ORIGINAL ARTICLE

A Survey of the Awareness of Prostate Cancer and its Screening among Men Attending the Outpatient Clinics of a Tertiary Health Center in Lagos, Nigeria

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ABSTRACT

Background: Prostate cancer is the most common cancer among Nigerian men and the second most common cause of death from cancer in men worldwide. The aim of this study was to assess the level of awareness of prostate cancer among men attending the various outpatients' clinics of the Lagos State University Teaching Hospital, Ikeja. **Materials and Methods:** This study is a descriptive cross-sectional study. Self-administered structured questionnaires were used to collect information from consecutives patients attending the various outpatient clinics of the hospital. **Results:** One hundred and forty-six respondents with an age range of 40–80 years participated in this study. Sixty-nine (47.3%) respondents were aware of prostate cancer while 77 (52.7%) have never heard of the disease. Twenty (13.7%) participants were aware of the availability of a screening test for the disease and only 12 (8.2%) have had any form of screening for prostate cancer. **Conclusion:** There is a low level of awareness of prostate cancer among patients seen at our center and also level of voluntary screening for the disease is low.

KEYWORDS: Awareness, Lagos, Nigeria, prostate cancer

BACKGROUND

Prostate cancer is the most common cancer among Nigerian men[1] and the second most common cause of death from cancer in men worldwide.[2] Prostate cancer is more common in blacks and mixed race men compared to men of European or of Asian descent.[3]

The primary goal of prostate cancer screening is to reduce deaths due to prostate cancer through early detection and prompt management.[4] Men with screen-detected cancer can potentially fall into 1 of 3 categories: Those whose cancer will result in death despite early diagnosis and treatment, those who will have good outcomes in the absence of screening, and those for whom early diagnosis and treatment improves survival. Recommended screening test for prostate cancer is the measurement of serum prostate specific antigen (PSA) levels; other methods of screening such as digital rectal examination or ultrasonography are secondary.[4] There are contradictions in the current guidelines by various medical organizations on screening for prostate cancer. The American Urological Association and the American Cancer Society recommended screening for all men aged 50 years and above with life expectancy more than 10 years and also men aged 40–45 years who are at a high-risk for the condition like African Americans and those with affected first degree relatives.[5,6] However, the National Cancer Institute[7] and the United States Preventive Service Task Force[4] did not recommend routine screening for prostate cancer in the general population or in at-risk population group such as blacks. This is because evidence shows that PSA-based screening programs result in the detection of many cases of asymptomatic prostate cancer that either will not progress or will progress so slowly that it would have remained asymptomatic for the man's lifetime. The terms "over-diagnosis" or "pseudo-disease" are used to describe both situations.

Routine prostate cancer screening is not a common practice in Nigeria despite the fact that it is the most common cancer in Nigerian men.[1] Awareness of prostate cancer among Nigerian men is poor[8,9] majority of our patients usually present in the hospital when the disease is already advanced.[10] Previous local studies on prostate cancer highlighted the need to increase awareness and surveillance for the disease. Prevalence of prostate cancer as reported by different researchers across Nigeria is between 2% and 11%.[1,11-13] Nigeria ranked first among nine

African countries with highest prevalence of the disease. The country is also ranked third among countries with significant death from prostate cancers after the United States and India according to World Health Organization.[14]

The main aim of this study is sensitize adult males about prostate cancer and the available screening tests. Objectives of the study include assessing the level of awareness of prostate cancer among adult males attending our outpatient clinics, determining sources of information about the disease, proportion of participants who have had previous screening for prostate cancer, and the association between awareness of prostate cancer and sociodemographic characteristics of the study participants.

MATERIALS AND METHODS

The study took place in the Lagos State University Teaching Hospital. The hospital is a tertiary health facility that is located in Ikeja Local Government Area of Lagos State. The hospital is 484 bedded facility spaces that catered for patients from in and around Lagos State.

The study was a cross-sectional descriptive survey. Consecutives consenting adults male, 40-year-old and above attending the various outpatient clinics at the Departments of Medicine, Surgery and general outpatient of the hospital were included in the study. Excluded from the study were health care workers, patients already diagnosed with prostate cancer, acutely ill patients who were unable to fill or respond to the questionnaires and patients who were unwilling to participate. The estimated total sample size was 138, 50 patients were recruited from each of the three clinics (medical outpatient, surgical outpatient, and general outpatient), making a total of 150 participants.

