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Original Research Article

Presumptive androgen deprivation therapy in prostate cancer emergencies: an ambispective study of clinical presentation, diagnostic delays and early outcomes in Nigerian hospitals

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ABSTRACT

Background: Advanced prostate cancer frequently presents with life-threatening complications in low-income settings where delays in histological confirmation often impede timely treatment. In such contexts, presumptive androgen deprivation therapy (pADT) may be initiated based on strong clinical suspicion. However, evidence on its clinical application and early outcomes remains limited. This study evaluated emergency presentation patterns, diagnostic delays, and short-term outcomes following pADT in men with suspected advanced prostate cancer in South-East Nigeria.
Methods: Between December 2021 and December 2025, 45 men presenting with prostate cancer-related emergencies prior to histological confirmation were enrolled and followed for four weeks after pADT initiation. Data collected included presenting symptoms, pain severity, neurological and functional status, PSA levels, laboratory parameters, histology result, and timelines to biopsy, diagnosis, and treatment. Descriptive statistics were used for analysis.
Results: The mean age was 70.6±11.3 years. Pain was the most common symptom (60%), mainly lower back pain (88.9%). Other presentations included lower limb weakness (31.1%), limb swelling (31.1%), anaemia (28.9%), and nephropathy (28.9%). All patients had advanced disease; 82.2% had metastases, with a mean PSA of 591.9 ng/ml. pADT was administered in 95.6% of cases. At four weeks, 88.9% achieved pain scores <3 and 44.4% were pain-free; nephropathy resolved in 84.6%. Significant improvements were observed in pain, motor function, and functional status ($p<0.002$). Time to biopsy and histology averaged 18.6±37.0 and 18.4±14.0 days, respectively.
Conclusions: pADT offers rapid symptomatic relief and represents a pragmatic interim strategy in resource-limited settings, though strengthening diagnostic pathways remains essential.

Keywords: Late stage prostate cancer, Acute complications of prostate cancer, Presumptive androgen suppression therapy

INTRODUCTION

Prostate cancer is the most frequently diagnosed malignancy and the third leading cause of cancer-related death among men worldwide.[1-5] Its burden varies geographically, with the highest prevalence observed among men of African descent.[3,6] In Nigeria, prostate cancer constitutes a major public health concern, accounting for 37.5% of all new cancer cases in men, with an estimated 18,019 new cases reported in 2022 and a 5-year prevalence of 30 per 100,000.[7]

Recent global trends indicate that mortality rates from prostate cancer are highest in sub-Saharan Africa and

parts of Latin America and the Caribbean.[5,8] In sub-Saharan Africa, the high morbidity and mortality associated with prostate cancer are largely attributable to limited screening programs, inadequate diagnostic infrastructure, and restricted access to effective treatment options.[8] Consequently, late presentation with locally advanced or metastatic disease is the predominant pattern in this region.[5,6,9,10] Furthermore, there is evidence suggesting that disease progression may be more aggressive in some Black populations, even when diagnosed at relatively earlier stages.[3,11] These factors contribute to a higher incidence of prostate cancer-related emergencies, with management often focused on palliation rather than cure.[5] Ayun et al reported that pain was the second most common presentation, occurring in 50.6% of cases in Sub-Saharan Africa.[11]

Prostate cancer typically follows an indolent clinical course, which in well-resourced settings allows sufficient time for histological confirmation through prostate biopsy, staging, and patient counseling prior to initiation of therapy.[13] However, due to lack of screening policy, out of pocket health expenditure, poverty and competing economic factors in resource-limited areas of Africa, patients present late and often as emergencies.

Prostate cancer emergencies can manifest in various forms, including acute urinary retention, spinal cord compression, severe obstructive uropathy, significant anaemia, intractable haematuria, pathological fractures, and severe bone pains. These conditions require rapid clinical decision-making and prompt intervention to prevent irreversible morbidity or death. As with other medical emergencies, timely diagnosis and treatment are essential for reducing complications, minimizing functional dependence, and lowering overall healthcare costs. However, in many African settings, healthcare financing remains largely out-of-pocket, with limited or absent health insurance coverage to mitigate the financial burden on patients.[2,5,14] Additionally, resource constraints and organizational inefficiencies, including poor multidisciplinary coordination, further impede timely and effective management of such emergencies. For instance, access to radiotherapy remains severely limited due to inadequate infrastructure and shortages of specialized personnel.[11]

ADT is the cornerstone of treatment for advanced and metastatic prostate cancer and has been shown to improve symptoms, reduce disease burden, and enhance quality of life.[5,12] In emergency situations where there is strong clinical suspicion of advanced prostate cancer-particularly in older men presenting with markedly elevated prostate-specific antigen (PSA) levels, abnormal digital rectal examination findings, and radiologic evidence of metastasis-clinicians are often faced with a critical decision: whether to initiate ADT immediately or delay treatment until histological confirmation is obtained.

