

Prevalence of Urinary Incontinence in Diabetic Patients; A Cross-Sectional Study

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Highlights:

- Prevalence of urinary incontinence in diabetic patients
- Problems faced by diabetic patients
- A cross-sectional study

Abstract:

Diabetes is related with high risk of Urinary incontinence (UI). The study was conducted to inspect that diabetes rises the risk and severity of urinary incontinence. The purpose of the current study was to examine the relationship between diabetes and urinary incontinence and factor that influence the chances of UI among diabetic patients,

Objective:

This study assess the high risk of prevalence of Urinary incontinence (UI) among diabetic patient suffered by it.

Methodology:

This cross-sectional study was carried out in diabetic patients, who were suffering from urinary incontinence. A total number of one hundred thirty (130) diabetic patients of all ages from 2 months to 85 were included in this study. Epidemiological study includes both male and female population. Self-administered questionnaire was formulated for multivariate investigation, to find out the problems, symptoms and associated risk factors for risk factors.

Results:

Out of 130 diabetic patients about 93(71.5%) have complain of urinary incontinence, including 50(38.5%) male and 80(61.5%) women. UI is more common in women as compared to men. There is strong relationship between diabetes and UI, but

age, type of delivery, menopause is weakly associated with UI. Urinary incontinence is more dominant in diabetic patients. 54(41.54) complaining urinary leakage and 39(30.00) do not have urine leakage.

Conclusion:

Urinary incontinence is inconvenient problem for diabetic patient. Self-administered questionnaire was designed to relate the problem and associated risk factors, so that essential steps are carried out for its avoidance and management.

Key Words:

Diabetes Mellitus, Urinary incontinence, Cross Sectional Study

Introduction:

Diabetes is a group of metabolic illnesses in which blood sugar levels increase due to extended period. Symptoms of high blood sugar include recurrent urination, increased dehydration, and increased starvation. Type 1 DM may lead to pancreas's failure and unable to produce sufficient insulin. Type 2 DM initiates with a condition of insulin resistance, in which insulin unable to respond to cell. Later liberal of bladder brokenness mimics a propelled condition enclosing an expansive range of lower urinary tract indication (LUTS) containing urinary direness, recurrence and incontinence. More than half of diabetic people with have bladder brokenness. Over 50% of diabetic men and women with have bladder dysfunction According to Clinical observations, there is increase susceptibility between diabetes mellitus and severity of infections.¹ Urinary tract infection is one of the most common infection

which occurs with increased frequency and severity in diabetic populations and associated with many complications.² Sort 2 diabetes and urinary incontinence are delayed, and incessant clutters. No investigations jump out at establish that non diabetic ladies with strange glucose levels are at expanded hazard for incontinence. Risk of type 2 decreases if individual reduce weight and increased physical activity.³ A study by Brown et al. proposed that diabetes increased the threat for urge incontinence by 50%, but did not affect the risk for stress incontinence. 18 million grown-up in the U.S. have diabetes, guess of grown-up with pre-diabetes have impeded glucose resilience and disabled fasting glucose. Urinary incontinenes by and large present in almost half of moderately aged and grown-up ladies.⁴ The event of lower urinary tract disorder in diabetic patient's increments by expanding age, longer diabetes period and related diabetes inconveniences like erectile brokenness. There was a variety in seriousness of lower urinary tract disorder in patients in urologic administration or in treatment of a general doctor.⁵ The immense number of diabetic patients with lower urinary tract disorder by and large and urologic preparing coordinates an underestimation of the issue. Urinary tract contamination is connected with urinary incontinence in the two ladies and men. According to randomized controlled preliminaries diabetes can be anticipated by thorough way of life mediations in high hazard pre-diabetic gathering.⁶ Risk factors involved former antimicrobial treatment and macro vascular problems in women having obesity and prostatic syndrome in men. In lower GI, Constipation is the most common symptom but can replace with episodes of diarrhea. Assessment of bladder dysfunction should be performed for persons with diabetes who complain of frequent urinary tract infections, incontinence, or a palpable bladder.⁷ Diabetes is connected with earlier beginning and expanded seriousness of urologic maladies which result in costly and obliterating urologic challenges.

