

AWARENESS AND KNOWLEDGE OF PROSTATE CANCER AMONG MEN IN BENIN CITY, NIGERIA.

AGBUGUI JO, OBARISIAGBON EO, NWAJEI CO, OSAIGBOVO EO,
OKOLO JC, AKINYELE AO

ABSTRACT

Cancer of the prostate is a major cause of morbidity and mortality in the elderly male population. The objective of this study was to assess the knowledge of prostate cancer among men in Benin City, Nigeria. This cross sectional study included 402 men above 40 years. A structured questionnaire was administered to each respondent to assess knowledge of prostate cancer. The mean age of the respondents was 51 ± 8.2 years. Majority (74.6%) of the respondents had tertiary education. Two hundred and eighty-eight (71.6%) respondents were aware of prostate cancer. One hundred and twenty men (29.9%) knew that lower urinary tract symptoms are associated with prostate cancer, while 174 (43.3%) men were aware that age is a risk factor in the etiology of the disease. Ninety (22%) respondents were aware of prostate specific antigen (PSA) but only 18 (4.5%) have undergone PSA screening. Level of awareness of prostate cancer and PSA screening was significantly higher in those with tertiary education, ($P < 0.0001$). The overall mean knowledge of the risk factors, symptoms and treatment of prostate cancer was 3.4 ± 1.2 out of 10.0. An in-depth knowledge regarding the risk factors, symptoms, treatment and screening of the disease is lacking. Further health education is needed.

INTRODUCTION

Prostate cancer is a leading cause of cancer related morbidity and mortality in the elderly male population. The incidence of the disease is higher among men of African origin than among those of other races.^{1,2} With an estimated number of 6,236 new cases and 5,098 deaths per year, prostate cancer is presently the most common

urological malignancy seen in Nigeria^{1,3,4}. Despite the significant burden of the disease, various challenges in the management of prostate cancer in the sub-region have been highlighted^{5,6}. A common challenge encountered is late presentation by the affected patients. 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.^{5,6,7} A good level of awareness and knowledge of prostate cancer is likely to lead to early presentation of cases with a resultant reduction in the overall morbidity and mortality associated with the disease. Previous studies from other parts of the country have shown an overall poor

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Agbugui JO, Obarisiagbon EO, Nwajei CO, Osaigbovo EO,
Okolo JC, Akinyele AO

Department of Surgery, University of Benin Teaching Hospital,
Benin City, Nigeria.

Correspondence Author:

Dr Agbugui JO

Urology Unit, Department of Surgery

University of Benin Teaching Hospital, Benin, Nigeria

E-mail: Orumuah@yahoo.com

Tel: 08050526052

knowledge of the disease.^{8,9,10} Thus the aim of this study was to determine the level of awareness and knowledge of prostate cancer among adult males in Benin City, an urban centre in southern Nigeria with a view to providing the necessary recommendations.

METHOD

The cross sectional study involved randomly selected adult males over the age of 40 years in Benin City, Nigeria. The study was done over a 3 week period in February, 2012. A structured questionnaire was interviewer-administered after obtaining informed consent from each respondent. A total of 402 respondents who completed the questionnaire were included in the study. Participants were selected from 5 federal, 5 state and 3 local government establishments, as well as from 3 major markets within the metropolis. The above institutions were randomly selected from a list of government establishments and markets in Benin City.

Research Instrument (Questionnaire): The study utilized a pre-tested 23-item questionnaire to obtain information about awareness and knowledge of prostate cancer

Pretest: The questionnaire was pre-tested in a sample (N=20) of patients in the consultant out-patient department of the University of Benin Teaching Hospital and necessary adjustment made to suit study aims and objectives.

Section A- Demographics: This section of the questionnaire obtained information regarding to the age, marital status, religion, occupation and level of education of the respondents.

Section B- Awareness and Knowledge: This section of the questionnaire was designed to determine the level of awareness and knowledge of the disease. It was made up of

14-items with specific questions about the prostate gland and prostate cancer. The respondents were asked if they have heard of prostate cancer and their source of information about prostate cancer. They were also asked about the risk factors, symptoms and treatment of the disease.

Section C- Screening practice: The third section of the research instrument consisted of 4 items with specific questions about knowledge of prostate specific antigen (PSA) and its role in cancer screening.

Method of Scoring: Respondents who have heard of prostate cancer through any of the listed sources were considered to be aware of the disease. The specific knowledge variables were measured on a 10-point scale where scores between 0 and 4.0 were considered a reflection of inadequate knowledge while scores 4.0 were considered adequate.

Validity: An elaborate review of the questionnaire was undertaken by senior research colleagues to provide face validity.

Statistical Analysis: Data obtained were analyzed using the statistical package for social sciences (SPSS) version 16.0. Data were expressed as frequencies, percentages, means and standard deviation where applicable. $P < 0.05$ was considered significant.

