

THE RELATIONSHIP BETWEEN VOIDING RELATED KNOWLEDGE, ATTITUDE, SELF-CARE BEHAVIOURS AND VOIDING PROBLEMS AMONG TYPE II DIABETES PATIENTS --- A EXPLORATORY STUDY

Hypothesis / aims of study

Diabetic bladder dysfunction is often categorized by poor bladder emptying and overflow incontinence. As the results, diabetes patients often taught by health care professional emptying their bladder when possible. However, recent evidence also indicates that storage symptoms, such as urinary urgency with/without urinary incontinence are significantly represented. Lack of voiding related knowledge, patients may misinterpret their voiding pattern. The purpose of this study was to investigate the relationship between voiding related knowledge, attitude, self-care behaviours and voiding problems among type II diabetes patients..

Study design, materials and methods

Purposive sampling was conducted to recruit type II diabetes patient from local diabetes clinics and the teaching hospital in Eastern Taiwan. Subjective and objective data were collected by using questionnaires, urinary flow rate meters and bladder scans. Structured questionnaire included International Prostate Symptom Score (IPSS), overactive bladder symptoms score (OABSS) and Urogenital distress inventory (UDI) were used to collect subjective symptoms and degree of bothersome. In addition, flow rate as well as post void residual were measured to understand the bladder function.

Results

196 patients were recruited, including 85 men and 111 women. The results of this study revealed that (1) the mean score of voiding related knowledge was 4.37 and with 48.56% correct response rates; (2) the mean scores of voiding related attitude was 29.53, tending to the positive attitude; (3) the mean scores of voiding related self-care behaviors was 21.76; (4) the means scores of voiding symptoms was 8.46; (5) the means scores of International Prostate Symptom Score (IPSS) was 8.04; with 3.85 voiding symptoms sub-score and 4.19 storage symptoms sub-score. Abnormal urine maximum flow rate were detected in 86.4% subjects, while 71.1% obtained abnormal functional voided volume. However, abnormal post-void residual urine (PVR) were found in only 10.8% of the total sample. The means of scores of overactive bladder symptoms score (OABSS) and Urogenital distress inventory (UDI) were 3.65, 2.55, respectively. The relationship of voiding related knowledge, attitudes and self-care behavior in type II diabetes patients were positively correlated (knowledge, attitude; $r=.451$, $p=.000$)(knowledge, behaviors; $r=.265$, $p=.000$) (attitude, behaviors; $r=.434$, $p=.000$). The relationship of voiding related knowledge, attitudes and subjective voiding problems were negatively correlated. Lastly, liner regression analysis revealed that the voiding problems will be more severe if the patients had older, hypertension, heart disease, benign prostatic hyperplasia, urologic treatment, long time of diabetes and poor diabetes control.

Interpretation of results

The results of this study revealed that 71.1% of the patients obtained abnormal functional voided volume. The average voided volume was less than the normal voided volume and patients reported urination with first sensation. Proper patient education will be needed to prevent possible premature voiding, and lead to elevation of PVR. Hence, frequent urination may lead to incomplete bladder emptying. In addition, the result of the linear regression also suggested that voiding problems will be more severe if the patients had older, hypertension, heart disease, benign prostatic hyperplasia, urologic treatment, long time of diabetes and poor diabetes control. As the result, medical professionals should pay special attention among older patients with multiple comorbidities. Proper patient coaching might result in positive influences on the improvement of voiding related knowledge, attitude and self-care behaviors.

Concluding message

Health care professionals often educate diabetes patients not to hold urine in order to prevent poor bladder emptying and overflow incontinence. Our study reveal the possibility of frequent urination with decreased voided volume and elevated PVR. Proper patient coaching might result in positive influences on the improvement of voiding related knowledge, attitude and self-care behaviors.

Disclosures

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