In such scenarios, some clinicians adopt a pragmatic approach by initiating what we term pADT prior to histological diagnosis. This strategy aims to stabilize the patient, alleviate symptoms, prevent further clinical deterioration, and potentially reduce healthcare-related costs. However, even when pADT is considered appropriate, its initiation may be delayed by factors such as withheld patient consent. Patients often require additional time to process information following counselling, navigate socio-cultural beliefs, and consider the long-term implications of treatment, including its financial costs and impact on quality of life.

While pADT represents a practical, goal-oriented approach in resource-constrained settings, it raises important clinical and ethical concerns. Initiating ADT without histological confirmation carries the risk of overtreatment, potential misdiagnosis, and delayed identification of alternative conditions that may mimic advanced prostate cancer. Conversely, deferring treatment until histological confirmation may expose critically ill patients to preventable morbidity and mortality. Despite its apparent clinical relevance, there is a paucity of prospective data examining the circumstances that necessitate pADT, the extent and causes of diagnostic delays, and the early outcomes associated with this management strategy in African populations.

A clear understanding of the clinical contexts in which pADT is employed, along with its outcomes, is essential for improving care pathways for advanced prostate cancer in resource-limited health systems. Such evidence may guide clinicians in determining when early hormonal therapy is justified, inform health policy aimed at reducing diagnostic delays, and support the development of context-appropriate clinical guidelines for managing prostate cancer–related emergencies.

This study therefore aims to evaluate the patterns of clinical presentation, diagnostic delays, and early outcomes among patients receiving presumptive ADT prior to histological confirmation of prostate cancer in Nigerian hospitals. The findings are expected to provide valuable insights to inform clinical decision-making and improve the management of advanced prostate cancer emergencies in low-resource settings.

METHODS

Study setting and design

This study was conducted as a mixed observational (ambispective) study in St Charles Borromeo Specialist Hospital and MacBenson Specialist Hospital, both in South-East Nigeria. It reviewed patients presenting with prostate cancer-related complications requiring urgent or emergency care prior to histological diagnosis between December 2021 and December 2025. The study evaluated

patients from the pre-treatment period at first urological review through 4 weeks after initiation of pADT (ADT).

Study population

The study included men ≥40 years with clinically suspected advanced or metastatic prostate cancer presenting with emergency or urgent complications prior to histological confirmation. Such complications included cancer-related pain, lower limb weakness suggestive of spinal cord compression, haematuria, obstructive nephropathy with uremic symptoms from suspected bilateral ureteric obstruction and intestinal obstruction requiring urgent care.

Inclusion criteria

Patients were included if they met the following criteria: 1) Clinical suspicion of prostate cancer based on abnormal digital rectal examination, markedly elevated serum prostate-specific antigen (PSA), or imaging findings suggestive of malignancy. 2) Presentation with prostate cancer–related urgent or emergency complications requiring immediate medical intervention. 3) Initiation of ADT during the period of evaluation. 4) Availability of clinical records documenting baseline presentation and follow-up data at four weeks after ADT initiation

Exclusion criteria

We excluded patients who had incomplete medical records preventing assessment of key variables, did not receive pADT during the study period or were lost to follow-up before the four-week outcome assessment. Those with a histological diagnosis at the time of presentation or who had received any form of ADT prior to presentation were also excluded.

Sampling method and sample size

All eligible patients presenting during the study period were consecutively included. The final sample therefore represents a consecutive case series, which is appropriate for exploratory clinical studies assessing patterns of presentation and early outcomes in rare emergency scenarios. This may justify absence of prior sample size calculation.

Collection of data

A structured study proforma was developed to ensure standardized data collection across all cases. Data were retrieved from patient medical records, inpatient charts, laboratory databases, and pathology reports. Variable collected include: Demographics and Clinical variables. For patients presenting with pain, the location and severity of pain were recorded. Pain severity was measured using the numerical rating scale (NRS) ranging from 0 to 10 (0=no pain, 10=worst possible pain).[15] Pain scores were documented before treatment initiation and at four weeks following ADT.

