Original Article

Prostate Lesions

Spectrum of Prostate Lesions: A Decade Experience

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ABSTRACT

Background: The prostate gland is found at the base of the bladder, surrounding the urethra. A rising interest has been noted in the diseases of the prostrate in the last decade or so. This is attributed to the fact that a high incidence of the prostatic carcinoma has been noted in different geographical locations and multi ethnic groups. Carcinoma of the prostate is the most common form of cancer in males in the United States, second only to lung cancer.

Study Design: retrospective study

Place and Duration of Study: This study was carried out at Department of pathology, Dow Medical College, Karachi between January 2003-2012.

Materials and Methods: A retrospective study of 317 prostatic biopsies was conducted, based on the histopathological reports, with the purpose of identifying patients with prostatic lesions. Records of all specimens of prostatic tissue received for histopathology from the Civil hospital Karachi were used in this study. The data obtained were subjected to descriptive statistical analysis using SPSS version 16.0.

Results: The total number of patients included in this study was 317. The mean age of the patients was 64.9±8.12 with an age range of 48-100. 7.9% (n=25) patients had prostatic adenocarcinoma whereas 91.8% of patients showed benign nodular hyperplasia.

Conclusion: Overall the incidence of prostatic cancers is more in the western countries as compared to the east. This can be attributed to the fact that the west has screening programs that leads to early detection. However screening programs should also be introduced and made available to general public and in males over the age of 50, PSA level detection should be made compulsory.

Key Words: Prostate, benign prostatic hyperplasia, prostatic carcinoma

INTRODUCTION

The prostate gland is found at the base of the bladder, surrounding the urethra.[1] A rising interest has been noted in the diseases of the prostrate in the last decade or so. This is attributed to the fact that a high incidence of the prostatic carcinoma has been noted in different geographical locations and multi ethnic groups. However, attention has naturally been focused more on the malignant, as well as premalignant, lesions of the prostate.[2] The pre-malignant lesion, in the recent times, have been better defined, mainly due to the technological advancements.[2] Prostate enlargement occurs with increasing age in some males. Benign prostatic hyperplasia, a redundant term for nodular hyperplasia is an exceptionally common disease in males over 50 years of age.[3] It is characterized by the formation of large, fairly discrete nodules in the periurethral region of the prostate. When sufficiently large, the nodules compress and narrow the urethral canal to cause partial, or sometimes virtually complete, obstruction of the urethra.[4] Carcinoma of the prostate is the most common form of cancer in males in the United States, second only to lung cancer.[2] The present study was done to see the pattern of prostatic diseases.

MATERIALS AND METHODS

A retrospective study of 317 prostatic biopsies was conducted between January 2003-2012, based on the histopathological reports, with the purpose of identifying patients with prostatic lesions. Records of all specimens of prostatic tissue received for histopathology from the Civil hospital Karachi were used in this study. The specimens were processed at the Department of pathology, Dow Medical College. Data was collected by a single observer. The biopsies were received in 10% formalin. The specimens were grossed and the measurement and weight of all the specimens were recorded. The tissue was processed and blocks were made. The slides were prepared and stained with Haematoxylin and Eosin stains. All the specimens were sub classified into benign and malignant. The following variables were studied: Age, Diagnosis and Nature of the lesion. The data obtained were subjected to descriptive statistical analysis using SPSS version 16.0.

RESULTS

The total number of patients included in this study was 317. The mean age of the patients was 64.9±8.12 with an age range of 48-100. The majority of these prostate specimens were taken out for symptoms related to nodular hyperplasia previously referred to as benign prostatic hyperplasia. Chronic prostatitis as an accompanying feature was seen in 60% of cases.7.9% (n=25) patients had prostatic adenocarcinoma whereas 91.8% of patients showed benign nodular hyperplasia. The incidence of different prostatic diseases is shown in

figure 1. All specimens were graded according to the criteria laid down by Gleason. All the 25 cases of adenocarcinoma were moderately differentiated (Gleason score of 5-7).

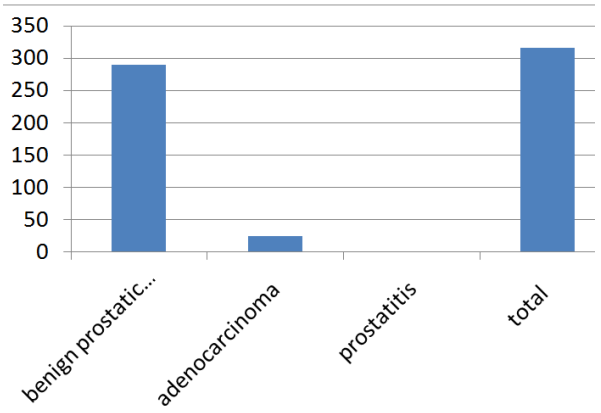

Figure No.1: incidence of prostatic diseases in our series

DISCUSSION

The important lesions of the prostate are typically, of three types. The inflammatory lesions, resulting due to non specific type of infections. Nodular hyperplasias occurring as a result of benign prostatic hypertrophy and the third is the malignant lesion, the carcinoma.[3,4] all three of them can lead to a considerable enlargement of the prostate gland. Any enlargement of the prostate gland can cause obstructive symptoms, since the prostate encircles the male urethra. Thus these patients can complain of difficulty in urination, nocturia, increased frequency of micturation or difficulty in initiating or maintaining the stream of urine.[5,6] In our study, majority of the patients (91.8%) presented with benign prostatic hyperplasia. In another study conducted in Faisalabad, Pakistan, 86.4% of the patients presented with benign prostatic hyperplasia.[1] Histopathologically, both the fibromuscular as well as glandular types of hyperplasias were seen. Many of the cases, showed an associated non-specific type of chronic inflammatory reaction. In a study conducted in Saudi Arabia chronic prostatitis was observed in 95.1% of all the biopsies reviewed.[2]

Our study showed that nodular hyperplasia is very commonly found in males of 60 years of age and above and the incidence in patients of 60 years and above is 83.9%. This result is in concordance with another study, where the incidence of patients of age 60 and above was 86.8%.[1] An analysis of prostatic disease in Saudi Arabia reveals 90% to be benign with 82.2 % showing hyperplasia.[2] another study from the sultanate of Oman in which the benign prostatic hyperplasia was seen in 88.5 %.[7] Quinn etal in their study also show the nodular hyperplasia to be an extremely common disorder above the age of 50 years.[8] In a five year study in a Bahraini population, it was seen that clinical incidence of this disease is only 8% during the fourth decade but reaches 50% in the fifth decade and 75% in the 8th decade.[9]

The data from USA in 2006 and Europe in 2008 reveals that prostatic cancer is the commonest disorder in men.[10,11] in our study 7.9% of the cases were malignant. A similar study reported in Pakistan, showed the incidence of malignant cases to be 13.2%[1] whereas a study carried out in Saudi Arabia showed an incidence of about 10%.[4] Prostatic carcinomas were graded according to the Gleason scoring. All the 25 samples received that were diagnosed as malignant were adenocarcinomas and were all graded as moderately differentiated according to the Gleason scoring. Grading of the carcinomas is indeed important as an analysis of patients revealed that death from prostatic cancers increases as the Gleason's score increases.[12,13,14,15]

CONCLUSION

Overall the incidence of prostatic cancers is more in the western countries as compared to the east. This can be attributed to the fact that the west has screening programs that leads to early detection. However screening programs should also be introduced and made available to general public and in males over the age of 50, PSA level detection should be made compulsory.

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