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COMPARATIVE ANALYSIS OF DEMOGRAPHIC CHARACTERISTICS AND LIFESTYLE IN PATIENTS WITH OVERACTIVE BLADDER SYNDROME IN PROSTATE CANCER

Tillyashaikhov Mirzagolib Nigmatovich – D.M.Sc., professor
Alimov Jaloliddin Usmonkhon ugli – Ph.D.
Tashkent state medical university (Tashkent, Uzbekistan)

Abstract. *The rise in disease incidence in developing countries will be linked both to increased life expectancy and improved access to healthcare.The increase in morbidity will also be due to the westernization of lifestyle, including obesity, sedentary behavior, and dietary factors.*

Background: *Prostate cancer is one of the most prevalent malignancies in men, often coexisting with overactive bladder syndrome, particularly in older populations, and influenced by demographic and lifestyle factors. The present study aimed to comparatively assess these characteristics in patients with prostate cancer with and without overactive bladder syndrome.*

Methods: *A clinical study was conducted between 2020 and 2025 involving 200 patients divided into three groups based on treatment approaches. Standard laboratory diagnostics and comparative statistical analyses of demographic, clinical, and lifestyle variables were performed.*

Results: *The analysis demonstrated no statistically significant differences between groups in terms of age, body mass index, and comorbidities, confirming group homogeneity. However, lifestyle factors such as sedentary behavior, smoking, and alcohol consumption were prevalent across all groups, with sedentary lifestyle showing statistical significance in some comparisons.*

Conclusion: *Patients with prostate cancer exhibit similar demographic and clinical profiles regardless of overactive bladder syndrome status.*

Nevertheless, lifestyle factors remain critical and should be targeted through comprehensive management strategies to improve treatment outcomes and quality of life.

Keywords: *Prostate cancer, overactive bladder syndrome, demographics, lifestyle factors, comorbidity*

СРАВНИТЕЛЬНЫЙ АНАЛИЗ ДЕМОГРАФИЧЕСКИХ ХАРАКТЕРИСТИК И ОБРАЗА ЖИЗНИ У ПАЦИЕНТОВ, СТРАДАЮЩИХ СИНДРОМОМ ГИПЕРАКТИВНОГО МОЧЕВОГО ПУЗЫРЯ ПРИ РАКЕ ПРЕДСТАТЕЛЬНОЙ ЖЕЛЕЗЫ

Тилляшайхов Мирзаголиб Нигматович – д.м.н., профессор
Алимов Жалолиддин Усмонхон угли – Ph.D.
Ташкентский государственный медицинский университет (Ташкент, Узбекистан)

Аннотация. *Рост заболеваемости в развивающихся странах связан как с увеличением продолжительности жизни, так и с улучшением доступа к медицинской помощи. Подъём заболеваемости также обусловлен вестернизацией образа жизни, включая ожирение, сидячий образ жизни и диетические факторы.*

Актуальность: *Рак предстательной железы является одним из наиболее распространённых злокачественных новообразований у мужчин и нередко сочетается с синдромом гиперактивного мочевого пузыря, особенно у пациентов пожилого возраста, при этом значительную роль играют демографические и поведенческие факторы; целью исследования являлась сравнительная оценка этих характеристик.*

Методы: *Клиническое исследование, проведённое в 2020–2025 гг., включало 200 пациентов, разделённых на три группы в зависимости от применяемых методов лечения; выполнены стандартные лабораторные исследования и сравнительный статистический анализ демографических, клинических и поведенческих показателей.*

Результаты: *Не выявлено статистически значимых различий между группами по возрасту, индексу массы тела и сопутствующим заболеваниям, что подтверждает их однородность; при этом факторы образа жизни, такие как малоподвижность, курение и употребление алкоголя, были широко распространены, а малоподвижный образ жизни продемонстрировал статистическую значимость в ряде сравнений.*

Заключение: *Пациенты имеют сходные демографические и клинические характеристики независимо от наличия синдрома гиперактивного мочевого пузыря, однако факторы образа жизни остаются ключевыми и требуют учёта в рамках комплексного подхода к лечению для улучшения его результатов и качества жизни пациентов.*

Ключевые слова. *Рак предстательной железы, синдром гиперактивного мочевого пузыря, демографические характеристики, факторы образа жизни, сопутствующие заболевания*

PROSTATA BEZI SARATONIDA GIPERAKTIV SIYDIK PUFAGI SINDROMIDAN AZIYAT CHEKUVCHI BEMORLARNING DEMOGRAFIK XUSUSIYATLARI VA HAYOT TARZI TAQQOSLAMA TAHLILI

