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CANCER OF THE PROSTATE: EXPERIENCE AT NNEWI, SOUTHEAST, NIGERIA.

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ABSTRACT

Objective: To evaluate the clinical presentation, method of diagnosis, treatment and outcome of prostate cancer patients.

Patients and Methods: A 5-year retrospective study of all patients seen with the diagnosis of cancer of the prostate at the Urology Unit of Nnamdi Azikiwe University Teaching Hospital, Nnewi from January1, 1996 to December 31, 2000. The demographic pattern, clinical features, laboratory findings, treatment modalities and outcome were studied.

Results: A total of 54 cases were seen. Cancer of the prostate was the commonest urological tumour accounting for 77.1%. There was a 4-fold increase in annual incidence between 1996 and 2000. Mean age was 71.0±10.9 years with a range of 44-92 years. Average duration of symptoms before presentation was 8 months while the commonest mode of presentation was Lower Urinary Tract Symptoms (LUTS). Digital Rectal Examination (DRE) had a predictive value of 66.7%. PSA was obtained only in 17 patients. Values of ≤ 4ng/ml was obtained in 11.7%, values between 4-10ng/ml in35.2%, between 10-20ng/ml 5.8% while 47.1% had values above 20ng/ml. Biopsy obtained in 14 patients showed poorly differentiated adenocarcinoma in 78.6%, well differentiated adenocarcinoma in 7.1% while 14.3% were unclassified. Commonest mode of treatment was bilateral orchidectomy in 46.3%. Follow up was variable from 3months to 6 years. Mortality was 22.2% while 33.3% were lost to follow up.

Conclusion: Prostate cancer is a major problem facing the aging male. Inadequate facilities make early detection difficult. Treatment is mainly palliative because of late presentation.

Key Words: Prostate cancer, Incidence, Presentation, Diagnosis, Palliation.

INTRODUCTION

Cancer of the prostate is said to be the most commonly diagnosed malignancy in males in the developing world, and ranks 2nd among causes of cancer death in men[1,2].

Recently, the incidence of cancer of the prostate has been on the increase worldwide that it has become a public health issue in some parts of the world[2-5]. It was previously believed that prostate cancer was rare in Africans[6]. Low androgen levels were adduced as the reason for this low incidence in Nigerians[7]. This was shown to be untrue by Osegbe et. al.[8] who found that androgen levels in Nigerian men were similar to those in black Americans in the United States[9]. Facts' emerging from recent reports show that incidence of this disease in the West African sub-region is similar to those of African Americans living in the United States of America[9-10]. Furthermore, evidences abound to suggest that the incidence of cancer of the prostate is on the increase in Nigeria[9,11-13].

The success of any treatment will depend on the state of the patient at the time of presentation, biological behaviour of the tumour cells and the available modalities for treatment. In our environment, most patients present late with very severe and devastating symptoms, that treatment options are mostly palliative[12,13].

The advent of Trans-rectal ultrasonography and prostate specific antigen (PSA) as tumour marker for cancer of the prostate have indeed improved early detection, monitoring and even screening of susceptible patients. Unfortunately, these modalities of investigation are not readily available in our environment thus making early diagnosis of cases difficult.

We present our experience with the management of carcinoma of the prostate over a 5-Year period. This will help to identify our pitfalls in

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order to improve on our management strategies in the given circumstance.

MATERIALS AND METHODS

This is a 5-year retrospective study of all patients seen with the diagnosis of cancer of the prostate at the Urology Unit of Nnamdi Azikiwe University Teaching Hospital, Nnewi from January 1, 1996 to December 31, 2000.

Information regarding the age, presenting symptoms, family history, and general physical examination findings especially digital rectal examinations and other disabilities were extracted from the case notes. Data on Laboratory investigations including haemoglobin concentration, ESR, serum acid phosphatase, PSA, biopsy results as well as radiological investigations, treatment and outcome were also extracted from the records and analyzed.

RESULTS

A total of 54 cases were seen during the period under review. This showed a gradual increase in the incidence from 4 new cases in1996 to 16 new cases in 2000 representing a 4-fold increase. It is the commonest urological tumour accounting for 77.1% of all urological tumours seen in the hospital during the period.

