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PROSTATE CANCER IN SAUDI ARABIA

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Abstract

Prostate cancer is a serious health challenge among men especially those above 50 years, and it peaks at 70 years . According to the 2017 World Health Organization (WHO) data, prostate cancer fatalities in Saudi Arabia were 369(0.38% of total deaths) . The country is ranked 153 in prostate cancer incidence rates. It is prudent to note that the incidences of prostate cancer and rates of death vary by state and ethnicity. It is reported that there is less incidence rate of this cancer among men in North Africa and the Middle East unlike in North America and some western countries . The difference is attributed to diet and androgenic factors. The cancer of the prostate is among the most common cancers in men affecting 1,618,000 as of 2015 of which 366,000 succumbed to it globally. The Arab men tend to be least affected compared to their counterparts in North America. The Arabs may have lower incidence rates because of smaller prostate sizes and lower testosterone levels than the blacks and the whites thus pointing to genetic factors . The paper analyses prostate cancer incidence in Saudi Arabia by focusing on fundamental issues such as incidence rate, worrying trends, and the need for early mass screening for this type of cancer in men to be contained.

Keywords

Age-standardized Incidence Rate, Chi-Square tests, metastatic, oncology, prevalence, screening

الخلاصة

يعد سرطان البروستاتا من التحديات الصحية الخطيرة بين الرجال وخاصة من هم فوق الخمسين عامًا ، ويبلغ ذروته عند بلوغهم سن السبعين. وفقًا لبيانات منظمة الصحة العالمية (WHO) لعام 2017 ، بلغت وفيات سرطان البروستاتا في المملكة العربية السعودية 369 (0.38٪ من إجمالي الوفيات). تحتل البلاد المرتبة 153 في معدلات الإصابة بسرطان البروستاتا. من الحكمة ملاحظة أن حالات الإصابة بسرطان البروستاتا ومعدلات الوفاة تختلف حسب المنطقة والعرق. يُذكر أن معدل الإصابة بهذا السرطان أقل بين الرجال في شمال إفريقيا والشرق الأوسط على عكس أمريكا الشمالية وبعض الدول الغربية. ويعزى الاختلاف إلى النظام الغذائي وعوامل الأندروجين. يعد سرطان البروستاتا من أكثر أنواع السرطانات شيوعًا لدى الرجال حيث يصيب 1،618،000 اعتبارًا من عام 2015 ، منهم 366،000 استسلموا له على مستوى العالم. يميل الرجال العرب إلى أن يكونوا أقل تأثراً مقارنة بنظرائهم في أمريكا الشمالية. قد يكون لدى العرب معدلات إصابة أقل بسبب أحجام البروستاتا الأصغر وانخفاض مستويات هرمون التستوستيرون عن السود والبيض مما يشير إلى عوامل وراثية. تحلل الورقة معدل الإصابة بسرطان البروستاتا في المملكة العربية السعودية من خلال التركيز على القضايا الأساسية مثل معدل الإصابة ، والاتجاهات المثيرة للقلق ، والحاجة إلى إجراء فحص جماعي مبكر لرجال لاحتوى هذا النوع من السرطان.

الكلمات

معدل الإصابة المعياري حسب العمر، الاختبارات، المتنقل، الأورام، الانتشار، الفحص.

Introduction

The kingdom of Saudi Arabia has been experiencing an increase in different types of cancer over the past few decades. (Khader et al, 2018) Despite this increase in cases reported, the incidence rate in Saudi Arabia and other Arab countries is lower compared to what is observed in Western countries. Among the cancer types that have recorded the highest increase in incidence is prostate cancer which experienced an 8-fold increase between 1990 and 2016. (Althubiti & Nour Eldein, 2018) Some of the methods exploited in the study of the phenomena include literature reviews and surveys. (Farhat, Rabah & Arafa, 2015), (Almuhanna, Alshammari & Alsalman, 2018), (Alghamidi, Hussain, Alghamdi & El-Sheemy, 2014) Also, statistical methods were used to study trends in the phenomena and interpret the results. The studies identified key aspects in the trend in prostate cancer as witnessed in Saudi Arabia which can be generalized for the entire Arab population in the Gulf countries given the similarity in demographics across these countries. The purpose of this text is to identify some of the factors that are responsible for the observed trend. A further aim is to show how various factors interact to give rise to the observed trends and how the cases are distributed across the population.

