The Significant Relationship between A Prostatitis and A High Level of Glycated hemoglobin in Non-Insulin dependent Diabetes Mellitus in Al-Diwaniah Province

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Abstract

Objectives: The aim of this study was to determine the effect of type 2 diabetes mellitus (DM) on the serum level of prostate-specific antigen.

Background: Prostatitis is an inflammation of prostate gland; several kinds chronic (nonbacterial) prostatitis and severe bacterial prostatitis, pelvic pain syndrome. Glycated Hemoglobin A1c (HbA1c) has been widely recognized as a biomarker predictor for the severity of Diabetes Mellitus (DM). Glycated Hemoglobin (HbA1c) is a pivotal biomarker reflecting both fasting and postprandial plasma glucose concentration over the preceding 120 days. Increasing epidemiologic evidence suggests that diabetes and associated hyperglycemia and insulin resistance significantly increase the risks of BPH and LUTS.

Method: A total of 175 blood samples were tested for Glycated hemoglobin with high R.B. Sugar and PSA level. (HbA1c) might have been quantified by (I Chroma 11 and ELISA).

Results: One Hundred Seventy Five patients aged (22 – 70 ± 10 years) with Type 2 DM, were studied who have signs of prostatitis inflammation, 100 under study and 75 control group.

Conclusion: A significant association between poor glycemic control and high PSA level of prostatitis among diabetic patients under study

Keywords: Benign prostatic hyperplasia, Bacterial Urine culture, Diabetes, Hyperglycemia, Insulin resistance. CBC

1 Introduction

Prostatitis is an inflammation of prostate gland; several kinds chronic (nonbacterial) prostatitis and severe bacterial prostatitis, pelvic pain syndrome. Prostatic alcer grows in abnormal [1]. In prostatitis the digital test usually detects an enlargement tender, warm, possibly irregular shaped prostate while digital test of prostate patients with prostate cancer usually detects a hard prostate [2]. Acute prostatitis is a serious bacterial infection of the prostate gland. This infection is a medical emergency. Acute prostati-
tis is relatively easy to diagnose due to its symptoms that suggest infection. The organism may be found in blood or urine, and sometimes in both.[2] HbA1c reflects normal plasma glucose again the past eight with twelve weeks [3] The point when there is poor glycemic control of high level and poor C-peptide making renal ailment What’s more predisposition with UTI [4]. With type 2 diabetes, Insulin resistance leads to lack of sensitivity to insulin, there will be acquaintanceship the middle of poor glycemic control and common UTI Around diabetic men[5]. Urinary tract infection will be a regular finding around diabetes mellitus patients [6]. Proof abounds that UTI is more as a relatable point on diabetics over the individuals without diabetes[7]. Furthermore markers from claiming immunemediated betacell decimation. Glycated hemoglobin (HbA1c) will be Notwithstanding utilized Similarly as a critical pointer and marker of poor glycemic control which incorporate common retinopathy Furthermore nephropathy around diabetics[8].

2 Materials and Methods

A total of 175 blood samples were tested for Glycated hemoglobin with high R.B. Sugar ; PSA and high level of (HbA1c ). 75 who have bacterial infection might have been quantified by (I Chroma 11 and ELISA) utilizing HbA1c test kits (biotech diagnostics, korea). and urine samples from patients were cultured and direct examination , 75 control were examined also from a period January 2020 to May 2022 Specimen were on chocolate blood agars McFarland [9] . Samples were labeled and transported to the laboratory in portable container, blood samples were investigated for PSA level by using ELIAS test methods.

3 Statistical analysis

SPSSv13.0was used for analysis. Quantitative variables expressed as mean ± SD. The comparison of categorical data. P < 0.05 statistically significant.

Table 1: Number and Ratio of isolated Bacterial Types

<table>
<thead>
<tr>
<th>Bacterial isolate</th>
<th>No.(%)</th>
</tr>
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<tbody>
<tr>
<td>Escherichia coli</td>
<td>40 (51.51 %)</td>
</tr>
<tr>
<td>Klebsiella pneumonia</td>
<td>12 (9.09)</td>
</tr>
<tr>
<td>Proteus mirabilis</td>
<td>10 (18.18)</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>13 (21.21)</td>
</tr>
<tr>
<td>Total</td>
<td>75 (100 %)</td>
</tr>
</tbody>
</table>

3.1 Results and Discussion:

One Hundred Seventy Five patients aged( 22 – 70 ± 10 years) with Type 2 DM, were studied who have signs of prostatitis inflammation ,100 under study and 75 control group. Between January 2020 and May 2022, One hundred patients aged of (20 -70) years who attended AL-Dywaniah Teaching Hospital and 75 as control , were Primary direct exam of HbA1c test and PSA level after rectal finger test to voiding bladder ( VB3) [10] and culturing on MacConkey and blood-agar revealed that 67 patients of high blood sugar suffering from prostatic bacterial inflammation, the results showed that 75 (67%) characterization revealed that four bacterial types were identified in high level PSA [11] diabetes patients belong to Staphylococcus aureus as Grampositive 8 and Gram negative bacte ( 40 Escherichia coli, 12 Klebsiella spp, 10 Proteus spp. and 13 Staphylococcus urease) With increases of white blood cells by(CBC). The cooperation the middle of poor glycaemic control Furthermore UTI might have been evaluated. A P-value < 0. 05 might have been said will a chance to be noteworthy. Within each group, compared with the baseline value, there was a significant reduction in fasting and post-prandial blood glucose, There was also hyper in total cholesterol, triglyceride and LDL at the end of the study by r-kray instrument (P <0.01). However, the level of HDL remained unindex, changed (P >0.01)[12]. Prostatitis symptoms may increase a man’s risk for benign prostate hypertrophy, lower urinary tract symptoms and prostate cancer[13].

3.2 Conclusion

A significant association between poor glycemic control and high PSA level of prostatitis among diabetic patients understudy. Men with high PSA levels should follow up with a doctor, but should not assume they have cancer [13]. There is need for routine screening of all diabetic men for UTI and increased HbA1c levels should serve as adjunct marker for compulsory urine microscopy and culture statistical analysis and manuscript writing[14] prostatitis was thought to be secondary to excessive to physical or sexual activity [15]
The significant relationship between a prostatitis and a high level of glycated hemoglobin

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Conflict of interest: NO

References


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