Figure1 shows the age distribution. The peak age incidence is in the 8th decade of life representing 37.0% of cases. The mean age was 71 ± 10.9 years with a range of 44-92 years. One patient was below 50 years of age. The average duration of symptoms prior to presentation was 8 month, with 34.7% presenting within 1 month, 24.5% in 1-6 months, 10.2% in 6-12 months, 18.4% between 1-2 years, while the remaining 12.2% presented more than 2 years from the initial symptom.

Table 1 shows the symptoms at presentation. The commonest presenting symptom was frequency in 54.4%, followed by hesitancy 22.2% while urgency and terminal dribbling were each seen in 20.3% of cases.

Findings at DRE included prostatic enlargement in 53.7% (29) and hard nodules 53.7% (29), hard glands 66.6% (36). PSA was obtained in 17 patients representing about 31.5% of all patients. 11.8% (2) had values less than 4ng/ml. 35.3% (6) and 5.9% (1) of cases had values of 4–10ng/ml and 10 – 20ng.ml respectively. 47.1% (8) had values greater than 20ng/ml. Serum acid phosphatase was determined in 70.4% (38) of the cases. Among these, 35.2% (19) had prostatic fraction value less than 4 iu/L, while the remaining 35.2% (19) had values above 4 iu/L. Only 14 patients had biopsy reports. Poorly differentiated adenocarcinoma was seen in 78.6% (11), well differentiated in 7.1% (1) while 14.3% (2) were not classified.

Bilateral orchidectomy was offered to 46.3% (25) with satisfactory results at 6 months as evidenced by significant reduction in symptoms. 20.4% (11) had Flutamide in addition as part of TAB with similar but yet unquantifiable improvement in symptomatology at 6 months of review. Diethyl stilbestrol (DES) was used for 22.2% (12), 16.6%(9) declined any form of treatment, of which only 7 (12%)were followed up. The other 2 (3.7%) did not

Figure 1: **Age Distribution in men with Prostate Cancer**

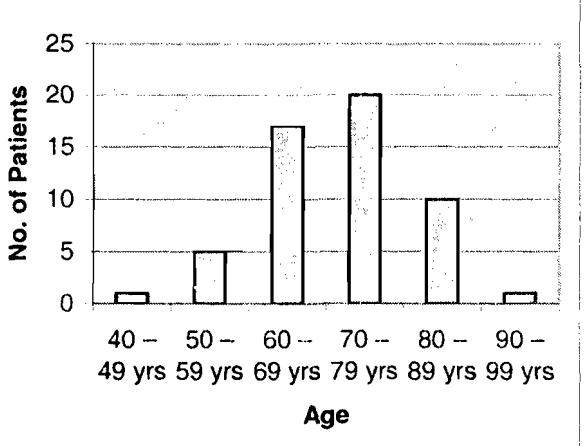

Table 1: **Clinical Features in Patients With Cancer of the Prostate.**

Presentation	*Frequency*	*%*
Urinary Frequency	31	57
Haematuria	12	22.2
Hesitancy	12	22.2
Urgency	11	20.3
Terminal Dribbling	11	20.3
Nocturia	7	12.9
Waist Pain	7	12.9
Weight Loss	7	12.9
Feeling of Incomplete emptying	6	11.1
Inability to Walk	6	11.1
Dysuria	5	9.2
Straining	4	7.4
Retention	4	7.4
Leg Swelling	4	7.4
Urge Incontinence	2	3.7
Intermittency	2	3.7
Weak Flow	1	1.8

return for follow up. Follow up was for variable periods ranging from 3 months to 6 years. Five (9.3%) cases only were followed up for 5 years, 13 (24.1%) between 2 and 5 years, 10 (18.5%) between 1 and 2 years while the rest were followed up for less than one year. Eighteen (33.3%) were lost to follow up at different stages while 12 (22.2%) died in the course of the study.

