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Carcinoma of the Prostate - A Five Year Experience in Maiduguri North Eastern Nigeria

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Abstract

Background: Carcinoma of the prostate is one of the commonest cancer afflicting elderly men globally with varying treatment options. Orchidectomy still occupies a prime place in developing countries where drugs are either unavailable or expensive.

Patients and Methods: The study reviewed all patients with carcinoma of the prostate managed in the University of Maiduguri teaching hospital (UMTH) between January 2009 and December 2013. All patients aged 50 years and above advanced disease had orchidectomy as primary treatment except when declined. Patients below 50 years of age were not offered orchidectomy for fertility reasons. Hormone resistant tumours were treated with anti-androgens such as stilboestrol, flutamide, bicalutamide, steroids, ketoconazole and bisphosphonates among others

Results: A total of 101 patients were studied age ranged from 42- 90 years with a mean of 67.30 years and SD of 11.56. The peak age group was 60 – 69 years, accounting for 43.65% of the patients. The clinical features included lower urinary tract symptoms in all patients, and low back pain in 66.34%. Complications at presentation were anemia in 54.56% and paraplegia in 18.81%. The procedures done were orchidectomy in 88.11, thoracostomy tube drainage of pleural effusion in 4.95%, and open reduction and internal fixation of femoral fractures in 5.94%. The 2 year and 5 year survival were 71% and 27% respectively.

Conclusion: Carcinoma of the prostate is fairly common, but patients present late with advanced disease and complications. Orchidectomy offers cost effective modality of treatment.

Keywords: Carcinoma of the prostate, Orchidectomy, Management outcome Developing country.

1. Introduction

Prostate cancer has become the number one cancer with increasing incidence and morbidity in men of black African ancestry^[1]. Its incidence and prevalence in black men is in multiples of those from other races in several studies^[2]. Odedina *et al.*^[3] recommended the need to focus on areas of genetic and environmental factors in this group. In developed countries early diagnosis is the norm^[4], as opposed to developing countries where patients present late often with metastatic disease and complications^[5]. Generally treatment consists of curative radical prostatectomy and radiotherapy in early disease^[6-7], while hormonal manipulation reserved for advanced disease^[8]. In developing countries most centers do not have facilities for radiotherapy, and chemotherapy is either not available or unaffordable. Orchidectomy being inexpensive, simple, and acceptable is the most viable option.

2. Patients and Methods

The study reviewed all patients with carcinoma of the prostate managed in the University of Maiduguri teaching hospital (UMTH) between January 2009 and December 2013. Permission for the study was granted by the Hospital Ethics and Research Committee. Written informed consent was obtained from all patients. Information was extracted from clinical and laboratory records and the data analyzed using SPSS version 16. The diagnosis of carcinoma of the prostate was based on clinical evaluations supported by laboratory and imaging investigations where indicated. Emergency presentations were resuscitated with intravenous fluids, analgesics, antibiotics, and blood transfusion where necessary. Investigations included urinalysis, blood chemistry, full blood count, chest x-ray, limited skeletal survey, abdominopelvic ultrasound scan, Computerized tomography and

electrocardiography. Others were prostate specific antigen, prostatic acid phosphatase, and prostate Trucut biopsy. All patients aged 50 years and above with extra – organ disease had orchidectomy as primary treatment except when declined. Patients below 50 years of age were not offered orchidectomy for fertility reasons. Hormone resistant tumours were treated with second and third line drugs. Second line treatment involved use of anti-androgens such as stilboestrol (estrogen with anti-androgen effect), flutamide, bicalutamide etc. A third line treatment includes steroids, ketoconazole and bisphosphonates among others.

3. Results

A total of 101 patients were studied age ranged from 42- 90 years with a mean of 67.30 years and SD of 11.56. The peak age group was 60 – 69 years, accounting for 44(43.65%) of the patients table 1. The clinical features were lower urinary tract symptoms in all patients (100%) table 2. Complication at presentation were anemia in 55(54.56%) and paraplegia in 19(18.81%) table 3. Locoregional disease comprising locally advanced (fixity to the pelvic bone, rectum, perineum and sacrum), was found in 39(38.61%), while 62(61.39%) had metastatic disease. Bony metastases were found in 57(56.44%), pulmonary in 19(18.81%), hepatic in 13(12.87%), cutaneous in 2(1.98%), and cerebral in 1(0.99%). The procedure done were orchidectomy in 89(88.11%), thoracostomy tube drainage of pleural effusion in 5(4.95%), open reduction and internal fixation of femoral fractures in 6(5.94%), and cavanotomy for 3(2.97%) patients with priapism. Post-operative complications were surgical site infections in 9(8.91%), scrotal hematoma in 7(6.93%). Patients were followed up from 3 months to 5 years. The 2 year and 5 year survival rates were 71% and 27% respectively though some patients were lost to follow up.

4. Discussion

Globally prostate cancer is a disease of the elderly with peak age of incidence ranging from 70 – 80 years in developed countries whereas in Africa due to short life expectancy prostate cancer peak at a decade earlier. This study found the mean age to be 67.30 years which is similar to the study in Egypt by Ahmed *et al.* [9]. However Cremers *et al.* [10] in the Netherlands found the mean age of 74 years that dropped to 70 years following the policy of cancer screening that led to early detection. The presenting features of lower urinary tract symptoms, Hematuria, low back pain were similar. Complications at presentations varied whereas in the current study impaired renal function, erectile dysfunction, anemia, and paraplegia dominated, Ekeke *et al.* [11] in Port Harcourt found paraplegia and Hematuria with anemia predominating. Ekeke had radical prostatectomy in few early diseases, in our study procedures were limited to orchidectomy for advanced disease, and other procedures to deal with complications such as pleural effusion and pathological fractures. The 2 year and 5 year survival in our series were 71% and 27% respectively similar to Ekeke’s 66.5% and 30%, but in complete variance to what is obtainable in Europe where Surapaneni *et al.* [12] reported a 5 year survival of 98%. From the Caribbean Kameel [13] reported a 5 year survival of 72 – 88%. The low survival rates in our series can be attributed to late presentations with advanced disease associated with complications, the tumour biology of high grade, and co morbid medical conditions. A study from Nnewi by Nwofor *et al.* [14] supported our findings.

5. Conclusion

Carcinoma of the prostate is common and the incidence is rising in Africa with high morbidity and mortality due to late presentation, poor socioeconomic conditions and lack of facilities. There is the need for screening policy for early detection and provision of facilities for curative treatment.

Table 1: Age Distributions

Age (years)	No	%
<50	4	3.96
50 – 59	12	11.88
60 – 69	44	43.56
70 – 79	30	29.70
80 – 89	8	7.92
90+	3	2.97
Total	101	100.00

Table 2: Clinical features

Clinical features	NO	%
LUTS	101	100
Pelvic/low back pain	67	66.34
Erectile dysfunction	49	48.51
Lower limb weakness/paraplegia	37	36.63
Hematuria	17	16.83
Weight loss/poor appetite	79	78.22

NB: LUTS.... Lower urinary tract symptoms

Table 3: Complications at presentation

Complications	No	%
Anemia	55	54.46
AUR	43	42.57
Impaired renal function	41	40.59
UTI/Urosepsis	27	26.73
Paraplegia	19	18.81
Pathological fracture	7	6.93
Pleural effusion	5	4.95
Fecal incontinence	5	4.95
Priapism	3	2.97

NB: AUR ---- Acute urinary retention, UTI.....Urinary tract infection

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