

Occurrence of Post-orchietomy Hot Flushes in Nigerians: A Preliminary Report

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ABSTRACT

Background: Hot flushes have been reported in men after bilateral orchietomy for carcinoma of the prostate, but such complaints are uncommon in the urology clinics in Nigeria. This study set out to determine the occurrence of hot flushes in Nigerian patients who had bilateral orchietomy for advanced carcinoma of the prostate.

Method: Twenty-four patients seen over a five-year period were prospectively evaluated. They all had bilateral orchietomies for advanced carcinoma of the prostate.

Result: Fourteen (58%) of patients studied had hot flushes of varying frequency and severity. All started within eight weeks of the operation. Empirical treatment with 1mg diethylstilboesterol daily was effective and abolished symptoms in all the patients within four weeks of commencement of therapy.

Conclusion: Post-orchietomy hot flushes of enough severity to necessitate treatment do occur in Nigerians and effort should be made to diagnose and treat them.

KEY WORDS: Prostate cancer, Treatment, Orchietomy, Diethylstilboesterol, Hot flushes

Introduction

Vasomotor symptoms, such as hot flushes and profuse sweating, have been reported as common following bilateral orchietomy, but with only little attention in the literature.¹⁻³ It

has also been reported in treatment of carcinoma of the prostate with leutenising hormone-releasing hormone (LH-RH) analogues⁴ and after hypothysectomy.⁵ In Nigeria, endocrine treatment with either bilateral orchietomy or oestrogens

is the common choice of therapy for carcinoma of the prostate because it is easily performed, acceptable to the patients, and relatively inexpensive. There is no doubt that many patients who have had bilateral orchietomy may thereafter have hot flushes and other vasomotor symptoms. But apparently, because of ignorance, or reluctance to complain, or even anecdotal belief that the average Nigerian is characteristically resilient and tolerant to pain and discomfort, such complaints are not common in the clinics.

This prospective study set out to determine the occurrence of hot flushes in Nigerian patients who have undergone bilateral orchietomy for advanced carcinoma of the prostate.

Patients and Methods

Twenty-four patients who presented between January 1994 and December 1998, and who had bilateral orchietomy for carcinoma of the prostate were prospectively evaluated for the occurrence of hot flushes. All the patients had advanced carcinoma of the prostate and were treated with bilateral subcapsular orchietomy. Soon after the operation, while still in hospital, the patients were educated on the possibility of occurrence of the vasomotor symptoms - hot flushes with a sensation of heat and profuse sweating. The features were explained to them in the local language or in the English language. On discharge they were provided

with a questionnaire to be completed as necessary at home. The questionnaire was designed such that on completion, it would provide data to elucidate the following;

1. The date of the first attack and the dates of subsequent attacks.
2. The number of attacks that occurred on each day.
3. The severity of the attacks - based on the verbal rating severity score of mild, moderate or severe.
4. The date of the last observed attack.

These data were collected from the patients and recorded during the follow-up visits.

The patients were usually discharged on the second post-operative day and the sutures removed on the 7th post-operative day. Follow-up appointments were given four-weekly for the purpose of the study. Minimum follow-up for this study was 6 months and maximum was 5 years.

In the first four weeks of reporting symptoms, twenty-four hour urine specimens were collected from the symptomatic patients for vanillylmandelic acid estimation. They were provided with special polythene bottles for the urine collection. The method of collection of the urine was explained to the patients verbally, and also copies of the typewritten instruction were given to them to facilitate collection. Vanillylmandelic acid estimation

was to exclude pheochromocytoma, an unrelated cause of flushing. Hydroxy-indole-acetic-acid estimation to exclude the carcinoid syndrome could not be done. Also, in the first four weeks of reporting symptoms and if the severity of the symptoms was enough to cause a demand for treatment, the patients were treated with a simple sedative and anxiolytic, usually bromazepam 1.5 mg three times daily (Lexotan, Roche). If by the next visit the symptoms became abated or alleviated as evidenced by a down grading of the severity score such that further treatment was unnecessary, nothing more was done. But if distressing symptoms persisted, empirical treatment with diethylstilboestrol was started. Though not part of the aims of this study, empirical treatment with diethylstilboestrol was done as a pilot observation, having been found effective in other studies.^{3, 6} Before June 1995, the patients received diethylstilboestrol 1 mg three times daily as used by Steinfeld and Reinhardt.⁶ Only 4 patients were so treated. After June 1995, all the patients received 1 mg of diethylstilboestrol daily as advocated by Atala et al,³ including the four patients who were previously on the three-times-daily regime. All the patients were Nigerians.

Results

During the period of study, 24 patients were evaluated. The mean age was 71.29 years (SD 4.1years) and median age of 72 years. Of the 24 patients, 14 (58%) had hot flushes and 10 (42%) did not. The 14 symptomatic patients were further evaluated. The nature of their symptoms is shown in Table 1.

