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ON THE ISSUE OF SOME EPIDEMIOLOGICAL ASPECTS OF PROSTATE CANCER IN THE REPUBLIC OF MORDOVIA. DYNAMICS OF INCIDENCE AND PREVALENCE

Research article

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Abstract

This article is devoted to the study of the prevalence and incidence of patients with prostate cancer (PCa) in the Republic of Mordovia (RM) for 2018 – 2022. The average age of patients with prostate cancer treated in the Republic of Mordovia from 2018-2022 was 61.64±10.42 years. The increase in the incidence of prostate cancer over the past 5 years in the Republic of Mordovia amounted to 38.54%. Increase in incidence from 2018 to 2022. − 60.61% with an average growth rate for 2022 of − 15.9%. As of 2022, stage IV metastatic prostate cancer was verified in 21.9% of patients. Locally advanced prostate cancer (stage III prostate cancer) was diagnosed in 24.5% of patients, localized prostate cancer stage I–II was detected in 59.5% of patients.

Keywords: prostate cancer, prevalence, incidence.

К ВОПРОСУ О НЕКОТОРЫХ ЭПИДЕМИОЛОГИЧЕСКИХ АСПЕКТАХ РАКА ПРЕДСТАТЕЛЬНОЙ ЖЕЛЕЗЫ В РЕСПУБЛИКЕ МОРДОВИЯ. ДИНАМИКА ЗАБОЛЕВАЕМОСТИ И РАСПРОСТРАНЕННОСТИ

Научная статья

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Аннотация

Данная статья посвящена изучению распространенности, заболеваемости пациентов раком предстательной железы (РПЖ) на территории Республики Мордовия (РМ) за 2018 – 2022 гг. Средний возраст пациентов с раком предстательной железы, проходивших лечение в Республике Мордовия с 2018-2022 год составил 61,64±10,42 лет. Рост заболеваемости РПЖ за последние 5 лет в РМ составил– 38,54%. Прирост заболеваемости с 2018 по 2022 гг. − 60,61% при среднем темпе прироста за 2022 г. − 15, 9%. По данным на 2022 г., метастатический РПЖ IV стадии верифицирован у 21,9% пациентов. Местнораспространенный РПЖ (III стадия РПЖ) диагностирован у 24,5% пациентов, локализованный РПЖ I–II стадии выявлен у 59,5% пациентов.

Ключевые слова: рак предстательной железы, распространенность, заболеваемость.

Introduction

One of the most common malignant tumors of the urogenital system in men is prostate cancer (PCa), most identified cases occur in the age group 50–70 years [1], [2]. The most important risk factors associated with prostate cancer include: confirmed prostate cancer in first-degree relatives; presence of mutations in the BRCA2 gene; consumption of animal and other fats. PCa can metastasize by lymphogenous and hematogenous routes, with the most common sites of metastasis being located in the spine, pelvic bones, and ribs (radiologically, a distinct osteosclerotic (osteoblastic) component is usually determined). Prostate cancer is a heterogeneous disease, and prostate cancer is common makes it one of the most important medical and social problems of our times, because prostate cancer is a chronic, slow and unfavorable process; for many years, prostate cancer has remained one of the most common cancers in men; it is reliably known that the frequency of disease progression in prostate cancer patients after radical treatment is largely predetermined by risk group and ranges from 1% in low-risk patients to 70–80% in high-risk patients [3], [4]. In 2022, in the structure of malignant tumor incidence (MTI) in men in Russia, prostate cancer took second place (the absolute number of newly diagnosed cases of prostate cancer reached 42,000), (14.9%), second only to malignant tumors and lung tumors (16.9%) [5], [6]. Diagnostics and treatment of this PCa have recently gained

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increasing interest, both in the Russian Federation in general and in the regions in particular. Objective of the study: To study the prevalence and incidence of patients with prostate cancer in the Republic of Mordovia (RM) for 2018 – 2022.

Research methods and principles

Analysis was carried out using data from the cancer registry of the State Budgetary Institution of Health of the Republic of Mordovia «Republican Oncology Dispensary» for the period 2018-2022, as well as data from the literature specialized in the problem of morbidity, mortality and treatment outcomes of prostate cancer (C61, ICD-10) (Annual publications for 2018-2022 «The state of oncological care for the population of Russia», edited by A.D. Kaprin, V.V. Starinsky, A.O. Shakhzadova). For processing statistical data, Microsoft Excel and Statistica 6.0 software were used. The parametric Student's t test was applied. The results are presented as follows, M ± m (M - mean, m - error of the mean). Differences were accepted as statistically significant at $p < 0.05$.