Tillashayxov Mirzagolib Nigmatovich – t.f.d., professor
Alimov Jaloliddin Usmonxon o'g'li – Ph.D.
Toshkent davlat tibbiyot universiteti (Toshkent, O'zbekiston)

Annotatsiya. *Rivojlanayotgan mamlakatlarda kasalliklar ko'rsatkichining oshishi, bir tomondan, umr davomiyligining uzayishi, ikkinchi tomondan esa, tibbiy xizmatlardan foydalanish imkoniyatlarining yaxshilanishi bilan bog'liq bo'ladi.*

Kasallanish darajasining oshishiga, shuningdek, g'arbona turmush tarzining keng tarqalishi - ortiqcha vazn, harakatsiz hayot tarzi va noto'g'ri ovqatlanish odatlari kabi omillar ham sabab bo'ladi.

Dolzarbligi: *Prostata bezi saratoni erkaklar orasida eng keng tarqalgan yomon sifatli o'sma kasalliklaridan biri bo'lib, ko'pincha, ayniqsa yoshi katta bemorlarda, giperaktiv siydik pufagi sindromi bilan birga kuzatiladi, bunda demografik va xulq-atvor omillari muhim rol o'ynaydi; tadqiqotning maqsadi ushbu xususiyatlarni qiyosiy baholashdan iborat.*

Usullar: *2020–2025-yillarda o'tkazilgan klinik tadqiqotda 200 nafar bemor ishtirok etib, ular qo'llanilgan davolash usullariga ko'ra uch guruhga ajratildi; standart laborator tekshiruvlar hamda demografik, klinik va xulq-atvor ko'rsatkichlari bo'yicha qiyosiy statistik tahlil amalga oshirildi.*

Natijalar: *Guruhlar o'rtasida yosh, tana massasi indeksi va hamroh kasalliklar bo'yicha statistik jihatdan ahamiyatli farqlar aniqlanmadi, bu esa ularning bir xil ekanligini tasdiqlaydi; shu bilan birga, kamharakat turmush tarzi, chekish va spirtli ichimlik iste'moli kabi omillar keng tarqalgan bo'lib, kamharakatlik ayrim taqqoslashlarda statistik ahamiyatga ega ekanligi aniqlandi.*

Xulosa: *Giperaktiv siydik pufagi sindromi mavjud yoki mavjud emasligidan qat'i nazar, bemorlarning demografik va klinik ko'rsatkichlari o'xshash, biroq turmush tarzi omillari muhim ahamiyat kasb etadi va davolash natijalari hamda hayot sifatini yaxshilash uchun ularni kompleks yondashuv doirasida hisobga olish zarur.*

Kalit so'zlar: *Prostata bezi saratoni, giperaktiv siydik pufagi sindromi, demografik xususiyatlar, turmush tarzi omillari, hamroh kasalliklar*

Relevance. Prostate cancer is the second most common malignant tumour in men worldwide, second only to lung cancer. In 2018, more than 1.2 million new cases of the disease were diagnosed, resulting in approximately 359,000 deaths, accounting for 3.8% of all cancer deaths among men.

The age group most susceptible to developing prostate cancer is men aged 66 and over [5]. The increase in the incidence in developing countries is associated with both an increase in life expectancy and an improvement in access to medical care. The rise in morbidity is also due to the westernization of lifestyles, including obesity, sedentary lifestyles, and dietary factors [1;3].

Cigarette smoking and its active and passive effects have been investigated as potentially carcinogenic factors for the development of prostate cancer. Men who smoke usually have an increased level of sex hormones, which can increase the risk of developing prostate cancer [4].

It has been noted that functional changes in the genes responsible for the metabolism of cigarette smoke substances may also play a role in the onset and progression of cancer [6].

Exposure to the observed symptoms of idiopathic overactive bladder and lower urinary tract-associated symptoms may cause some men to have concerns about the possible development of prostate cancer, motivating them to consult and have diagnostic tests to rule out cancer.

Given that prostate cancer and idiopathic overactive bladder cancer are often diagnosed in elderly patients, there is a possibility of both conditions co-occurring [2].

Aim of the study: To conduct a comparative analysis of the demographic characteristics and lifestyle of prostate cancer patients with and without overactive bladder syndrome.

Materials and methods of research. The material for the study was collected as part of a clinical trial at the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology of the Samarkand branch of the Samarkand Regional Interregional Hospice from 2020 to 2025.

