

Prevalence of Lower Urinary Tract Symptoms in Patients with Prostate Cancer: A Retrospective Observational Study Investigating the Correlation Between Disease Duration and Extent

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Introduction

- Prostate cancer has consistently ranked as the most prevalent non-cutaneous malignancy among men in the United States and Europe since 1984, constituting 19% of all such cancers.
- Recent estimates suggest that approximately 1 in 8 men (12.9%) alive today will be diagnosed with prostate cancer, with 1 in 40 (2.5%) ultimately succumbing to the disease[1].
- Notably, there has been a notable shift towards more favourable disease stages at diagnosis, largely attributed to PSA screening. This trend has resulted in 81% of newly diagnosed cases presenting with localized disease, accompanied by a 75% decline in the incidence of metastatic disease.
- The increasing identification of nonpalpable cancers (AJCC clinical stage T1c), accounting for 60-75% of new diagnoses, underscores the pivotal role of lower urinary tract symptoms (LUTS) in prompting further investigation for prostate cancer suspicion[2].

Hypothesis:

We hypothesize that LUTS serve as the primary mode of presentation for prostate cancer. Furthermore, we anticipate that there exists a substantial duration of LUTS before the diagnosis of prostate cancer, and a proportion of metastatic prostate cancer cases present solely with LUTS.

Aim of the Study:

To determine the prevalence of lower urinary tract symptoms (LUTS) as the primary mode of presentation for prostate cancer and to evaluate the duration of these symptoms prior to diagnosis.

Objectives

Primary Objective:

The primary objective of this study is to determine the most common presentation of prostate cancer, focusing on the prevalence of LUTS, particularly voiding/obstructive symptoms, among affected individuals.

Secondary Objectives:

- To assess the average duration of LUTS preceding the diagnosis of prostate cancer.
- To quantify the proportion of prostate cancer cases that present solely with LUTS.

Study design, materials and methods

Design- Retrospective study

Institute - Cancer Institute Adyar (WIA), Chennai

Study population - Men with Carcinoma prostate presenting to Uro-oncology OPD from 2003 to 2007 (5 years of data) were analyzed which satisfied the inclusion and exclusion criteria. Presenting symptoms including LUTS, haematuria, constipation, bony pain, and pathological fractures, were assessed and documented.

Inclusion criteria

- Male patients with carcinoma prostate- localized and metastatic

Exclusion criteria

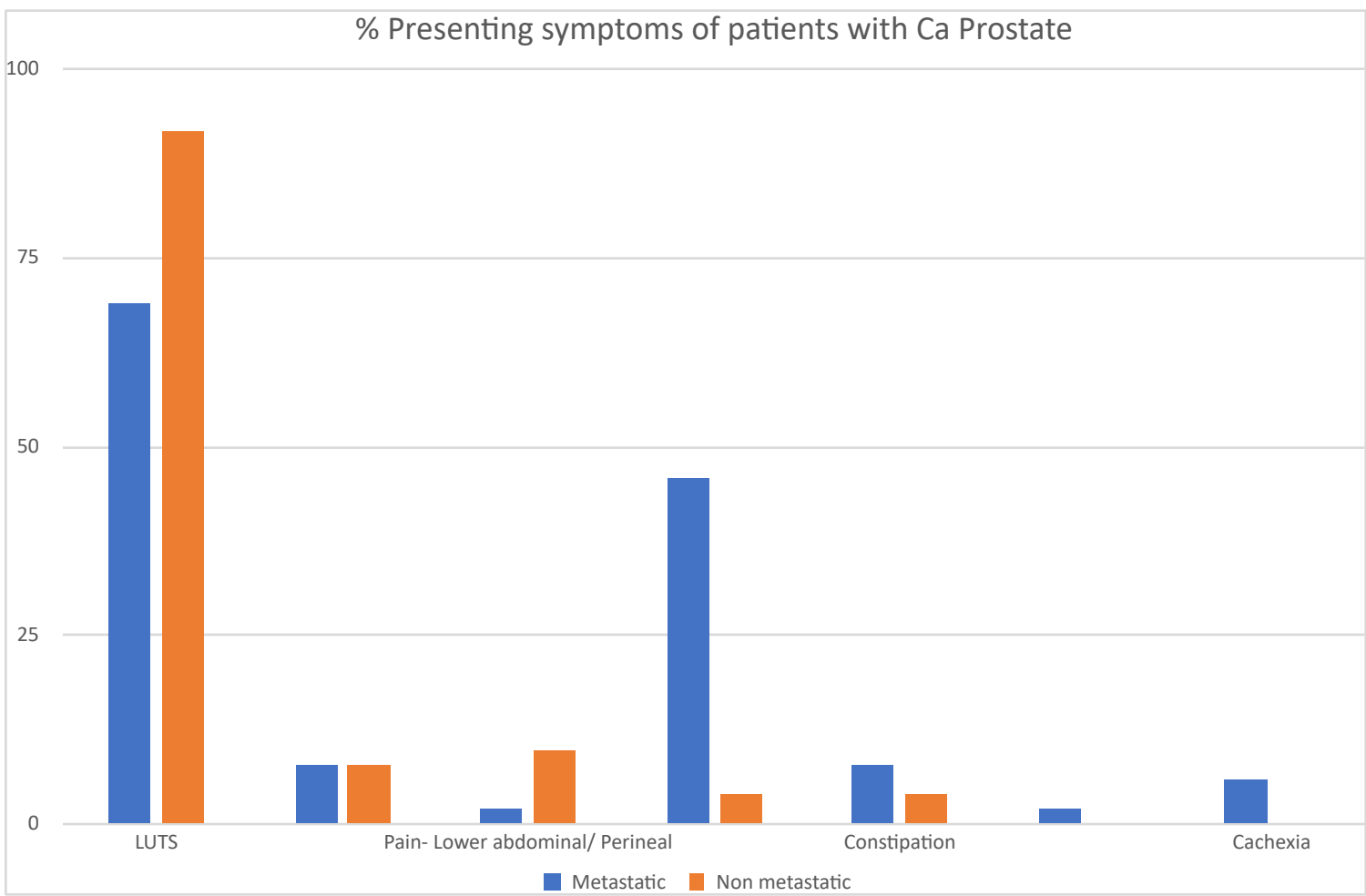
- Presence of other malignancy
- Patients already underwent surgery for carcinoma prostate/ recurrent disease
- Cognitive impairment
- Known case of urethral stricture disease
- Urolithiasis
- Presence of lower urinary tract infection