Main results

The average age of patients with prostate cancer treated at the State Budgetary Institution of the Republic of Mordovia "Republican Oncology Dispensary" from 2018-2022 was 61.64±10.42 years. In 2022 On the basis of the State Budgetary Healthcare Institution of the Republic of Mordovia "ROD", 157 patients were examined and treated, of which 57.9% were newly diagnosed cases. For the period from 2018 to 2022, we identified an increasing trend in the prevalence of prostate cancer in the Republic of Mordovia (RM). In the Republic of Mordovia, the incidence rate increased during the reporting period from 2021 to 2022 amounted to 18.9% ($p<0.05$). In general, there is a clear trend towards an increase in the incidence of prostate cancer in the territory of the Republic of Mordovia. Thus, in 2021 in the Republic of Mordovia, the absolute number of patients with prostate cancer was 227 people, which is 11.82% statistically significant more than in 2020, $p < 0.05$. The “crude” incidence rate in 2021 was 62.12 per 100,000 population. The increase in the incidence of prostate cancer over the past 5 years in the Republic of Mordovia amounted to 38.54%. The most statistically significant increase in incidence on the territory of the Republic of Mordovia was recorded in 2021-2022 and amounted to 11.9% per 100 thousand population (due to registration of patients with newly diagnosed prostate cancer, and late referral of patients in the regions of the republic) while in the Russian Federation as a whole, the increase in incidence was 12.9% ($p< 0.05$) In 2021, the standardized incidence rate was 36.23 per 100,000 population, which is 15.86% statistically significantly higher than in 2020 ($p<0.05$) (Fig. 1).

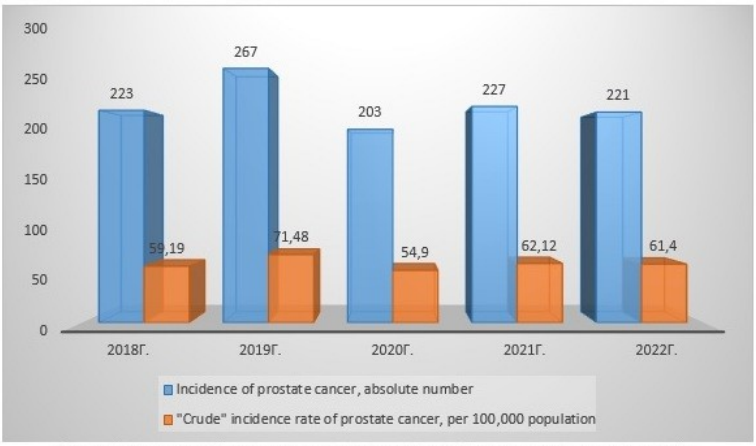

Figure 1. Incidence of prostate cancer in the Republic of Mordovia for the reporting period.

Figure 1 - Incidence of prostate cancer in the Republic of Mordovia for the reporting period
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In the Russian Federation, the incidence of prostate cancer is steadily increasing. A similar trend was noted in the Republic of Mordovia. In the structure of the incidence of malignant neoplasms in the male population of Russia, prostate cancer ranks second, which corresponds to 14.5% of all diagnosed neoplasms in men after tumors of the trachea, bronchi, and lung (17.4%). Thus, in 2018, 40,785 new cases of prostate cancer were identified for the first time and the standardized indicator was 40.47 per 100 thousand population. Increase in incidence from 2018 to 2022 − 60.61% with an average growth rate for 2022 of − 15.9%. Mortality from prostate cancer in Russia has increased over the past 10 years. In 2022, 13,565 men died from prostate cancer in Russia. Over 10 years (from 2012 to 2022), the increase in the mortality rate was 13.85% with an average annual growth rate of 1.29%. Despite the improvement of methods for diagnosing prostate cancer and the introduction of PSA monitoring, the incidence of advanced forms of prostate cancer in Russia, as well as in Mordovia, remains high. According to data for 2022, stage IV metastatic prostate cancer, in which radical treatment of these patients is no longer possible, was verified in 21.9% of patients. Locally advanced prostate cancer without the presence of regional and distant metastases (stage III prostate cancer) was diagnosed in 24.5% of patients, localized prostate cancer stage I–II was detected in 59.5% of patients.

Conclusion

For the period from 2018 to 2022, we have recorded an increasing trend in the incidence of prostate cancer in the Republic of Mordovia; the average age of the patients was 61.64±10.42 years. Men in the age group 60+ are significantly more susceptible to prostate cancer, however, we also recorded a statistically significant increase in the incidence among patients of

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working age [1], [7], [8], [9]. To determine the optimal treatment strategy for patients with high-risk prostate cancer, it is necessary to take into account the presence of concomitant diseases, the age of the patients, life expectancy, possible complications of the treatment method, as well as adherence to treatment; in patients at high risk of progression, a multimodal approach is warranted [3], [4], [10]. To successfully combat prostate cancer, it is necessary to provide every patient with clinically effective and safe medical care.

Конфликт интересов

Не указан.

Рецензия

Все статьи проходят рецензирование. Но рецензент или автор статьи предпочли не публиковать рецензию к этой статье в открытом доступе. Рецензия может быть предоставлена компетентным органам по запросу.

Conflict of Interest

None declared.

Review

All articles are peer-reviewed. But the reviewer or the author of the article chose not to publish a review of this article in the public domain. The review can be provided to the competent authorities upon request.

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