Research Article

Investigation of Prostate Disorders in 614 Patients Attended Alzahra/Urology Ward Between the Years 2013 to 2015 in Isfahan

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ABSTRACT

According to previous publications, cancers seem to be a major public health problem internationally. Consequently prostate cancer (PCa) is a medical common problem of male population. Therefore, the main objective of this investigation was to evaluate patients with prostate disorders for primary recognition of PCa. In this retrospective study, 614 patients with prostate disorders, those attended Alzahra/urology ward from the years 2013 to 2015 were enrolled. Clinical and demographical data were recorded and the statistical analyses of data processed using SPSS. There were 210, 269 and 135 patients with prostate disorders that could be corresponded to 353 days related to year 2013, 294 days associated to year 2014 and 237 days connected to year 2015. In the 98% age related prostate disorders were more than 40 years old. Malignant neoplasm of prostate was reported in 44% as positive. Except in the 2 % of those suffered from acute or chronic prostatitis, in the 54% of patients there was evidence regarding to prostate hyperplasia. The study findings verified an increase in the number of patients with such disorders by reference to the time interval of analysis and 44% reported malignancy. Further recommended planning, toward inspection for calculating disease prevalence, evaluation of the etiology, primary recognition of PCa in Isfahan/Iran appears to be advantageous.

Keywords: Prostate; Hyperplasia; Neoplasm; Malignant; Cancer; Isfahan.

INTRODUCTION

According to recent publication, prostate cancer (PCa) with prevalence of 25.3 per 100000 population, could be mentioned as the second most frequently cancer that could generate significant difficulties for health system[1]. The lowest and highest value of prevalence with values of 1.9 versus 137 per 100000 populations was reported for Tianjin (China) versus North America and Scandinavia, especially in African-American people[2,3]. It could affect elder male and diagnosed at an average age of 66 years old[4,5]. High intake of red meat and processed meats, lack of dietary fiber, alcohol intake, smoking, lack of physical activity, diabetes and many other factors could be mentioned as its' important risk factors[6-14].Obesity as a potentially modifiable risk factor for disease progression and poor outcomes for numerous diseases could increases the risk of prostate cancer progression and biochemical recurrence[15-18]. The inflammation markers might be associated with poor PCa outcomes[19]. Related to PCa management it was reported that age, stage of tumor and its' aggressiveness could affect therapeutic strategy. In comparison to men from other parts of the world, African men suffer disproportionately from PCa. Metcalfe C, et al., in 2008 provided evidence of a lower incidence of prostate cancer amongst South Asian men living in England, in comparison with their White counterparts[19-21]. People living in poorer and/or urban areas and the young-elderly are more susceptible to a very late cancer diagnosis[22]. Xiao H, et al., in 2007 confirmed that older age, marital status, being black, low income, low education, tobacco use, and disease diagnosis in early years could affect individual patient[23]. According to previous publications, ethnicity and income could have implications for quality of care[24-26]. As the burden of PCa is expected to grow to 1.7 million new cases and 499,000 deaths by 2030 mainly due to the growth and aging of the global population[27], therefore, this investigation was designed to evaluate patients with prostate disorders those attended Alzahra/urology ward between the years 2013 to 2015 in Isfahan/Iran.

MATERIALS AND METHODS

A retrospective survey associated to 614 patients with prostate disorders was carried out from 2013 to 2015. All patients with prostate disorders that attended urology ward located at the Alzahra Hospital, conducted to Isfahan Kidney Transplantation Research Center (IKTRC), were entered. There was no induction in treatment procedure. Clinical data; including name, surname, hospital archive's code, discharge date, classified disorders such as hyperplasia, malignant neoplasm, prostatitis, age of each

individual patient were recorded in Excel and analyzed by SPSS v. 20 (Chicago, IL, USA). Wherever possible, the mean, minimum and maximum values were reported for data.

