

Prostate Cancer in Patients with Enlarged Prostate, Ibn Sina Hospital, 2020

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Abstract: Introduction: prostate enlargement is histologic diagnosis that refers to the proliferation of glandular epithelial tissue, smooth muscle, and connective tissue within the prostatic transition zone. Objectives: The study objectives are to measure prevalence of prostate cancer in patients with prostate enlargement. Methods: The study was a descriptive cross-sectional hospital. Base study carried out on fifty patients. Results: 100% of study population did digital rectal examination, 90% of study elements did SPA test, 38% of them were positive, 48% negative. 82% of study population did U/S examination, and 84% did biopsy. 94% of population said that; they know about the disease. Conclusion: The study concluded that prostate cancer is threat for prostate enlargement patients.

Keywords: Prostate, Prostate Enlargement, Cancer Sudan

1. Introduction

Background

A normal prostate gland is approximately 20 g in volume, 3 cm in length, 4 cm wide, and 2 cm in depth. As men get older, the prostate gland is variable in size secondary to benign prostatic hyperplasia. Imagine a walnut nestled beneath your bladder, that's roughly the size of a healthy prostate gland: 20 grams in volume, 3 centimeters long, 4 centimeters wide, and 2 centimeters deep [1]. As men age, this little neighbor can get a bit unruly, thanks to a condition called benign prostatic hyperplasia (BPE). Think of it like the cells in the walnut multiplying uncontrollably, causing it to swell and squeeze the nearby urethra, the tube that carries urine and semen out of the body [2].

This squeeze act throws a wrench in the bladder's usual routine. Picture it like a muscle having to push against a growing weight: it has to contract more forcefully to push urine through the narrowed urethra [20].

Over time, the bladder adapts to this pressure. Its muscles become stronger, thicker, and even overly sensitive, meaning they start twitching even with just a trickle of urine, leading to those frequent "gotta go" moments. In the worst-case scenario,

the bladder just can't compete with the stubborn urethra [4], leaving urine stuck behind and causing incomplete emptying.

So, while BPE might not be life-threatening, it can certainly disrupt your bathroom visits. If you're concerned about your prostate health, especially if you're over 50, talk to your doctor. They can help you figure out if BPE is at play and recommend the best course of action to keep your walnut-sized neighbor in check. Imagine your bladder as a well-behaved house guest, politely emptying itself and leaving when it's finished. Now, picture its neighbor, the prostate gland, acting a bit cheeky. As men age, this walnut-sized gland in front of the bladder can start to swell, a condition called benign prostatic hyperplasia (BPE). Don't worry, it's not cancer and often poses no major health risks. But this cheeky swelling can make it harder for the bladder to fully empty, leading to frequent bathroom visits and a general feeling of "never being quite done."

While BPE may be a bit bothersome, prostate cancer is a different story. It's the most common cancer among men, and it develops when cells in the prostate start multiplying out of control. This can happen slowly, with no signs for years, making it important for men over 50 to get regular checkups. Unlike BPE, prostate cancer can be serious, so early detection and treatment are crucial [3-5].

The story of how prostate cancer grows is complex,

involving changes in genes and cell behavior. But the gist is this: cells start dividing too quickly, forming uncontrolled tumors that can spread. Thankfully, there are treatments available, and catching it early makes a big difference in the fight against this disease. We conducted this study to determine the incidence of prostatic cancer in enlarged prostate patients.

2. Methodology

2.1. Study Design

The study was a cross-sectional hospital based study.

2.2. Study Area

Khartoum state, Ibn-Seena hospital, which is tertiary level of urology department and it is referring center of all over Sudan.

2.3. Study Population

Patients with newly discovered prostatic enlargement
Inclusion criteria
patients with prostatic enlargement in Ibn-Seena Hospital during study period.
45 years or older. Accept to participate. Exclusion criteria:
Refuse to participate. Less than 45 years.

2.4. Sample Size

N=50.

2.5. Data Collection

Close questionnaire was design to provide personal and medical information and filled by researchers themselves.

