



Correlation Between The Presence Of Inguinal Hernia and IPSS

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Abstract

Introduction:

Histologic benign prostatic hyperplasia (BPH) develops also with advancing age. After the age of 45 the prevalence of BPH increases rapidly, reaching 90% at the age of 90. However macroscopic BPH (prostatic enlargement due to BPH) will be detected eventually in half of men with microscopic BPH. The American Urological Association guideline, for BPH, updated in 2006, recommends prostate surgery as the first option just for patients presenting refractory retention, gross hematuria, bladder stones, recurrent urinary tract infection and renal insufficiency, all clearly related to BPH. No recommendations are made in men with concomitant evidence of Inguinal (IH) and bothersome LUTS related to BPH.

Aims & Objectives:

The aim of this study is to verify the correlation between the presence of IH and the intensity of LUTS, related to BPH, quantified through the IPSS and compared with Prostate size

Methods:

Total number of cases- 50, All patients admitted with Hernia above 45 years of age with BPH and LUTS(Group A) and Lower urinary tract symptoms (LUTS) without Inguinal Hernia (Group B) were included in the study
Duration of study- six months

Study Type- Prospective case control study

Results:

A statistically significant difference was found between the PVR mean values between groups A and B (p<0.05). We did not find a statistically significant difference between the number of men with mild, moderate and severe LUTS symptoms between groups A and B, but the presence of IH correlated with a higher IPSS.

Conclusion:

Patients with IH present higher IPSS. However prostate size does not have a role in IH.

The role of IPSS as a marker to predict the development of clinical IH needs further study.

Keywords: Inguinal Hernia, Prostate, BPH, IPSS, LUTS

Introduction

Lower urinary tract symptoms (LUTS) are prevalent among elderly men[1]. Multiple etiologic factors have been described with the genesis of urinary symptoms, including the effect of aging on the nervous system and bladder, metabolic derangements, changes in fluid regulation,

obstruction and autonomic overactivity. LUTS can be due to mechanical obstruction to urine flow or due to bladder hypocontraction.

Histologic benign prostatic hyperplasia (BPH) develops also with advancing age. Initial development of microscopic BPH begins as early as 25 – 30 years. After the age of 45 the prevalence of

BPH increases rapidly, reaching 90% at the age of 90. However macroscopic BPH (prostatic enlargement due to BPH) will be detected eventually in half of man with microscopic BPH.

The incidence of inguinal hernias (IH) also increases with age[2]. Various factors contribute to the development of IH, including obesity and work-related physical activity[3]. The American Urological Association guideline, for BPH, updated in 2006, recommends prostate surgery as first option just for patients presenting refractory retention, gross hematuria, bladder stones, recurrent urinary tract infection and renal insufficiency, all clearly related to BPH. No recommendations are made in men with concomitant evidence of IH and bothersome LUTS related to BPH[4][5].

Need For Study:

The diagnostic evaluation of patients with LUTS suggestive of bladder outlet obstruction (BOO) includes symptomatic evaluation. Although symptom scoring systems have proved to be a useful tool to quantify clinical symptoms, several studies have shown that none of these scores correlate with BOO and BPH related complications, furthermore they are not disease specific.

This study was done to determine whether BPH is a significant cause factor on formation of inguinal hernia in elderly patients.

Aims & Objectives:

The aim of this study is to verify the correlation between the presence of IH and the intensity of LUTS, related to BPH, quantified through the IPSS and compared with Prostate size

Materials And Methods

Source of data- all patients admitted for treatment of BPH in general surgery and urology department over the age of 45years in KIMS hospital, Bangalore.

Total number of cases- 50

Duration Of Study- six months(Jan 2019- Jun 2019)

Study Type- Prospective case control study

Methodology

The study subjects were divided into two equal groups as

Group A- composed of 25 patients with IH with BPH.

Group B- composed of 25 patients with BPH without IH.

Inclusion criteria: All patients admitted with Hernia above 45 years of age with BPH and LUTS(Group A) and Lower urinary tract symptoms (LUTS) without Inguinal Hernia (Group B) were included in the study.

Exclusion criteria: Presence urinary tract infection, urethral stricture, prostate cancer, a past history of abdominal surgery, previous therapy for voiding dysfunction during the last 3 months, or taking medications that could affect the lower urinary tract.

IPSS, Post Void Residual Volume & Prostate Volume were assessed and compared between 2 groups.

LUTS were quantified using the 7 question IPSS and the patients were classified as having mild, moderate or severe symptoms according to the final IPSS score: IPSS from 0 to 7 – mild symptoms; IPSS from 8 to 19 – moderate symptoms; IPSS > 20, severe symptom.

IH was detected by physical examination.

Lower urinary tract symptoms (LUTS) include voiding or obstructive symptoms (hesitancy, poor and/or intermittent stream, straining, prolonged micturition, feeling of incomplete bladder emptying, dribbling, etc.,) and storage or irritative symptoms (frequency, urgency, urge incontinence, and nocturia)[6].

The severity of LUTS is best measured using quantitative symptom indices. Noninvasive parameters of evaluation included post-void residual (PVR) and measurement of prostate volume (PV) by ultrasound.

Results

The mean values of the noninvasive parameters: PVR and PV for Groups A and B are summarised.

Table 1: Mean Ipss, Post Void Residual Urine (Pvru), Prostate Volume(Pv)

Group	IPSS	PVRU(ml)	PV(ml)
Group A	19.6	55.6	48.9
Group B	13.2	37.8	50.7

A statistically significant difference was found between the PVR mean values between groups A and B ($p < 0.05$).

We did not find any correlation between PV, and PVR with the LUTS intensity assessed through the IPSS. We did not find a statistically significant difference between the number of men with mild, moderate and severe LUTS symptoms between groups A and B, but the presence of IH correlated with a higher IPSS.

A possible explanation for this association remains on the fact that patients with obstructive voiding dysfunction may need to strain to void, this effort over time may have a direct impact on the abdominal wall contributing to the development of IH, another possibility remains on the fact that IH and BPH are part of the ageing process which incorporates other functional and anatomic disorders, if all these changes have a cause effect relation or are independent factors just related to the ageing process, are still to be defined.

Discussion

Despite many experts attempting to explain the association between LUTS-BPH and hernia formation, the relation between LUTS-BPH and IH might be more complicated and intertwined because both are affected by ageing[7].

Our findings are supported with the results of the study published on 2011 by Reis et al, who were the first to investigate the correlation between the presence of IH and LUTS-BPH through quantification by the International Prostate Symptom Score (IPSS)

The IPSS includes seven questions for storage symptoms (frequency, urgency and nocturia) and voiding symptoms (incomplete emptying,

intermittency, weak stream and straining) and indicates how LUTS-BPH affects urine void[6]

Conclusion

Patients with IH present higher IPSS. However prostate size does not have a role in IH. The role of IPSS as a marker to predict the development of clinical IH needs further study.

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