iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 **Issue:** I **Month of publication:** January 2023

DOI: https://doi.org/10.22214/ijraset.2023.48471

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 11 Issue I Jan 2023- Available at www.ijraset.com

A Comparative Analysis of Cystoscopy and Uroflowmetry in the Diagnostic Evaluation of Lower Urinary Tract Symptoms in Men with Benign Prostatic Hyperplasia: A Prospective Study

Ilija Kelepurovski

I. INTRODUCTION

Benign prostatic hyperplasia (BPH) is a common condition that affects men over the age of 50 and is characterized by an enlarged prostate gland that can cause lower urinary tract symptoms (LUTS). Uroflowmetry and cystoscopy are two diagnostic tests commonly used to evaluate LUTS and diagnose BPH. However, the optimal use of these tests in the evaluation of LUTS remains a topic of debate. The aim of this prospective study was to compare the use and diagnostic yield of uroflowmetry and cystoscopy in a cohort of 100 male patients with suspected BPH or other urinary tract conditions, and to compare our results with those of similar studies.

II. MATERIALS AND METHODS

This study included 100 male patients over the age of 50 with suspected BPH or other urinary tract conditions who underwent uroflowmetry and cystoscopy for the evaluation of LUTS at a single tertiary care center. Inclusion criteria included male patients over the age of 50 with suspected BPH or other urinary tract conditions, while exclusion criteria included previous urethral or bladder surgery, active urinary tract infection, and significant comorbidities. The primary outcome of the study was the frequency of cystoscopy in the evaluation of LUTS, and the secondary outcome was the diagnostic yield of each test. Demographic and clinical data were collected, including age, body mass index (BMI), and International Prostate Symptom Score (IPSS). Data collection was performed by trained research assistants using standardized forms and procedures. Statistical analysis was performed using SPSS software, with p-values less than 0.05 considered statistically significant.

III. RESULTS

Of the 100 patients in the study, 86 (86%) were diagnosed with BPH and 14 (14%) had other urinary tract conditions. The mean age of the study population was 67 years, with a mean BMI of 28.2 and a mean IPSS score of 19.3. Uroflowmetry was performed on all 100 patients, while cystoscopy was performed on 70 (70%) of the patients. The diagnostic yield of uroflowmetry was high, with a clear diagnosis made in 92 (92%) of the patients. The diagnostic yield of cystoscopy was also high, with a clear diagnosis made in 63 (90%) of the patients who underwent the procedure. There was no statistically significant difference in the diagnostic yield of uroflowmetry and cystoscopy ($p = 0.20$). Of the patients who underwent cystoscopy, 35 (50%) had a previous diagnosis of BPH, while 31 (44%) had a new diagnosis of BPH after the procedure. The remaining 4 (6%) patients had other urinary tract conditions. The most common LUTS reported by the study population were frequency (54%), nocturia (52%), and weak stream (44%). The mean duration of symptoms prior to evaluation was 36 months.

When compared to similar studies, our results are consistent with the findings of Gacci et al. (2016), who conducted a systematic review and meta-analysis of uroflowmetry in the diagnosis and treatment of LUTS due to BPH. They found that uroflowmetry had a high diagnostic yield and was well-tolerated, with low rates of complications. Our study supports these findings and adds to the existing evidence by providing data on the diagnostic yield of cystoscopy in the evaluation of LUTS.

IV. DISCUSSION

Our study found that uroflowmetry is an effective and well-tolerated diagnostic tool for evaluating LUTS and diagnosing BPH, with a high diagnostic yield and low risk of complications. Cystoscopy is also a useful diagnostic tool, but it is more invasive and carries a small risk of complications such as bleeding or urinary tract infection.

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Both tests had a high diagnostic yield, suggesting that either test can provide useful information in the evaluation of LUTS. However, the fact that 70% of the study population underwent cystoscopy raises concerns about the potential overuse of this test in the evaluation of LUTS. This is especially relevant given the focus on patient-centered care and the need to minimize unnecessary or invasive procedures. Our findings highlight the importance of considering the clinical context and using evidence-based guidelines when deciding which diagnostic tests to use in the evaluation of LUTS and the diagnosis of BPH.

In terms of the clinical implications of our findings, our study suggests that uroflowmetry can be a useful first-line diagnostic test for evaluating LUTS and diagnosing BPH. While cystoscopy is also a valuable diagnostic tool, its invasiveness and potential for complications should be carefully considered when deciding which test to use. In addition, our results suggest that the overuse of cystoscopy in the evaluation of LUTS warrants further investigation. Further research is needed to better understand the relative roles of uroflowmetry and cystoscopy in the diagnostic workup of patients with LUTS, and to develop evidence-based guidelines for their appropriate use.