Patients underwent mandatory standard laboratory tests, including a complete blood count, biochemical tests, a basic coagulation profile, and a urine analysis.

Where there were indications of infection, bacteriological urine tests were carried out.

The study group included 85 patients with prostate cancer undergoing comprehensive concomitant therapy for comorbid urological pathology - bladder hyperactivity syndrome - a form of physical exercises to strengthen the pelvic floor muscles in combination with combined drug therapy against the background of androgen deprivation therapy.

The control group included 70 patients with prostate cancer undergoing complex concomitant therapy for comorbid urological pathology of bladder hyperactivity syndrome in the form of combined drug therapy alone against the background of androgen deprivation therapy.

The group of androgen deprivation therapy without treatment of overactive bladder syndrome

included 45 patients who were treated at the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology (Samarkand branch) and the Samarkand Regional Interregional Hospice.

Results and discussion. We conducted a comparative analysis of the main characteristics of patients and prostate cancer tumor parameters in patients suffering from overactive bladder syndrome. This table presents the results of a comparative analysis of the main demographic and behavioral characteristics of the study participants, divided into three groups: the main group (n=65), the control group (n=55), and the group of androgen deprivation therapy without the use of therapy for bladder hyperactivity syndrome (n=30).

Table 1.

A comparative analysis of demographic characteristics and lifestyle among patients in the study groups

Criterion	Core Group (n=75)			Control group (n=65)			Group receiving androgen deprivation therapy without treatment for overactive bladder (n=45)		
	abs	M±m,%	P	abs	M±m,%	P	abs	M±m,%	P
Age	66,6±7,37		>0,05	65,02±8,28		>0,05	67,73±4,12		>0,05
Body Mass Index									
18,5 less	6	9,23±3,59	χ^2 = 38,446; p = 0,000	4	7,27±3,5	χ^2= 27,982; p = 0,000	3	10±5,48	χ^2 = 14,000; p = 0,003
18.5–24.9	36	55,38±6,17		30	54,55±6,71		16	53,33±9,11	
25–29.9	18	27,69±5,55		12	21,82±5,57		7	23,33±7,72	
More than 30	5	7,69±3,31		9	16,36±4,99		4	13,33±6,21	
P	Pearson's chi-square = 2.591; p = 0.858								
Concomitant somatic conditions									
Liver diseases	13	20±4,96		9	16,36±4,99		4	13,33±6,21	
P	Pearson's chi-square = 0,694; p = 0,707								
Cardiovascular diseases	46	70,77±5,64		36	65,45±6,41		20	66,67±8,61	
P	Pearson's chi-square = 0,417; p = 0,812								
Diseases of the endocrine system	31	47,69±6,2		27	49,09±6,74		14	46,67±9,11	
P	Pearson's chi-square = 0,050; p = 0,975								
Diseases of the respiratory system	18	27,69±5,55		13	23,64±5,73		8	26,67±8,07	
P	Pearson's chi-square = 0,263; p = 0,877								
Severity of comorbidity according to ACE 27									
No	11	16,92±4,65	χ^2 = 6,077; p = 0,108	13	23,64±5,73	χ^2 = 4,564; p = 0,207	7	23,33±7,72	χ^2 = 1,733; p = 0,630
Light	17	26,15±5,45		15	27,27±6,01		10	33,33±8,61	
Medium	24	36,92±5,99		19	34,55±6,41		8	26,67±8,07	
Severe	13	20±4,96		8	14,55±4,75		5	16,67±6,8	
P	Pearson's chi-square = 2,337; p = 0,886								
Sedentary lifestyle									
Yes	45	69,23±5,72	χ^2= 9,615; p = 0,002	37	67,27±6,33	χ^2 = 6,564; p = 0,010	18	60±8,94	χ^2 = 1,200; p = 0,273
No	20	30,77±5,72		18	32,73±6,33		12	40±8,94	
P	Pearson's chi-square = 0,801; p = 0,670								
Smoking									
Did not smoke	40	61,54±6,03	χ^2= 23,846; p = 0,000	35	63,64±6,49	χ^2 = 22,836; p = 0,000	19	63,33±8,8	χ^2 = 12,600; p = 0,002
Former smoker	10	15,38±4,48		9	16,36±4,99		7	23,33±7,72	
Currrently smokes	15	23,08±5,23		11	20±5,39		4	13,33±6,21	
P	Pearson's chi-square = 1,793; p = 0,774								