Study participants were requested to fill a self-administered questionnaire. The questions were written in English language, the attending doctors in filling the questionnaires assisted patients who do not write or understand English. The questionnaire had 21 items and was designed to assess respondents' awareness of prostate cancer, possible family history of prostate cancer, and history of previous screening for the disease.

Information obtained from the participants was coded and no personal identifier was used in order to maintain confidentiality. Acceptance to fill the questionnaire was taken as consenting to participate in the study.

Data obtained during the study was transferred from the questionnaires and saved in a database using the version 15 of Statistical Package for the Social Sciences (SPSS, Inc., Chicago, IL, USA). Categorical variables were expressed as counts and/or percentages. Associations between categorical variables were tested using the Chi-square test; the level of significances was taken as $P < 0.05$. Continuous variables were summarized as mean ± standard deviation.

RESULTS

A total of 150 questionnaires were given out and 146 were returned. The mean age of participants that took part in the study was 58 years, with the age range of 40–80 years. Assessment of level of education of participants showed that 48.6% had postsecondary education and only 2.7% had no formal education [Table 1].

Assessment of awareness showed that 47.3% of respondents were aware of prostate cancer, 52.7% have never heard of the disease. The sources of information about the disease revealed that 21.2% became aware of the disease through the media, 9% heard about the disease from health workers [Table 2].

Among the 47.3% participants who were aware of prostate cancer, 14.4% knew someone who has the disease; the other 32.9% though aware of the disease do not know anyone who has been diagnosed with the disease. Enquiry about the awareness of screening tests revealed that 13.7% of participants were aware of the availability of screening tests for the disease. Only 8.2% of the respondents had actually done any form of screening for the disease. Seven had a PSA test, two had digital rectal examination, one had a biopsy and the remaining two cannot mention the screening test they did.

The study did not show any association between age of participants and awareness of the disease. There was however association between the level of education and awareness, the better educated the participants the better their level of awareness [Table 3].

Table 1: Demographic characteristics of study participants

Variable	Outcome
Age (years)	
Mean	58
Range	40-80
Age group (years) (%)	
40-49	28.1
50-59	21.2
60-69	31.3
≥70	16.4
Level of education (%)	
No formal education	2.7
Primary	18.5
Secondary	30.2
Postsecondary	48.6

Table 2: Sources of information about prostate cancer

Variables	Percentage
Family member	7.5
Friend	5.5
News media	21.2
Health care workers	8.9
Other sources	4.1

Table 3: Cross-tabulation of awareness of prostate cancer with the demographic characteristics of the respondents

Variable	Awareness		Test statistics (Chi-square)
	Yes	No	
Age group (years)			
40-49	21	20	χ^2=0.60, P=0.9
50-59	14	17	
60-69	22	28	
≥70	12	12	
Level of education			
No formal education	2	2	χ^2=17.7, P=0.001
Primary	5	22	
Secondary	17	27	
Postsecondary	45	26	

Significant P<0.05

DISCUSSION

This study showed that the level of awareness of prostate cancer, a condition which is the most common cancer among men aged 40 years and above in our environment is still low, only 47% of respondents from this study are aware of this disease. In a similar study, done in a rural community of Ogun State in South-Western Nigeria the level of awareness of prostate cancer among the participants was 39.2%.[15] This is lower than the awareness rate in our study but the fact that our survey took place in an urban setting and among hospital patients may account for the difference. Knowing the level of awareness about a disease condition is important for both the government and health care workers for the purpose of planning and organization of health care delivery to the group of people affected or to people at risk of developing the disease condition.

The source of information about awareness of the disease showed that majority got their information about the disease from the news media, 45% (31/69) of those who are aware of the disease got their information from this source. It is therefore important in the dissemination of the information about the disease to take advantage of this channel of information for the purpose of health education activities. The fact that all the 146 participants in this study had contact with health care workers during this survey and despite this only 13 (8.9%) of them got any information about the disease from health care workers shows that more efforts still are still needed from the health care workers to educate people about the disease. There is a need for the health care workers to take advantage of their contact with adult males who are at risk of this disease to give them some information about the disease during their contact. Provision of information leaflets containing short information on the common diseases in our community in different languages and made available to all patients when they have contact with healthcare workers may help with improving level of awareness about such diseases among patients.