Urologic intricacies, including bladder brokenness, sexual, erectile brokenness and furthermore urinary tract diseases deeply affect the personal satisfaction of diabetic people.⁸ Diabetic ladies treated with insulin are fundamentally at higher danger of urge incontinence than those treated with oral pharmaceuticals or eating regimen.⁹ Rigorous lifestyle therapy and weight loss may be effective but the value of predictable managements for urinary incontinence in diabetic women which has been questioned.¹⁰ With waning glycemic control the risk of urinary incontinence also increase, but the power of this relationship is based on the level of glycemic control and urinary incontinence. Glycemic control may make spontaneous sense as adjustable risk factor.¹¹ Stress urinary incontinence (SUI) usually occurs when the pressure in bladder surpasses urethral closure pressure, causing temporary opening of sphincter and urinary leakage. It is caused by physical activities that increases intra-abdominal pressure such as walking, lifting heavy objects, coughing, and sneezing.¹² Psychological illness includes reduced self-esteem, social extraction, depression, anxiety, irritability, worry, frustration, tension and due to discomfiture, and condensed social and leisure events. It is assessed that approximately 50 percent of adult women experience urinary incontinence, and merely 25 to 61 percent of symptomatic community-lodging women pursue attention.¹³ Physiotherapy is frequently ignored by women who is suffering from this condition, perhaps because of their lack of awareness about the role of physiotherapy in the management of urinary incontinence. Sometimes, physicians recommended medication for sustained times and do not refer these patients for physiotherapy. Pelvic floor exercises are harmless and operative way of improving symptoms of urinary incontinence. The lack of awareness of welfares of these trainings (exercises) may leads to deprived discussion and physiotherapy recommendation. Women who complaining urinary incontinence

to physiotherapist. Prevalence of urinary incontinence in women is nearly 30 to 40% in middle aged and 50% in older women.

Methodology:

A total of 130 patients was selected from different hospitals. Data was collected by interviewing the patients face to face and simple questionnaire related to urinary incontinence will be given to them to fill it and the prevalence of urinary incontinence will be evaluated from this data. self-administered questionnaire was designed to relate the problem and associated risk factors, so that essential steps are carried out for its avoidance and management.

Results:

In this study 50(38.5%) were male and 80(61.5%) were female. 93(71.5) diabetic patients have urinary complain and 37(28.5) do not have this complain (Figure 1) 54(41.54) have urinary leakage several times a day, 13(10.0) have 2-3 times a day, once a week is 4(3.08), occasional is 20(15.38) and 39(30.00) do not have urine leakage (Figure 2)

Do you have complain of urinary leakage?

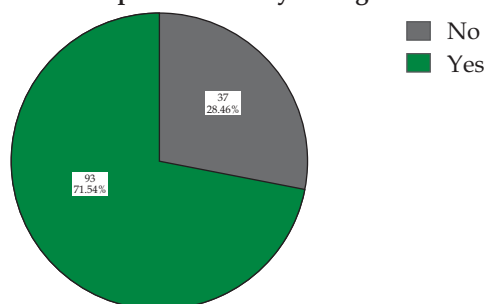


Figure 1: Representation of Complain of Urinary Leakage among Respondents

How often do you leak urine?

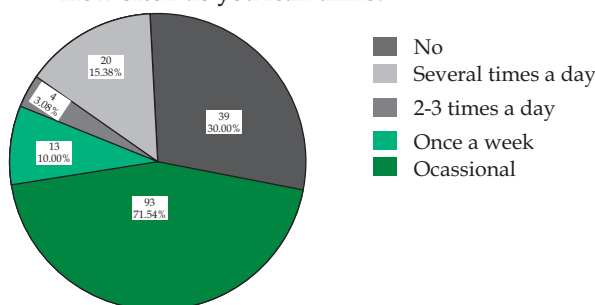


Figure 2: Representation of how often is Urinary Leakage among Respondents.