RESULTS AND DISCUSION

As shown in Figure 1, the period of study from 2013 to 2015 included 884 days. There were 210, 269 and 135 patients with prostate disorders that could be corresponded to 353 days related to year 2013, 294 days associated to year 2014 and 237 connected to year 2015. Figure 2, shows distribution of age within the population studied. With a minimum of 22 and a maximum of 91 years old, the mean age was 65.4 years old. Within 2% of population studied, age was under 40 years old. In the 22 % of population studied, age ranged from 50 to 60 years old. Those at the age between 50 to 60 years old were involved as the highest population of patients with prostate disorders (n= 256/614; 42%). In the 24% of population studied age ranged from 70 to 80 years old. Only in the 8% of population studied age ranged from 80 to 91 years old. As

shown in Figure 3, analysis of patients with prostate disorders, according to the results received from the local pathology laboratory confirmed that 44% of population suffered from malignant neoplasm of prostate. In the 54% the reason for attending urology ward recorded as prostate hyperplasia. In the remaining 2% the reason for attending urology ward recorded as acute and chronic prostatitis. As shown in table 1, there were not any significant differences related to age between populations with prostate hyperplasia versus population with malignant neoplasm. In the 15 patients those suffered from prostatitis due to acute or chronic inflammation, the mean age was 53.8 years old with the minimum of 22 and maximum of 71 years old. The global burden of cancer in 2013 confirmed that cancer poses a major threat to public health worldwide, and incidence rates have increased in most countries since 1990[26]. In the year 2016, Quante AS., et al., mentioned that past models of cancer and prospect alteration in the demographic structure have a key influence on the predictable occurrences related to human malignancies[27,28]. Of all men diagnosed with cancer each
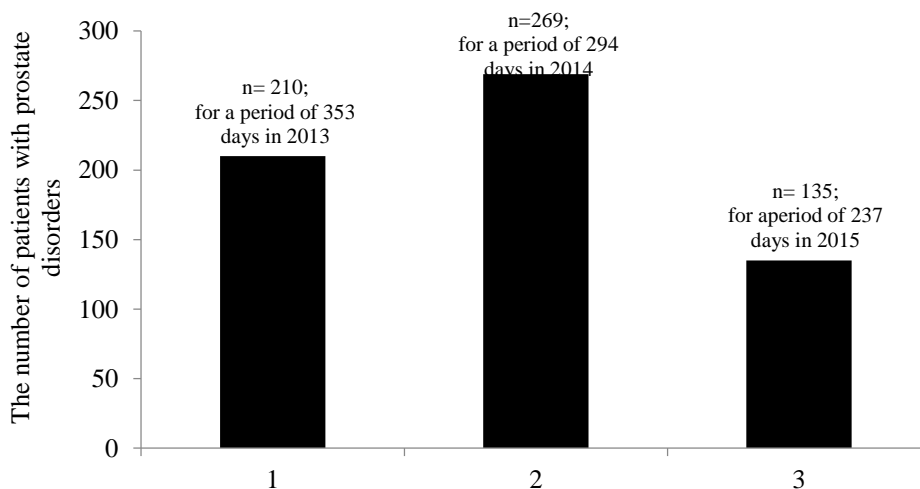