In all the symptomatic patients, symptoms were first noticed within the first eight weeks of bilateral orchietomy. Most of these patients (86%) described the symptoms as mild or moderate and only 2 (14%) admitted that they were severe and embarrassing attacks. All the symptomatic patients considered their symptoms significant enough to warrant treatment, and thus were treated. Treatment with diethylstilboestrol in both dosages was effective as the symptoms were abolished in all patients (100%) within four weeks of commencement of therapy. Only 4 of the symptomatic patients whose symptoms were scored as moderate or severe reported some relief when treated with bromazepam during the first four weeks of presentation. They all had one-step improvements in the severity score of their symptoms to mild or moderate, but there were no changes in the number of daily attacks. This improvement in symptom with bromazepam was however not an acceptable relief to the patients concerned. Eight patients had 24-hour urine vanillyl-mandelic acid estimation

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done. These were the ones whose urine samples were adjudged as correctly collected. None had an elevated urinary vanillylmandelic acid. Six of the 14 patients died

before the completion of the five-year period. Five had tumour escape and died of the effects of an overwhelming tumour burden. One died after a cardiovascular accident.

Table 1: Nature of The Vasomotor Symptoms in 14Patients

Vasomotor symptoms	No. (%)
TIME OF ONSET	
1 – 4 weeks	8 (57)
5 – 8 weeks	6 (43)
9 – 12 weeks	0 (0)
NUMBER OF ATTACKS PER DAY	
1 – 5	12 (86)
6 – 10	2 (14)
11 - 15	0 (0)
SEVERITY SCORE	
Mild	8 (57)
Moderate	4 (29)
Severe	2 (14)

Discussion

Vasomotor symptoms are common clinical problems in men who have undergone bilateral orchietomy.^{1- 3}

In Nigeria, endocrine treatment with bilateral orchietomy is the preferred method of treatment for advanced carcinoma of the prostate as it is easily performed, acceptable to the

patient and relatively inexpensive when compared with other available modalities of treatment. However, the low report rate of hot flushes and other vasomotor symptoms in the clinics makes one wonder if the condition is rare or even absent in Nigerians. This prospective study has proved that it exists. There is no doubt that there is reluctance on the part of the patients to report. Even patients who report to the general practitioner without good histories would continue to receive treatment for the more common illness, malaria, or at most treated as anxioneurosis. This reluctance to report may be due in part to ignorance of the significance of the symptoms, as positive reports were obtained when the patients were educated on the significance during this study. Also, anecdotal findings indicate that characteristically, the average Nigerian has a high level of tolerance to pain and discomfort and this may partly contribute to their reluctance to complain.

Fifty eight percent of the patients with hot flushes in this study compares with the 54% reported by Atala et al³ and varies only slightly with the 76% reported by Charig and Rundle.² Oestrogens have been known to be effective in the treatment of post orchietomy vasomotor symptoms. Post-orchietomy hot flushes in men, like the menopausal hot flushes in the females, are related to the endocrine function of the gonads. The production of testosterone and oestrogen is controlled by the pituitary release of the luteinising

hormones (LH). The administration of testosterone and oestrogen or their analogues, suppresses the release of LH by a negative feedback mechanism. The mechanism of the hot flushes is unclear, although it is known to be related to fall in testosterone and oestrogen secretion, and is associated with a rapid surge in LH secretion. Since testosterone and oestrogen are structurally similar, administration of oestrogen in the male orchietomised patient will suppress the LH secretion and control a surge without a concomitant enhancement of the pathologically negative effect of testosterone in these patients. Steinfeld and Reinhardt⁶ used 3mg of diethylstilboestrol daily but similar results were obtained by Atala et al³ with a lower dose of 1mg per day. Such a low dose limits the cardiovascular complications usually associated with the higher dosage oestrogen therapies. The empirical finding in this study seems to provide further evidence that 1mg daily is effective, and it is suggested that this regime should be preferred meanwhile.

Other drugs that have been tried for the treatment of post-orchietomy vasomotor symptoms include cyproterone acetate,⁷ low dose medroxyprogesterone acetate,⁸ and clonidine.⁹ For these drugs, not only have they not consistently produced reproducible effectiveness in studies, but their use have been dogged by high costs and an unacceptable level of side effects and complications.

Though all the patients'

symptoms in this report started within eight weeks of the operation, it is inconclusive to state at this stage that hot flushes are unlikely to commence after this period. Also, from the natural history of hot flushes, the patients get better with time. It may therefore be inappropriate at this time to suggest an adequate period of therapy. Continuation of therapy should be determined by patients' behaviours as noted during the therapy. Such patient behaviours were not documented in the present study.

Our use of diethylstilboestrol is empirical and serves to provide a pilot observation in this environment. We hope, in our subsequent study, to incorporate a double-blind crossover trial of diethylstilboestrol and low-dose medroxyprogesterone acetate (5mg bd) in the treatment of post-orchietomy hot flushes.

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