majority of the respondents recognized the importance of screening for prostate cancer and agreed that screening is important and prostate cancer

could be treated if detected early.¹⁶ In contrast to this, a study done in Turkey showed that only 20.7% participants had heard about serum PSA.¹⁸

In our study, most of the participants (61.4%) opted for the age to commence screening before 40 years and 38.6% chose for more than 40 years. Three hundred and forty-five (91.3%) participants said they would like to go for screening. Similar finding was seen in a study done in Jamaica, where 88.0% of the participants have a positive attitude towards screening of prostate cancer.¹¹ In Saudi Arabian study, more than 70.0% of the respondents believe that it is very important to screen for prostate cancer.¹⁸

Screening tests like serum PSA and DRE has resulted in considerable reduction in prostate cancer deaths by 40.0% by 2010. Screening for Prostate cancer is relatively high in European countries.¹⁶ However, in one independent international survey, men in the USA were found to be more aware of tests for prostate cancer (69.0%) compared to those in UK (42.0%).¹⁷ For early diagnosis and treatment programmes of prostate cancer to be effective, the general public must be aware of the disease and its impact, presentation and potential treatment. Result of several studies have shown the public awareness of prostate cancer and support this view.¹⁹⁻²¹

This study gives us the idea about the knowledge of prostate cancer, screening practice and positive attitude towards prostate cancer screening among the patients visiting Urology OPD in Kathmandu. The findings of this study indicate a need for increased public sensitization campaigns on prostate cancer and screening tests as to create awareness about its prevention and early detection.

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