RESULT

A total of 402 men were studied. The ages of the respondents ranged between 41-72 years with a mean age of 51 ± 8.2 years. Three hundred and twelve (77.6%) of the respondents were civil servants. The remainder consisted of 30 (7.5%) market traders, 36 (8.9%) unemployed men, 18 (4.5%) retirees and 6 (1.5%) artisans. Three hundred (74.6%) men had tertiary education while 54 (13.4%) and 48 (12.0%)

TABLES

Table 1: Source of information among respondents who aware of prostate cancer.

Source of information	Respondents n(%)
Radio/Television	114 (39.6%)
Health Education	84 (29.2%)
Family members and friends	54 (18.7%)
Newspapers	36 (12.5%)

Table II: Comparison of Educational level with awareness of prostate cancer and PSA screening.

Educational Level	Pca Awareness		P-value	PSA Awareness		P-value
	yes	no		yes	no	
Primary	18	30		0	48	
Secondary	30	24	<0.0001	6	48	<0.0001
Tertiary	240	60		78	222	

Pca - Prostate cancer

PSA- Prostate Specific Antigen

had secondary and primary education respectively. Two hundred and ninety four (73.1%) respondents have heard of the prostate gland. Two hundred and thirty four (58.2%) knew it is found only in males, 210 (52.2%) knew it plays a role in male reproduction while 150 (37.3%) were aware that the prostate gland can be accessed via a digital rectal examination. Two hundred and eighty-eight men (71.6%) were aware of prostate cancer. Of the above number, 114 (39.6%) got their first information about the disease from the electronic media (radio/television). Eighty-four (29.2%) became aware through health talks in their places of work and worship, and during hospital visits. (Table I).

One hundred and seventy-four men (43.3%) were aware that age is a risk factor in prostate cancer while 120 (29.9%) were aware of its relationship with lower urinary tract symptoms. Thirty (7.5%) respondents had relations with prostate cancer. Ninety men (22.4%) were aware of PSA and its role in the early detection of prostate cancer, however, only 18 (4.5%) have undergone PSA screening. One hundred and thirty men (34.3%) knew that prostate cancer required specialist urological intervention. The overall mean knowledge of the risk factors, symptoms and treatment of prostate cancer was 3.4 ± 1.2 out of a maximum of 10. Those with tertiary education had significantly better awareness of prostate cancer and PSA screening than others in the study. ($p < 0.0001$)

DISCUSSION

Prostate cancer is the most common malignancy seen in men above 50 years, with a high morbidity and mortality rate among men of African origin¹⁻³. The study sought to assess awareness level in an urban population at risk of the disease.

The mean age of the respondents was 51 ± 8.2 years. Though few cases of the

disease have been seen in men in their forties, the incidence and mortality increases at a near exponential rate after the age of fifty¹¹.

Most of the respondents were civil servants in the different government establishments. This may be due to the fact they were more easily accessible and willing to give consent to the study than market traders, laborers, artisans and the unemployed who expressed more reservations about the study.

Majority of the respondents had tertiary education. This finding is in keeping with that of a previous study in another urban centre in Nigeria⁹. Though a significant proportion of the respondents (73.1%) have heard of the prostate gland, a much lower number knew of its physiological function, its position in the male anatomy and its accessibility via a digital rectal examination. Similar findings have been noted in studies done in Africa and in the developed world^{9,10,12}.

Seventy one percent of the respondents have heard of prostate cancer. This is higher than the 21.2% recorded by Ajape et al⁹ in an urban centre in central Nigeria but in keeping with the 80% noted by Oladimeji et al¹⁰ in western Nigeria. Majority (36.6%) of those who were aware of prostate cancer got their first information about the disease from the electronic media, including television and radio, while less than a third became aware through community or hospital based health education programs. The important role of the mass media in the dissemination of health information to the populace can not be over emphasized. It is hoped that with better provision of electricity and communication facilities, majority of the populace at risk would be better opportune to have contact with health related programs on television, radio

and the internet. On the other hand, findings from the study suggest that organized community and hospital based health education is presently inadequate in this region. Studies have shown that health education has led to a significant increase in the level of awareness and knowledge of prostate cancer^{13,14}. A study demonstrated a remarkable improvement in the level of awareness and knowledge of prostate cancer after a 1 hour health seminar on the topic¹³.