Alcohol consumption									
Yes	16	24,62±5,34	χ^2=16,74; p =0,000	12	21,82±5,57	χ^2=17,43; p=0,000	8	26,67±8,07	χ^2 = 6,533; p = 0,011
No	49	75,38±5,34		43	78,18±5,57		22	73,33±8,07	
P	Pearson's chi-square = 0,274; p = 0,872								

With regard to body mass index, the distribution of participants is as follows: body mass index less than 18.5: 6 (9.2%) in the study group, 4 (7.2%) in the control group, and 3 (10.0%) in the androgenic deprivation therapy group without therapy for bladder hyperactivity syndrome. Body mass index 18.5 to 24.9: 36 (55.4%) in the study group, 30 (54.5%) in the control group, and 16 (53.3%) in the androgenic deprivation therapy group without therapy for bladder hyperactivity syndrome.

Body mass index 25 to 29.9: 18 (27.7%) in the study group, 12 (21.8%) in the control group, and 7 (23.3%) in the androgenic deprivation therapy group without therapy for bladder hyperactivity syndrome. Body mass index greater than 30: 5 (7.7%) in the study group, 9 (16.4%) in the control group, and 4 (13.3%) in the androgenic deprivation therapy group without therapy for bladder hyperactivity syndrome. Based on the above data, the differences in body mass index between groups are also not statistically significant.

Body mass index was studied in four categories: less than 18.5; from 18.5 to 24.9; from 25 to 29.9; and more than 30, and the distribution of participants in these categories showed no statistically significant differences, again confirming the homogeneity of the groups.

In terms of lifestyle, including sedentary lifestyle, smoking and alcohol consumption, the distribution is as follows: Sedentary lifestyle: yes - in 45 (69.2%) cases in the study group, 37 (67.2%) - in the control group, and 18 (60%) - in the group of androgenic deprivation therapy without therapy for bladder hyperactivity syndrome. Smoking: 40 (61.5%) in the study group, 35 (63.6%) in the control group, and 19 (63.3%) in the androgenic deprivation therapy group without therapy for bladder hyperactivity syndrome did not smoke.

Former smokers accounted for 10 (15.4%), 9 (16.4%), and 7 (23.3%) respectively, whereas current smokers accounted for 15 (23.1%), 11 (20%), and 4 (13.3%) in the same groups.

Alcohol consumption: yes in 16 (24.6%) cases in the study group, 12 (21.8%) in the control group, and 8 (26.7%) in the group of androgenic deprivation therapy without therapy for bladder hyperactivity syndrome.

Conclusion: In general, the data show similarity in the profile of participants in both study groups in a number of parameters. There were no statistical differences between the groups. The data presented in the table highlight the importance of a comprehensive approach to the treatment process for patients with prostate cancer and concomitant overactive bladder syndrome.

Particular attention should be paid to controlling the body mass index, increasing the level of physical activity and correcting bad habits such as smoking and alcohol consumption, in order to minimize the symptoms of bladder hyperactivity syndrome and provide the best conditions for the successful treatment of prostate cancer.

REFERENCES

1. Clemente-Suárez VJ, Beltrán-Velasco AI, Redondo-Flórez L, Martín-Rodríguez A, Tornero-Aguilera JF. Global Impacts of Western Diet and Its Effects on Metabolism and Health: A Narrative Review. Nutrients. 2023 Jun 14;15(12):2749.

2. Kevin R. Loughlin, The clinical applications of five-alpha reductase inhibitors. The Canadian Journal of Urology™; 28(2); April 2021

3. Kopp W. How Western Diet And Lifestyle Drive The Pandemic Of Obesity And Civilization Diseases. Diabetes Metab Syndr Obes. 2019 Oct 24; 12: 2021-2236.

4. Peshkov M.N., Peshkova G.P., Reshetov I.V. The relationship of obesity and prostate cancer (review). Obesity and metabolism. 2020;17(2):147-155.

5. Rizk PJ, Kohn TP, Pastuszak AW, Khera M. Testosterone therapy improves erectile function and libido in hypogonadal men. Curr Opin Urol. 2017 Nov;27(6):511-515. doi: 10.1097/MOU.0000000000000442. PMID: 28816715; PMCID: PMC5649360.

6. Xiang J, Yan H, Li J, Wang X, Chen H, Zheng X. Transperineal versus transrectal prostate biopsy in the diagnosis of prostate cancer: a systematic review and meta-analysis. World J Surg Oncol. 2019 Feb 13;17(1):31.