Results and interpretation

- In this study, a total of 165 patients with prostate cancer were enrolled, comprising 113 with metastatic disease and 52 with localized/locally advanced disease.
- The average duration from symptom onset to presentation was 6.12 months.
- The primary mode of presentation was lower urinary tract symptoms (LUTS), observed in 69% of metastatic cases and 92% of non-metastatic cases.
- Following LUTS, the most common symptoms were bony pain and backache in the metastatic group, and lower abdominal pain in the non-metastatic group.

Interpretation:

A notable portion of patients presented solely with lower urinary tract symptoms (LUTS) in both groups, comprising 18.5% of the metastatic group and 44.2% of the non-metastatic group.



Conclusions

- Prostate cancer patients primarily present at an advanced or later stage of the disease. This presentation is predominantly observed in older individuals. While lower urinary tract symptoms (LUTS) are common, they are often accompanied by additional symptoms such as bony pain, radiating pain, or hematuria.
- In elderly patients with LUTS, benign prostatic hyperplasia (BPH) is typically the primary concern. **However, our institute being a cancer institute, a significant proportion of patients presenting with LUTS are diagnosed with prostate cancer.**
- This data underscores the significance of evaluating patients with LUTS early to detect cancer in its initial stages, which typically have a more favourable prognosis.**
- Despite being slow-growing, prostate cancer is prevalent among older individuals and can have comparatively good outcomes, even when diagnosed at an advanced stage.

References

- Arnold, Melina, Henrike E. Karim-Kos, Jan Willem Coebergh, Graham Byrnes, Ahti Antilla, Jacques Ferlay, Andrew G. Renehan, David Forman, and Isabelle Soerjomataram. "Recent Trends in Incidence of Five Common Cancers in 26 European Countries since 1988: Analysis of the European Cancer Observatory." *European Journal of Cancer (Oxford, England: 1990)* 51, no. 9 (June 2015): 1164–87. <https://doi.org/10.1016/j.ejca.2013.09.002>.
- Mottet, Nicolas, Roderick C. N. van den Bergh, Erik Briers, Thomas Van den Broeck, Marcus G. Cumberbatch, Maria De Santis, Stefano Fanti, et al. "EAU-EANM-ESTRO-ESUR-SIOG Guidelines on Prostate Cancer—2020 Update. Part 1: Screening, Diagnosis, and Local Treatment with Curative Intent." *European Urology* 79, no. 2 (February 1, 2021): 243–62. <https://doi.org/10.1016/j.eururo.2020.09.042>.