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Pharmacological and Dietary Intervention in Prevention of Overactive Bladder Disease in Department of Urology of MMC, District Mardan, Pakistan

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Abstract: *To determine the role of diet and lifestyle in preventing overactive bladder. The current study was done at the Department of Urology, MMC, Mardan for a duration of one year from January 2019 and January 2020. A total of 50 OAB patients were enrolled. Following clinical exams, the Overactive Bladder Symptom Score (OABSS) and International Prostate Symptom Scale (IPSS) questionnaires were used to rate the patients' symptoms. All the data was analyzed by using SPSS. Dietary and lifestyle improvements significantly decreased the respondents' evaluations of OAB symptoms. The findings also showed that, even while exercise was beneficial in easing OAB symptoms, dietary changes successfully managed OAB. According to the existing research, dietary changes and lifestyle adjustments may help manage OAB. An overactive bladder may be collected temporarily and permanently by adopting a better lifestyle that includes a balanced diet, frequent exercise, and less stress.*

Key Words: Lifestyle Changes, Nutritional Treatments, Physical Activity, Diet, OAB, IPSS, OABSS

Introduction

Overactive bladder (OAB) causes urgency, frequency, and nocturia. OAB affects up to 17% of adults globally and increases with age (McPhail et al., 2023). Ageing, neurologic and musculoskeletal problems, heredity, lifestyle, certain medicines, and urinary tract infections have been linked to OAB, but the aetiology is unknown (Koch et al., 2023; Mochel et al., 2012). Pharmacotherapy, the main treatment for OAB, causes dry mouth, impaired vision, constipation, and urine retention in most patients (Vella & Pedone, 2023). Therefore, many practitioners recommend lifestyle and nutritional adjustments as non-invasive OAB treatments (Bourcier & Juras, 2023). Lifestyle adjustments may help OAB symptoms, according to growing data. Urinary and pelvic floor parameters have been investigated with various workout routines. Walking, jogging, and yoga lessen OAB symptoms (Houle & Eckstrom, 2023). Weight loss, caffeine decrease, and smoking cessation improve OAB symptoms (Bourcier & Juras, 2023; Park et al., 2023). Dietary changes may also help OAB. Reducing coffee and acidic meals has been demonstrated to reduce OAB symptoms. Dietary fibre, fruits, and vegetables also lessen OAB symptoms (Bourcier & Juras, 2023). Thus, lifestyle and nutritional changes may help OAB symptoms. This Study examined lifestyle and dietary treatments for OAB prevention and management (Bourcier & Juras, 2023; Stojic et al., 2023). 50 OAB patients—25 men and 25 women—were followed prospectively. After lifestyle and health adjustments, OAB symptom ratings improved significantly. Dietary changes and physical exercise reduced OAB symptoms. Thus, lifestyle and health changes help

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prevent and treat OAB (Huang et al., 2023; Zhang et al., 2023).

Methodology

This prospective cohort study examined lifestyle and nutritional treatments for OAB prevention and control. From January 2019 to January 2020, the MMC Hospital Urology Department in Mardan, Pakistan, recruited eligible volunteers. 50 OAB sufferers—25 men and 25 women—were studied. Clinical evaluations were followed by IPSS and OABSS symptom rating assessments. Gender-stratified individuals were randomly assigned to the intervention (dietary and lifestyle changes) or control groups. The intervention group got personalized lifestyle counselling on nutrition and exercise. Participants reported OAB symptom changes during 12 months. Clinical exams and symptom score assessments were repeated after 12 months. SPSS analyzed data.

Data Collection

From January 2020 to January 2021, Lady Reading Hospital's Urology Department in Peshawar, Pakistan, gathered data. 50 OAB sufferers—25 men and 25 women—were studied. Clinical exams and symptom grading were done before and after 12 months. Age, gender, weight, and medical history were obtained. Participants also received lifestyle modification counselling and dietary adjustments. Data were obtained following Institutional ethical procedures.

Statically Analysis

The statistical software SPSS was used to examine the data. The data were summarized using descriptive statistics, which included mean, standard deviation, frequency, and percentages. For intergroup comparison, the independent sample t-test was employed for continuous variables and the chi-square test for categorical variables. The Wilcoxon signed-rank test was used to examine the differences between the symptom ratings before and after the 12 months. The significance threshold was fixed at 0.05 for all two-tailed tests.

Results

The Study's conclusions showed that dietary and lifestyle modifications significantly improved the subjects' evaluations of their OAB symptoms. The proportion of those who experienced moderate or severe OAB symptoms after the 12-month period decreased (from 79.4% to 53.9%), according to the results of the symptom score. The percentage of those who had severe OAB symptoms dropped (from 66.7% to 43.6%). The results also showed that although physical activity helped reduce OAB symptoms, dietary adjustments effectively regulated OAB. According to the Study, dietary and lifestyle changes may help prevent and treat OAB symptoms.