DISCUSSION

The incidence of cancer of the prostate has been noted to be on the increase globally[1-5,8-13]. Although, the number of cases in this study is small, we noted an increase in incidence of as much as 400% over a 5-year period. This corroborates the result of other investigators who noted a rising trend in our environment[9-13]. The probable reason for this increase may be increased awareness of the disease, better documentation of our cancer patients and increasing use of PSA, needle biopsy and ultrasound in the evaluation of men with LUTS.

The mean age as well as the peak age incidence is comparable to reports from this sub-region and elsewhere[6,9-15]. The youngest patient was 44 years at presentation. This is to the best of our knowledge, the youngest case of carcinoma of the prostate reported from Nigeria. He presented with urinary frequency and inability to walk of 4 month duration. DRE revealed an enlarged, hard, nodular prostate that turned out to be infiltrating poorly differentiated adenocarcinoma on biopsy. He accepted orchidectomy but was lost to follow up after 3 months.

The commonest mode of presentation was LUTS. Features of local spread like waist pain, paraplegia, leg swelling were also encountered and were obvious evidence of late disease. This is similar to the finding of others in the environment[9,12,13]. Average duration of symptoms prior to presentation was 8 months. The main reasons for seeking medical attention were as a result of complications of the disease process especially haematuria and acute urinary retention.

The reason for this late presentation is probably due to ignorance and poverty. Other reports from Nigeria attributed late presentation to the absence of screening programmes, inadequate diagnostic facilities, lack of health education and the assumption by patients that LUTS are part of the normal ageing process[12,13,16].

Digital rectal examination findings is said to have a sensitivity of 30-50%[17]. In this study a higher predictive value of 66.7% for Cancer of the prostate was obtained. This is probably due the late presentation of most of the cases. Despite the fact that only 17 patients had PSA results because of unavailability of facilities for the assay at the earlier period of the study, there is a wide variation in values obtained. As much as 47.1% of cases had values below 10ng ml, while 47.1% had values above 20ng ml. PSA therefore cannot be used alone as a diagnostic tool. It has also been reported that some cases of BPH have elevated PSA values and so suggested the use of percent free PSA as a discriminatory factor between BPH and Carcinoma of the prostate[18,19]. In their study of 1700 men of Arab origin in Kuwait, Kehinde et al[20] found that out of 161 men with PSA of 10ng/ml, 68% had BPH, 21%had BPH with prostatitis and cancer of the prostate in only 11%, and that neither PSA density nor percentage free PSA was useful in differentiating between cancer of the prostate and BPH in these men, rather a progressive decline of total PSA level from >0ng/ml to <4ng/ml over time confirmed the diagnosis of BPH with prostatitis. In this study, PSA values did not correlate with the extent of the disease. Prostatic fraction of the Acid Phosphate level was also not predictive of carcinoma of the prostate. This is not surprising because it had been noted that it is non-specific to the prostate, though, it may be useful for the monitoring the disease progression and treatment success[21,22].

Tissue diagnosis was obtained in only 25.0%. This was because the facilities for needle biopsy were not readily available at the earlier stage of the study and when available the cost of this investigation was not affordable to most patients. Despite these we were able to make our diagnoses based on the overwhelming clinical evidence as well as the complications with which the patients presented.

Treatment of these patients had no special clinical criteria, but was dependent on patients' choice and affordability. However, all treatment modalities were palliative and were based on hormonal manipulation because of late presentation. Bilateral orchidectomy was the commonest mode since it was cheap and available. Addition of anti-androgen drugs was dependent on affordability. This did not seem to have affected the prognosis. Follow up was variable from 3 months to 6 years. This showed a clear improvement and better quality of life for those who had treatment than those who refused any form of treatment. It is difficult to make clear statements on the survival rate since as much as one-third of the whole population were lost to follow up at different periods, even as early as 3 to 6 months following diagnosis. Apart from the 22.2% mortality recorded, most of the patients had one problem or the other especially bladder outlet obstruction, progressive anaemia and in few cases paraplegia. These were obvious evidence of progressive disease.

We conclude therefore that cancer of the prostate is a major problem facing the ageing males in our environment. The outlook is still poor because of ignorance and inadequate facilities for early detection. Treatment is mainly palliative because of late presentation. It is expected that as facilities improve we will be able to diagnose the disease early among our people so that curative treatment could be offered.

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