Discussion:

The most significant conclusion of our investigation is that diabetes mellitus is an autonomous hazard highlight for urinary incontinence. Diabetic patient in our study population had increased risk for UI including male or female both, other studies just performed on women population⁽¹⁹⁾. For the first time high risk prevalence of urinary incontinence among diabetic mellitus is shown. Previous studies formed lower risk factors, respectively.^{19,20} Most studies point out age as risk factors for UI, but there is no age limit for UI among diabetic patients. Higher age is unmodifiable risk factor but it also goes along with a higher threat for prevalence of UI in diabetes. Even though age in our study also were considerably related with urinary incontinence, the effect size was too small to interpret into clinical implication. According to our current studies prevalence of UI among diabetic patients is 71.5, relatively in other studies prevalence found of 41.0 which is consider as less. According to current research 54(41.54) Of diabetic patients complain of urinary leakage several times a day, 13(10.0) have 2-3 times a day, once a week is 4(3.08), occasional is 20(15.38) and 39(30.00) do not have urine leakage. 11(8.46) complaining of blood in urine. We included only diabetic population, instead of any comparable cross sectional studies between diabetic and non-diabetic. That's why our prevalence rate are possibly higher than comparable national prevalence studies. These results specify that patients with diabetes should be given proper info about urinary incontinence by medical staff. If the people want to acquire primary care for urinary incontinence, it is required for them to access any physician or urologists. According to our current studies 29(15.38) diabetic patients with UI complain of feeling of incomplete emptying. 48(36.92) diabetic patients have very low stream, dribbling, discomfort, burning pain. 8(6.15) complain of stopping and starting of urine stream. Past restorative history of urinary tract disease (UTI) and procedures of general

wellbeing were linked with the two consequences. Diabetic ladies expressed trouble in controlling pee. They utilize cushions since they felt unfit to totally exhaust the bladder, being ignorant of spillage, and have distress in pee⁹. Out of 130 Diabetic patients 24(18.46) have undergone any hysterectomy or surgery for prolapse. It can be claimed that most diabetic patients were not in progressive stage of the condition because of the use of oral anti-diabetic therapy. This conclusion may be biased because patients were using insulin therapy all over the world. In these type of cases, diabetic complications are not suspected to be very dominant because they occur after sustained disease duration < 8 years. In 72(55.38) diabetic patient physical activities does not activates leakage while some people complaining leakage due to physical activities, in 6(4.62) due to coughing, in 6(4.62) due to sneezing, in 4(3.08) due to lifting, in 11(8.46) due to coughing and sneezing. In 9(6.92) due coughing, sneezing, lifting and in 5(3.85) these all activities leads to leakage. In diabetic patients 34(26.15%) are smokers and 7(5.38) are tobacco chewers. Smoking or tobacco chewing can be a risk factor for diabetic but there is no strong association found between them. As indicated by different investigations the danger of diabetes was greater for overwhelming smokers (≥ 20 cigarettes/day; RR, 1.61; 95% CI, 1.43-1.80). In diabetic patients, type of delivery is not strongly associated strongly related to risk of urinary incontinence. As per prior investigations there is no gripe of urinary incontinence in ladies with cesarean conveyance or the ladies never get pregnant yet typical conveyance expands danger of urinary incontinence. UI is considered a worldwide problem disturbing people of all ages and across various cultures and races. The variety of prevalence rates among the previous studies is extensive. This disparity is due to alterations in definitions used, population surveyed, age, gender, accessibility and effectiveness of health-care, and other aspects. Diabetic patients mostly complain of GI associated symptoms like

burning pain, nausea and vomiting. Results concluded form studies is 96(73.85) who complained of gastrointestinal symptoms. Concluded percentage shows that there is strong association of GI related symptoms with diabetes which is relatable with earlier research included (472) hundred seventy-two people (5.4%) stated they are diabetic. Of these, only 49 women stated diabetes in pregnancy, leaving 423 people with diabetes (4.9%) for additional investigation. No symptoms or more than 6 symptoms were described by 59.6% and 9.7% in diabetic people.

Conclusion:

Urinary incontinence is inconvenient problem for diabetic patient. Self-administered questionnaire was deigned to relate the problem and associated risk factors, so that essential steps are carried out for its avoidance and management. Women suffer more from urinary incontinence as compared to men.

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