Materials and Methods

There are a variety of methods that can be used in studying the trend in prostate cancer in Saudi Arabia. One such method exploited in several of the reviewed articles is the use of surveys filled out by study participants. (Almuhanna, Alshammari & Alsalman, 2018),(Ghunaim, Aljohani & Alharbi, 2018) These were mostly used in the gathering of information concerning awareness of the cancer menace among study participants. In other studies, literature review was the main method used in studying the incidence of prostate cancer. (Alghamidi, Hussain, Alghamdi & El-Sheemy, 2014), (Al-Abdin & Al-Beeshi, 2018). Studies that employed this method were mostly interested in evaluating the trends that characterize prostate cancer incidence in the Saudi Arabian kingdom. Several statistical methods were also crucial in facilitating the study including such methods as Chi-Square tests and Cox proportional hazards models. (Alhuwayshil, 2016) The rationale behind the use of such quantitative methods is to allow for the objective study of incidence and mortality rates as they relate to each other. In combination, these methods allow for the comprehensive examination of the factors that predispose men to high risk of prostate cancer in Saudi Arabia and also provide insight into how the condition is distributed in the population.

Results and Discussion

The results obtained paint a clear picture of the state of prostate cancer among the Saudi Arabian population. The results show that the incidence was on the rise between the years 2001 to 2008. (Arafa & Rabah, 2017) Despite the noted increase, the number of screening exercises was very few during the same period. In addition, it was shown that very few men within the kingdom were not aware of the correct age at which screening should be conducted. (Ghunaim, Aljohani & Alharbi, 2018) Educational level was a significant factor in determining the level of awareness about the condition among participants and only a small percent (17.84%) of the men practiced regular screening for prostate cancer. (Almuhanna, Alshammari & Alsalman, 2018) According to the country's oncology society, only 46.9% of the cases are diagnosed while still localized at one site while the remaining cases are mostly metastatic. (Bazarbashi et al., 2018)It is also seen that the most affected regions in Saudi Arabia are in the Eastern part of the country, Riyadh and Makkah which show the highest values for age-standardized incidence rates (ASIR). (Alghamidi, Hussain, Alghamdi & El-Sheemy, 2014) According to the oncology society, management practices adopted in the country are dependent on the level of progression of the cancer, risk group into which the patient belongs to and life expectancy. (Bazarbashi et al., 2018) There is need to promote screening tests to allow for the early identification of prostate cancer cases, the men should also be educated on the significance of regular screening if the country is to succeed in managing the condition.

Figures and Tables

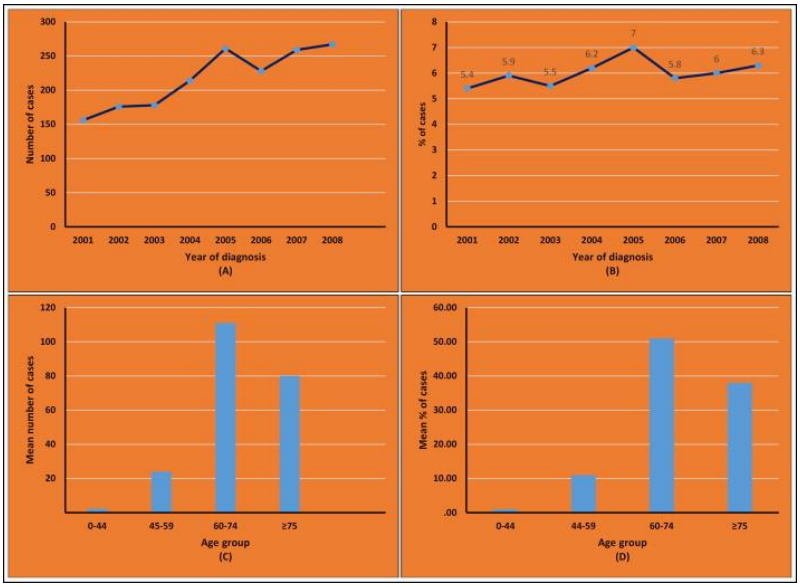

Figure 1 Distribution of Cancer Cases by Age Group in the Saudi Arabian Population