Less than half (43%) of the respondents were aware that age is a risk factor associated with prostate cancer. This is not encouraging when one considers the fact that the respondents were all in the age group at potential risk of prostate cancer. Only 29.9% knew that lower urinary tract symptoms have an association with prostate cancer. This may be due to the fact that many elderly men in this sub region regard such symptoms as due to ageing and therefore do not present for treatment on time. This lack of awareness of the symptoms of prostate cancer is one of the factors responsible for late presentation of men affected with the disease in this country^{5,6,7}. Surprisingly, some studies in more advanced countries with better health education programs also show similar lack of awareness of symptoms of the disease^{14,15}. The level of awareness of PSA and its role in prostate cancer screening and management was also low. Only 22.4% of respondents were aware of PSA while 4.5% have ever undergone PSA screening. Similar findings were noted in the sub region^{9,10}. Such low level of screening practice may work against early detection of the disease, especially in asymptomatic men. Presently, PSA screening facilities are not easily affordable and available to men at risk of prostate cancer.

Tertiary education was the only factor noted to be associated with increased awareness and knowledge of prostate cancer and PSA screening. Similar findings were noted in other studies^{13,16}. With a national literacy level of just 68%¹⁷, the level of awareness of the disease among the general populace is expected to be lower than that obtained among the urban cohort in this study. This finding suggests that improving the standard and accessibility of education in the sub region may promote awareness and knowledge of prostate cancer among men.

CONCLUSION

In-depth knowledge of prostate cancer regarding its risk factors, symptoms, treatment and screening practice is still low in our setting. There is need to improve on organized community and hospital based health education programs in order to achieve greater knowledge of the disease among the populace.

REFERENCES

1. Ogunbiyi JO, Shittu OB. Increased incidence of prostate cancer in Nigerians. *J Nat Med Assoc* 1999; 91: 159-164
2. Ferley J, Bray F, Pisani P et al. GLOBOCAN 2002. Cancer incidence, mortality and prevalence worldwide. Lyon, France. IARC press. 2004
3. Nwofor AME, Oranusi CK. Cancer of the prostate: Experience at Nnewi, southeast Nigeria. *Nig J Clin Pract* 2004; 7: 65-68
4. Mohammed AZ, Edino ST, Ochicha O, Gwarzo AK, Samaila AA. Cancer in Nigeria: a 10 year analysis of the cancer registry. *Niger J Med* 2008; 17: 280-4
5. Olapade-Olaopa EO, Obamuyide HA, Yisa GT. Management of advanced prostate cancer in Africa. *Can J Urol* 2008; 15: 3890-8
6. Eke N, Sapira MK. Prostate cancer in Port-Harcourt, Nigeria: Features and outcome. *Nig J Surg Res* 2002; 4: 34-44

7. Dawan D, Rafindadi AH, Kalayi GD. Benign prostatic hyperplasia and prostate cancer in native Africans. *BJU Int* 2000; 85: 1074-77
8. Ukoli F, Osime U, Akereyeni F, Okunzuwa O, Kittles R, Adams-Cambell L. Prevalence of elevated serum prostate- specific antigen in rural Nigeria. *Int J Urol* 2003; 10: 315-322
9. Ajape AA, Babata A, Abiola OO. Knowledge of prostate cancer screening among native urban population in Nigeria. *Nig Q J Hosp Med* 2009; 19: 145-7
10. Oladimeji O, Bidemi YO, Olufisayo JA, Sola AO. Prostate cancer awareness, knowledge and screening practices among older men in Oyo state, Nigeria. *Int Q Community health Educ* 2010; 30: 271-286
11. Yeboah ED. The prostate gland. In: Badoe EA, Achampong EQ, da Rocha-Afodu JT, editors. *Principles and practice of surgery. Including Pathology in the tropics*. 3rd Ed. Accra: Ghana publishing co-operation; 2000: 870-884
12. Arnold-Reed DE, Hince DA, Bulsara MK et al. Knowledge and attitudes of men about prostate cancer. *MJA* 2008; 189: 312-14
13. Wilkinson S, List M, Sinne M, Dai L, Chodak G. Educating African-American men about prostate cancer; impact on awareness and knowledge. *Urology* 2003; 61: 308-313
14. Rajbabu K, Chandrasekera S, Zhu G, Dezylva S, Grunfeld EA, Muir GH. Racial origin is associated with poor awareness of prostate cancer in UK men, but can be increased by simple information. *Prostate cancer and prostatic diseases* 2007; 10: 256-260
15. Egawa S, Suyama K, Shitara T, Uchida T, Koshiba K. Public awareness and knowledge of prostate cancer in Japan. *Int J Urol* 1998; 5: 146-151
16. Olapade-Olaopa EO, Owoaje E, Ladipo M, Adebuseye A. Knowledge and awareness of prostate cancer in men aged 40 and above in Ibadan, Southwestern Nigeria. *UICC World cancer conference 2006*. Washington DC, USA
17. Demographics of Nigeria. *CIA World factbook 2011*. Available at indexmundi.com/Nigeria/literacy.html. Accessed 2/10/11