Assessment of neurological function, mobility and independence

Lower limb motor power was evaluated using the Medical Research Council (MRC) scale for muscle strength.[16] Mobility and Independence were assessed based on direct visual and interrogative assessment of the patient ambulation and independent activity by the attending urologist. This was the preferred option since all the patients arrived as emergencies and it was difficult to administer standardized forms assessing functional status, compounded by literacy issues prevalent in study region. Mobility and degree of independent functioning (functional status) was categorized by the investigators into four grades: Grade 1: Able to walk normally without difficulty, Grade 2: Walks with difficulty but does not require assistance, Grade 3: Requires support (walking aids or assistance from another person), Grade 4: Bedridden or wheelchair-bound. Functional status was documented in the pre-treatment period and reassessed four weeks after initiation of ADT.

Complication resolution assessment

For patients presenting with prostate cancer–related complications, additional outcomes were documented: Presence or resolution of nephropathy symptoms at four weeks post-pADT, Time to resolution of haematuria, Time to resolution of intestinal obstruction, Resolution of other presenting complications (where applicable).

Laboratory and histological data

Baseline laboratory and diagnostic variables collected included: pre-treatment haemoglobin level, renal function parameters, serum PSA levels, histological diagnosis, Gleason grades, Gleason score and International Society of Urological Pathology (ISUP) grade.[17]

Timeline and treatment variables

Treatment-related intervals calculated (in days) include: time from first urological review to prostate biopsy, time from biopsy to histology report issuance, time to histological diagnosis (gotten from addition of the previous 2 time intervals), time from urological review to recommendation for ADT, time from recommendation to initiation of pADT and then time from urological review to initiation of ADT. Reasons for delays in each time interval were documented where applicable.

Patients were counselled about the following locally available ADT options: Bilateral total orchiectomy (BTO), GNRH analogues (Goserelin 3.6 mg or 10.8 mg), non-steroidal antiandrogen therapy (oral bicalutamide 50 mg or 150 mg), and 20 mg intramuscular depot estradiol valerate. Administration of ADT prior to histological

confirmation was classified as pADT while after histological confirmation was classified as definitive ADT. However, the reversible options for pADT were offered ahead of the irreversible (surgical) ADT unless otherwise preferred by patient after proper counselling.

Outcome measures

Primary outcomes assessed were: patterns of emergency clinical presentation in suspected prostate cancer, diagnostic delays in obtaining histological confirmation, timing and pattern of ADT initiation, early clinical outcomes following pADT (Change in pain severity, improvement in neurological function, Improvement in mobility, Resolution of presenting complications).

Data analysis and statistical tools

Statistical analysis was performed using SPSS version 31 (IBM Corp., Armonk, NY, USA). Continuous variables were summarized using means, standard deviations, ranges, and modes, while categorical variables were expressed as frequencies and percentages. Paired samples t-tests were used to compare pre-treatment and 4-week post-treatment outcomes including pain severity, lower limb power, and functional status scores. Independent samples t-test was used to compare mean functional status improvement between patients who received ADT within 7 days and those with delayed initiation (>7 days). Statistical significance was set at $p<0.05$.

Control of bias

We applied some measures to reduce bias. These include: consecutive patient inclusion to minimize selection bias, use of a standardized data collection proforma to improved data consistency, clinical variables such as pain score and muscle power were assessed using validated clinical scales and data extraction was performed systematically from multiple clinical records and laboratory databases to reduce information bias.

Ethical considerations

Ethical approval for this study was obtained from health research ethics committee of the participating hospital with reference numbers SCBSHO/2021/009. The study adhered to the principles outlined in the Declaration of Helsinki for research involving human subjects. Because the study involved review of existing clinical records and observational follow-up, the requirement for individual informed consent was waived by the ethics committees. All patient data were anonymised and handled confidentially to ensure privacy and data protection.

RESULTS

A total of 45 patients requiring urgent or emergency care were reviewed. Age ranged from 55-84 years with mean of 70.58±1.13 years and mode of 73 years.

Metastatic disease was noted in 82.2% of the subjects while 17.8% cases had locally advanced disease. Mean PSA was 591.92±2025.12 ng/ml and histologically, all were prostate adenocarcinoma except for a solitary case of Urothelial prostate cancer. The distribution of the primary, secondary Gleason grades and ISUP grades of the 44 cases with adenocarcinoma is shown in Figure 1 below.

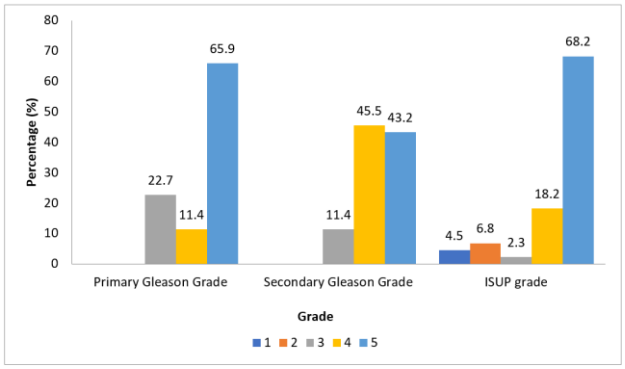

Figure 1: Frequency distribution of the primary, secondary Gleason grades and ISUP grades of the 44 cases with adenocarcinoma.

