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Informed decision and knowledge about prostate-specific antigen (PSA) test for prostate cancer screening in Thai Male.

Piya Innachit M.D., Julin Opanuraks M.D., Kriangsak Prasopsanti M.D.

Abstract

Objective: To assess men's informed decision and knowledge of the PSA test for prostate cancer screening in Thai male.

Subjects and Methods: We use the constructed questionnaire evaluate 80 Thai males, aged 35-78 years who had a reported PSA tests and attended urological outpatient unit of King Chulalongkorn Memorial hospital, we exclude subject had a prior diagnosis of prostate cancer or had ever undergone prostate biopsy before. Men who received a PSA test for reasons other than screening were excluded.

Results: Overall 73.75% didn't understand why the test was being done, 43.75% understand that "PSA test is screening tool". Only 16% were informed about potential of false positive and false negative of PSA , and 8.75% were informed about further management (transrectal biopsy) if the result of PSA test is abnormal, 6.25% understand the drawback of PSA test such as unnecessary biopsy. Four men aged under 45 years without prostate cancer risk had PSA test in their check up program.

Conclusion: Informed decision and knowledge about PSA such as benefit and harms, the limitations of PSA testing, the consequence of a positive test result had been deficient in Thai male. Informed and shared decision should become the promoting issue in public health.

Division of Urology, Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Introduction

Screening for prostate cancer with prostate-specific antigen (PSA) remains a controversial topic. Because randomized controlled trials have not yet demonstrated whether regular PSA testing reduced prostate cancer mortality[1-3]. Mass screening with PSA could identify asymptomatic men with clinically insignificant tumor and lead them to treatments that carry a risk of harm. False positive and false negative of PSA are possible and lead men to unnecessary biopsy and may induce persistent psychological distress about an elevated PSA. Other risks include the side effects of common treatments for prostate cancer (e.g., impotence and urinary leakage from surgery or radiation therapy) particularly if insignificant tumor was found[4].

Recommendation from worldwide organization supports informing men about the known risks and benefits of PSA testing and helps men make an informed decision about PSA testing[5,6] concerns have been raised regarding the inadequate information given to men prior to having a test. We hypothesized that men do not know the facts needed to provide informed for prostate cancer screening with PSA. Then we explored the knowledge and understanding about PSA testing in Thai male who had ever been test PSA for prostate cancer screening.

Methods and sample

We determine the key facts men ought to know about PSA testing, and construct the questionnaire to assess the knowledge and understanding.

The important key facts are that 1) PSA is screening test 2) false-positive PSA test results can occur, 3) false-negative PSA test results can occur.4) PSA test may lead to unnecessary biopsy, psychological distress.

80 Thai males who have had a reported PSA tests and attended to out-patient urological unit of King Chulalongkorn Memorial hospital participate to the study. The age distribution was shown in table 1. Four men aged under 45 years without prostate cancer risk had PSA test included in their check up program. The study excludes the men who have PSA test by indication of suspected prostate cancer, a prior diagnosis of prostate cancer or previously underwent prostate biopsy.

Table 1 *Age distribution*

Subjects	Numbers	Percent
<45 years	4	5
45-55	7	8.75
56-65	25	31.25
66-75	38	47.5
>75 years	6	7.5

Result

By question “What was the main reason you had this PSA test?”, a minority (12.5%) active sought to find out their own PSA, 67.5% were requested by their physician and 20% included in their check up program (Table 2). In total, 59/80 (73.75%) of men stated that they did not understand why the test was being done, 43.75% understand that “PSA is screening tool (not diagnostic tool)”. Only 16% was informed about potential of false positive and false negative of PSA, and 8.75% was informed about further transrectal biopsy if the result of PSA test is abnormal, 6.25% understood the drawback of PSA test such as unnecessary biopsy (table 3).

Table 2 *The reason of PSA test.*

Reason of PSA Testing		
Actively sought to find out their own PSA.	10	12.5%
Requested by his physician.	54	67.5%
By check up program.	16	20%

Table 3 *The informed decision and knowledge of subjects*

Informed Decision and Knowledge	Numbers	Percent
Understand why the test was being done.	21/80	26.25
Understand that "PSA test is screening tool" (not diagnostic tool).	35/80	43.75
Informed a potential of false positive and false negative of PSA.	17/80	21.25
Informed about further management (transrectal biopsy) if the result of PSA test is abnormal.	7/80	8.75
Understand the drawback of PSA test *.	5/80	6.25

* such as unnecessary biopsy, psychological distress

Discussion

Despite professional recommendations to promote informed consent or "informed decision making" for screening, knowledge about prostate cancer and screening is low[2,3]. Men often have an inadequate knowledge about PSA screening and are not aware of the test's limitations with regard to false-positive and false-negative results. The majority of patients could not identify the benefit and harms of the test.

Changes in prostate cancer screening owing to the widespread use of PSA testing have reduced the proportion of patients with advanced prostate cancer. PSA testing can lead to the detection of early prostate cancer and inconclusive evidence that early detection improves health outcomes and reduce mortality rate[1]. Because the long natural history of prostate cancer may occur when screening test detects small tumor that would otherwise remain clinically insignificant until the patient dies from other causes. Overtreatment appears to be harmful when aggressive treatment of the tumors can cause morbidity and mortality[4,8,9].

PSA test have some limitation, because it is organ specific and not disease specific. There is an overlap in the serum PSA levels among men with cancer and those with benign disease. Thus, elevated serum PSA levels may reflect alterations within the prostate secondary to tissue architectural changes such as cancer, inflammation, benign prostatic hyperplasia (BPH) or prostate gland manipulation. High PSA is indicated for prostate biopsy, mens would be advised by clinician to underwent transrectal prostate biopsy if theirs PSA is elevated. Although up to 30% of men presenting with an elevated PSA may be diagnosed of prostate cancer following this procedure, as many as 75% to 80% are not found to have cancer. This may lead the patients to take

risks of complication such as septicemia, hematuria, bleeding per rectum and urinary tract infection from the procedure[7].

In some instances the biopsy needle may fail to sample representative areas, thus failing to detect present cancer. The reassurance from a negative biopsy finding may not be entirely justified because up to 20% of these patients have been found to have cancer on repeat biopsy[7,8]. To this end, application of PSA derivatives such as PSA density, PSA velocity, age-adjusted values, and, more recently, molecular derivatives have attempted to improve the performance of PSA to decrease unnecessary biopsy and miss diagnosed cancer.

We concern how to advise clinicians and patients on key points a man should understand before having a PSA test. The patients should be educated the advantages and disadvantage of PSA test.

Some clinicians may be unclear how to inform their patients proficiently. It is also possible that men were never informed of having the test, but some men may forget or may not understand the information that they had been given by the clinicians.

There has been general agreement that young men without prostate cancer risk (i.e., those under 45 years of age) and elderly men (those over 75 years of age) should not be screened because it may lead to a improper outcome, check up program usually include PSA test in the package this may cause improper screening in young and elderly who would not get a benefit from screening. PSA screening may not gain benefit from many. First, with the healthcare system can cause economically strain. Second, the overtreatment in the elderly men may cause morbidity and mortality. Third, for patient who choose watchful waiting after diagnosis of prostate cancer may cause psychological distress.

This study is intended to increase the awareness of clinicians who deal with this group of population. Informed decision should become an important issue in public health, further research should be undertaken to identify how to help men fully informed decisions about PSA testing.

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