Conclusion

Evidently, the Saudi Arabian population has seen a significant increase in the number of prostate cancer cases reported. Despite this increase, the population appears to be less informed on the nature of the condition and the measures they can take to look out for themselves. There exist several methods that can be adopted in the study of the condition to provide insight into its dynamics. Numerous research has been carried out to assess the condition's incidence, and factors surrounding its increase and the results suggest that the country would benefit from an increase in the frequency of screening exercises and educating its citizens on the condition.

Reference List

1. Khader, Y., Sharkas, G., Arkoub, K., Alfaqih, M., Nimri, O., & Khader, A. (2018). The Epidemiology and Trend of Cancer in Jordan, 2000–2013. *Journal Of Cancer Epidemiology*, *2018*, 1-7. doi: 10.1155/2018/2937067.
2. Althubiti, M., & Nour Eldein, M. (2018). Trends in the incidence and mortality of cancer in Saudi Arabia. *Saudi Medical Journal*, *39*(12), 1259-1262. doi: 10.15537/smj.2018.12.23348.
3. . Farhat, K., Rabah, D., & Arafa, M. (2015). Knowledge and attitude of the population toward cancer prostate Riyadh, Saudi Arabia. *Urology Annals*, *7* (2), 154. doi: 10.4103/0974-7796.150516.

4. Almuhanna, A., Alshammari, S., & Alsalman, H. (2018). Awareness of Prostate Cancer, Screening and Methods of Managements in a Hospital in Riyadh, Saudi Arabia. *The Egyptian Journal Of Hospital Medicine*, *70*(7), 1090-1092. doi: 10.12816/0044531.
5. Alghamidi, I., Hussain, I., Alghamdi, M., & El-Sheemy, M. (2014). The incidence rate of prostate cancer in Saudi Arabia: an observational descriptive epidemiological analysis of data from the Saudi Cancer Registry 2001–2008. *Hematology/Oncology And Stem Cell Therapy*, *7*(1), 18-26. doi: 10.1016/j.hemonc.2013.10.001.
6. Ghunaim, A., Aljohani, H., & Alharbi, Y. (2018). The Extent of Knowledge and Awareness of Prostate Cancer Screening among Saudi Men Aged More than 40 Years. *The Egyptian Journal Of Hospital Medicine*, *70*(7), 1185-1189. doi: 10.12816/0044547.
7. Al-Abdin, O., & Al-Beeshi, I. (2018). Prostate cancer in the Arab population. An overview. *Saudi Medical Journal*, *39*(5), 453-458. doi: 10.15537/smj.2018.5.21986.
8. Alhuwayshil, A. (2016). Retrieved 4 November 2020, from http://cardinalscholar.bsu.edu/bitstream/handle/123456789/200567/AlhuwayshilA_2016-1_BODY.pdf?sequence=1&isAllowed=y. [Accessed 8 March 2019].
9. Arafa, M., & Rabah, D. (2017). With increasing trends of prostate cancer in the Saudi Arabia and Arab World: Should we start screening programs?. *World Journal Of Clinical Oncology*, *8*(6), 447-449. doi: 10.5306/wjco.v8.i6.447.
10. Aljubran, A., Abusamra, A., Alkhateeb, S., Alotaibi, M., Rabah, D., Bazarbashi, S., Alkushi, H., Al-Mansour, M., Alharbi, H., Eltijani, A., Alghamdi, A., Alsharm, A.,

Ahmad, I., & Murshid, E. (2018). Saudi Oncology Society and Saudi Urology Association combined clinical management guidelines for prostate cancer 2017. *Urology annals*, *10*(2), 138–145. https://doi.org/10.4103/UA.UA_177_17.