2.6. Variables

1. Age.
2. Family history.
3. Weight.
4. Eating habits.
5. Residence.

2.7. Data Analysis

Analysis of the data from the questionnaire done by SPSS version 22.0 (The Statistical Packages of Social Science).

2.8. Ethical consideration

The study was ethically approved by the ethical committee of faculty of medicine, Alzaïem-Alazhari University, ministry of health, Ibn-Seena hospital and verbal consent from patients.

3. Results

A total of 50 patients were involved in this study, And result Show majority were aged.

From 66-75 years 23 (46%), Regarding Social status, 98%

Were married.

Many patients 26 (52%) presented first time before 2-3 years frequency was 26 and percentage.

The Majority of patients have not the habbit of Smoking (62%), and many of them smoked for over 5 years (34%) one pack per day. 47 (94%) were aware about the disease and its progress and 12 patinets had History of similar symptoms before. 45 patients had no Family history of prostate cancer. All patients Received treatment, which consist many of surgery and radiation.

There were no alot of alcoholic patients.

Table 1. Shows symptoms and signs of the disease amonf participants.

Variables	Frequency	Percentage
Presence of blood in urine:		
Yes	30	60
No	20	40
Frequency of urination:		
More than 10 times per day	21	42
6-7 times per day	16	32
Less than 4 times per day	13	26
Urinate frequently during night:		
Yes	37	74%
No	13	26%
Presence of blood in seminal fluid:		
Yes	7	14
no	37	74
missing	6	12

Table 2. Shows diagnostic test done for the participants.

Variables	Frequency	Percentage
Digital rectal examination:		
Yes	50	100
No	00	00
PSA test		
Yes	45	90
No	5	10
PSA result:		
Positive	19	38
Negative	24	48
missing	7	14
UltraSound		
Yes	41	82
No	9	18
Peforme biopsy		
Yes	42	84
No	6	12
Missing	2	4

Table 3. PSA result and age correlation.

	Positive	Negative
46-55 years	2	2
56-65 years	5	6
66-75 years	10	11
75 years and above	2	5

4. Discussion

The carried out to estimate prostate cancer in patients with large prostate, the study conducted on 50 patients, data was collected through fully designed questionnaire.

The study showed that 64% of study population were over

65 years old and this result agreed with study No (1) which done by professor R. J Simpson and study No (2) which done by Katy JL Bell, Etl and study No (3) which done by Danel Kok, Etl. 98% of them were married, 80% of them the appearance of disease was in year.

Urinary symptoms appear in 2- years in 52% of study population. 88% had a burning during urination [6-9].

The study showed that 42% of study population urinate more than 10 times daily, 74% urge urinate frequently during night. Just 7% had a blood presence in urine. 70% of them went to urologist [20-22].

Related to diagnosis the study showed that: 100% of study population did digital rectal examination, 90% of study elements did SPA test, 38% of them were positive, 48% negative. 82% of study population did U/S examination, and 84% did biopsy. 94% of population said that; they know about the disease [10-13].

74% of study elements hadn't family history of same symptoms, we can consider this result similar to study No (3) which done by Danel Kok, Etl, and 90% of them didn't have family history of prostate cancer [14].

Related to treatment the study showed that; all of study population received treatment. 84% of them treated by surgery, 4% by radiation [15-18].

38% of study population had history of smoking, 89% of them smoking more than 5 years, 63% smoke one package per day, 20% of study population were alcoholic and we can consider life style is a determinants according to previous study No (3) which said "Genetics, diet and life style may play a role here"

The study showed that 52% of positive PSA were between 66- 75 years and this result strongly agreed with all previous study in literature review [19].

5. Recommendations and Conclusion

5.1. Recommendations

1. Increase awareness about prostate cancer.
2. Encourage people to early detection.
3. Doing screening test periodically to enhance early detection.
4. Doing more researches about this topic.
5. Establishing specialized centers.

5.2. Conclusion

Overall, the study suggests that enlarged prostate is associated with various urinary symptoms and a high prevalence of prostate cancer diagnosis. Lifestyle factors seem to be potential contributing factors. However, further research with larger and more detailed studies is needed to confirm these findings and establish clearer links.

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Conflicts of Interest

The authors declare no conflicts of interest.

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