Figure 1: The number of patients with prostate disorders according to the number of days from 2013 to 2015 (n= 614).
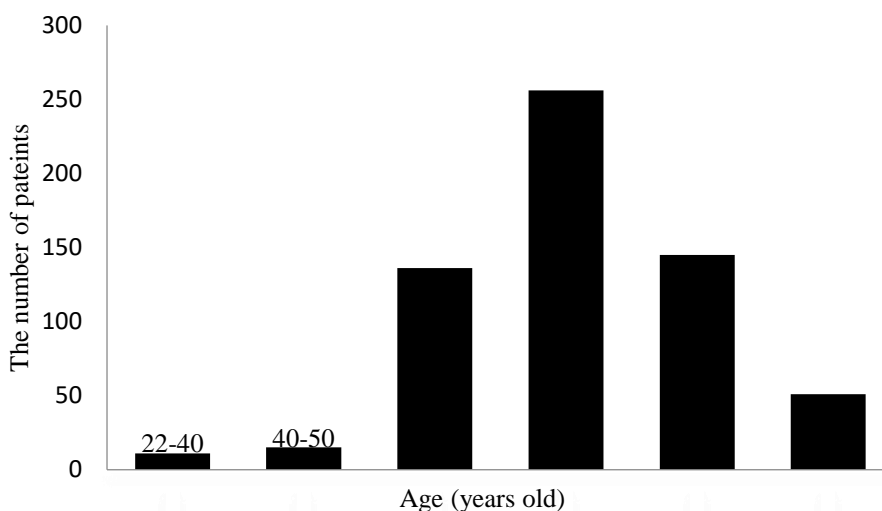

Figure 2: Distribution of age in patients with prostate disorders (n= 614).

Table 1: Mean, minimum and maximum values of age (years old) related to prostate disorders.

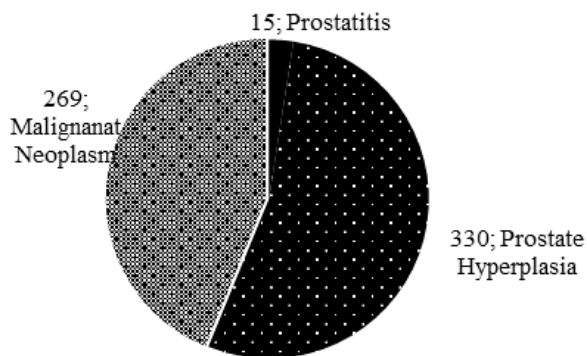| Type of prostate disorders	Number of patients in each population	Mean age; years old (Minimum-Maximum)
Prostate hyperplasia	330	(22-91) 65.5
Malignant neoplasm	269	(26-91) 66
Acute or chronic inflammation of prostate	15	(22-71) 53.8

Figure 3: Distribution of prostate disorders in total population studied (n= 614).

year, more than 30% will be diagnosed with prostate cancer[24]. The increase in the number of patients with the values of 210 (for 353 days in 2013) versus 269 (for 294 days in 2014) is in agreement with previous publication of Enayatrad M, et al., in 2016 in which confirmed that the future burden of cancer in Iran is going to be acute with the expected increases in aging populations[29].

The calculated mean age in 98% of patients with prostate disorders was more than 40 years old, that this is in accordance with the recent publication of Pakzad R, et al., wherein mentioned that prostate cancer is a disease of older men and its' incidence is increasing in Iran[30]. As the most common morphology related to prostate cancer described to be as adenocarcinoma[30-33], therefore, in this study out of total population in 44% of patients the results reported from the local pathology laboratory proved as malignant neoplasm. The challenges related to pharmacotherapy and surgical strategy of prostate disorders mentioned to be altering due to a superior thought about the disorder and the growth of the practical perception of lower urinary tract symptoms (LUTS)[34,35]. A recent study suggested that among individuals with low vitamin D status, the increase of the 25 (OH) D levels may be associated with a lowered risk of LUTS[36]. Finally in order to monitor quality and quantity of care, strong prostate disorders registrations' by assembling well-defined extensive research database seems to be vital to properly counting PCa burden in Isfahan/Iran[37-40].

CONCLUSIONS

The outcomes of the current study will contribute significantly toward the prompting for the importance of the prostate disorders as the key health issues associated to the 1) economic concerns and life style modification such as control of diabetes, hypertension, an appropriate level of vitamin D, and knowledge on various factors lead to renal failure (41-7) and 2) planning of better care for aged males in Isfahan/Iran.

CONFLICT OF INTERESTS
The authors declare that there is no conflict of interests regarding the publication of this paper.

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