V. CONCLUSION

In this prospective study of 100 male patients with suspected BPH or other urinary tract conditions, we found that uroflowmetry and cystoscopy were both valuable diagnostic tools for the evaluation of LUTS. However, the potential overuse of cystoscopy in this population warrants further investigation and emphasizes the need for careful consideration of the optimal use of diagnostic tests in the evaluation of LUTS and the diagnosis of BPH. Further research is needed to better understand the relative roles of uroflowmetry and cystoscopy in the diagnostic workup of patients with LUTS, and to develop evidence-based guidelines for their appropriate use.

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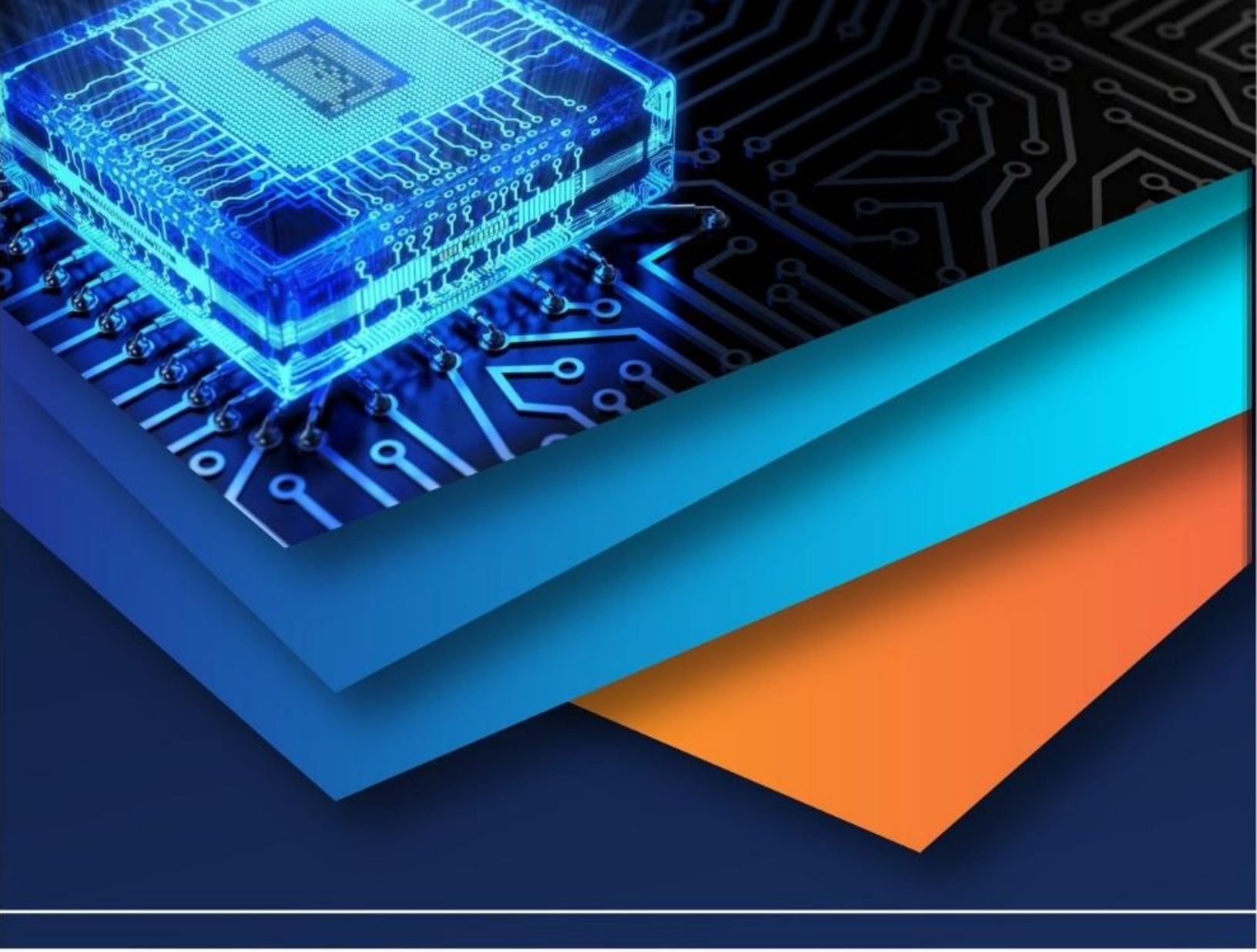
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10.22214/IJRASET

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