The low level of awareness about the disease may explain the low number of respondents who have had any form of screening done for the disease. Two large international trials had assessed benefit of screening for prostate cancer.[16,17] These studies have showed that early screening is important in the reduction of morbidity and mortality from the disease. However, awareness about the disease would be first step for the people to present themselves for screening.

CONCLUSION

This study has showed that the level of awareness of prostate cancer among adult male patients attending hospital clinic at our center is low. The most common source of information about the disease among participants is the news media; our health care workers need to do more in disseminating information about the disease. More efforts are needed to encourage adults male who are at risk to go for voluntary screening as early detection have been shown to improve the disease outcome.

REFERENCES

1. Ogunbiyi JO, Shittu OB. Increased incidence of prostate cancer in Nigerians. J Natl Med Assoc 1999;91:159-64.
2. Haas GP, Sakr WA. Epidemiology of prostate cancer. CA Cancer J Clin 1997;47:273-87.
3. Hoffman RM, Gilliland FD, Eley JW, Harlan LC, Stephenson RA, Stanford JL, et al. Racial and ethnic differences in advanced-stage prostate cancer: The Prostate Cancer Outcomes Study. J Natl Cancer Inst 2001;93:388-95.
4. Moyar VA. U.S. Preventive Services Task Force. Final recommendation statement prostate cancer screening. Ann Intern Med 2012;157:120-34.
5. Smith RA, Cokkinides V, Eyre HJ, American Cancer Society. American Cancer Society guidelines for the early detection of cancer, 2003. CA Cancer J Clin 2003;53:27-43.
6. American Cancer Society Guidelines for the Early Detection of Cancer. Available from: http://www.cancer.org/docroot/ped/content/ped_2_3x_acs_cancer_detection_guidelines_36.asp. [Last accessed 2009 Jun 30].
7. National Cancer Institute. Prostate Cancer Screening. Available from: http://www.cancer.gov/cancertopics/pdq/screening/prostate/Patient.[Last accessed on 2012 Dec 12].
8. Ajape AA, Babata A, Abiola OO. Knowledge of prostate cancer screening among native African urban population in Nigeria. Nig Q J Hosp Med 2010;20:94-6.
9. Ukoli F, Osime U, Akereyeni F, Okunzuwa O, Kittles R, Adams-Campbell L. Prevalence of elevated serum prostate-specific antigen in rural Nigeria. Int J Urol 2003;10:315-22.
10. Badmus TA, Adesunkanmi AR, Yusuf BM, Oseni GO, Eziyi AK, Bakare TI, et al. Burden of prostate cancer in southwestern Nigeria. Urology 2010;76:412-6.
11. Ikuerowo SO, Omisanjo OA, Bioku MJ, Ajala MO, Mordi VP, Esho JO. Prevalence and characteristics of prostate cancer among participants of a community-based screening in Nigeria using serum prostate specific antigen and digital rectal examination. Pan Afr Med J 2013;15:129.
12. Yawe KT, Tahir MB, Nggada HA. Prostate cancer in Maiduguri. West Afr J Med 2006;25:298-300.

13. Osegbe DN. Prostate cancer in Nigerians: Facts and nonfacts. J Urol 1997;157:1340-3.

14. Mathers CD, Lopez AD, Murray CJ. The burden of disease and mortality by condition: Data, methods, and results for 2001. In: Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJL, editors. Global Burden of Disease and Risk Factors. Washington, DC: The International Bank for Reconstruction and Development/The World Bank Group; 2006.

15. Atulomah NO, Olanrewaju MF, Amosu AM, Adedeji O. Level of Awareness, perception and screening behavior regarding prostate cancer among men in a rural community of Ikenne Local Government Area, Nigeria. Prim Prev Insights 2010;2:11-20.

16. Prorok PC, Andriole GL, Bresalier RS, Buys SS, Chia D, Crawford ED, *et al.* Design of the prostate, lung, colorectal and ovarian (PLCO) cancer screening trial. Control Clin Trials 2000;21 6 Suppl: 273S-309.

17. Schröder FH, Hugosson J, Roobol MJ, Tammela TL, Ciatto S, Nelen V, *et al.* Screening and prostate-cancer mortality in a randomized European study. N Engl J Med 2009;360:1320-8.