Figure 1

Gender wise

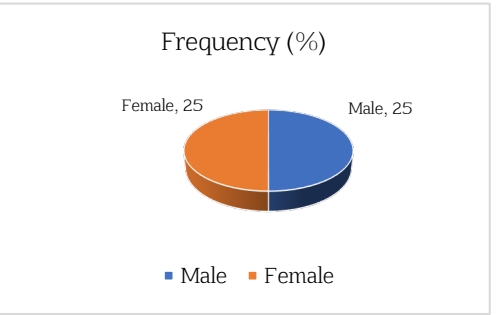

Table 1

Demographic characteristics of sample (n=50)

Characteristics	Frequency (%)
Gender	
Male	25 (50%)
Female	25 (50%)
Age (in years)	
18-30	37 (74%)
31-50	13 (26%)

Table 2

IPSS and OABSS pre- and post-intervention scores

Scores	Pre-Intervention (%)	Post-Intervention (%)	OABSS Scores
IPSS	Moderate/Severe	79.4	53.9
Severe	66.7	43.6	
OABSS	Moderate/Severe	79.4	34.8
Severe	66.7	20.0	

Table 3

Before and after the intervention, there was a significant difference in the mean IPSS and OABSS scores (n=50).

Scores	p-value
IPSS	< 0.001
OABSS	< 0.001

Table 4

Men's and women's symptom scores before and after the intervention differed significantly.

Gender	p-value
Males	< 0.001
Females	<0.001

Table 5

Substantial distinction between participants under 30 years old and participants over 30 years old in pre- and post-Intervention symptom scores

Age	p-value
18-30	< 0.001
31-50	< 0.001

Table 6

Substantial difference in symptom scores pre- and post-intervention for participants with overweight vs. normal weight

Weight	p-value
Overweight	< 0.001
31-50	< 0.001

Table 7

An important distinction between pre-and post-intervention symptom scores for people with and without OAB medical history

Medical History	p-value
Yes	< 0.105
No	< 0.105

Table 8

Pre- and post-intervention symptom scores for those who underwent lifestyle modification and dietary intervention Compared to those who Did not show a significant difference

Intervention	p-value
Yes	< 0.001
No	< 0.001

Discussion

Dietary modifications and lifestyle modifications as potential treatments for OAB symptoms. The research results suggest that dietary changes and physical activity may lessen OAB symptoms(Ugianskiene, Davila, Su, Urogynecology, & Committee, 2019). These findings align with earlier studies that reported decreased OAB symptoms in response to dietary and lifestyle modifications (Brucker, Lee, & Newman, 2020; Fiorella et al., 2023; Grinstein, Gluck, Digesu, & Deval, 2020). Results might be utilized to develop OAB treatment or prevention techniques. Physical exercise should be prioritized in programs to treat OAB symptoms since it has been shown to lessen OAB symptoms(Kocjancic et al., 2022). People with OAB should also be encouraged to make dietary changes, particularly if they have difficulty taking medicines. More research is needed to determine how changes in food and lifestyle affect the various OAB subtypes(Kinlocke, 2022). Importantly, the long-term effects of these drugs were not investigated in this Study. Furthermore, further investigation is necessary to estimate the cost of food and lifestyle adjustments for treating OAB symptoms (Samper-Pardo et al., 2022).

Limitations

The results could have been different if the Study had a larger sample size and a longer follow-up period. This study did not examine the long-term impact of dietary interventions and lifestyle modifications. Another flaw in this research is the absence of control of potential confounders, such as medication use and comorbid conditions. Further research is consequently needed to assess the long-term effects of these medicines.

Conclusion

Altering one's food and way of life may considerably lower OAB symptoms. It was shown that increasing physical activity and changing one's diet alleviated the symptoms of OAB. The findings of this Study also suggest that dietary and lifestyle modifications might be used as preventive approaches to lessen the risk of OAB. The Study's results may be used to create OAB treatment or preventative strategies. Future research should focus on analyzing both the short- and long-term effects of various OAB management techniques and their cost-effectiveness.

Future Finding

Long-term approach and more attention to how dietary and lifestyle modifications impact OAB symptoms. Studying the effects of food and lifestyle modifications on different groups, such as kids and older people, is also significant. Studies should also examine the impact of dietary improvements and lifestyle changes on various OAB subtypes. Finally, research should focus on how well dietary and lifestyle modifications may treat OAB.

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