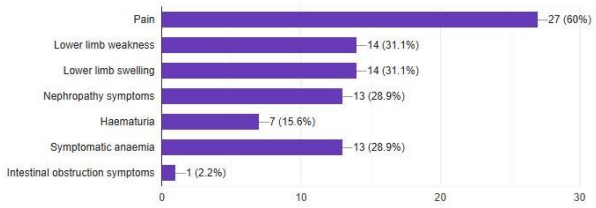

Figure 2: Percentage distribution of urgencies/emergencies at presentation.

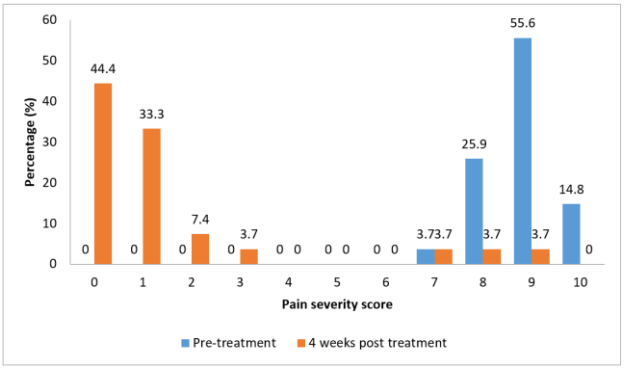

Figure 3: Change in pain severity pre pADT and 4 weeks after pADT.

Figure 2 above shows the symptoms related to the urgency/emergency at presentation with figures representing the number of patients with each individual symptom. More than one symptom may be present in one patient. Pain, the commonest symptom, was present in 60% of patients. Lower limb weakness and lower limb swelling accounted for 31.1% (n=14) each while anaemia

and nephropathy symptoms were present in 28.9% each (n=13).

The location of pain was in the lower back in 88.9% (24 patients out of 27). The 3 remaining patients had generalized pain, pain in the lower limbs and hip pain consecutively. Figure 3 shows severity of pain in the pre-treatment period and in 4 weeks post pADT; Pain was severe in the pre-treatment period in all patients (scores≥7). By 4 weeks post ADT, 88.9% had pain scores≤3 with 44.4% pain free.

Lower limb weakness was the emergency presentation in 31.1% (n=14). Nephropathy symptoms caused presentation in 28.9% (n=13) of the 45 patients with resolution of these symptoms in 84.6% of these patients by 4 weeks post ADT initiation. Haematuria was the emergency in 15.6% (n=7) and in 71.4% (n=5) haematuria resolved by the 3rd day after commencing ADT. It became intractable, lingering till day 18-20 in 2 patients; one had an urothelial prostatic malignancy while the other was given depot subcutaneous Goserelin (Zoladex) 10.8 mg and 50 mg daily oral bicalutamide. Only one case of intestinal obstruction was seen and this resolved in 2 days post ADT.

Mean haemoglobin level of the reviewed patients was 9.64±2.58 g/dl. Symptomatic anaemia was the urgent presentation for 28.9% (n=13) of these patients while 33.3% (n=15) had blood transfusions as the part of their care.

The mean time to biopsy from urology review in days was 18.56±36.98 days with a range of 1-240 days. Day 1 was the mode (13.3%). Time to biopsy was delayed (≥7 days) in 55.6%. The reasons for these delays in patients were severe anaemia (32%), active UTI or prostatitis (in 24%), nephropathy (24%), withheld consent (20%), ongoing haematuria (12%), financial constraints (16%), anti-platelets use (12%), anti-coagulants use (12%), delayed important investigations (4%) and a missed appointment (4%).

The mean time to issuance of the histology report (calculated in days from time of biopsy) was 18.42±13.97 days with a range of 5-60 days. Issuance at day 10 was the mode (15.6%). This time was delayed (≥14 days) in 44.4% (20 cases). Administrative/procedural issues accounted for 95% of this delay in issuing this report and in only one case (5%), it was due to patient factors; delayed out of pocket payment or result pick up.

Time to histological diagnosis was calculated by adding time to biopsy to the time to issuance of the histology report. The mean time to histological diagnosis was 36.98±46.05 days with a range of 292 days and minimum of 8 days. This time was delayed (≥21days from review) in 53.33%.

Mean time to ADT recommendation in days by the attending urologists was 12.62±54.32 with a range of 1-365 days. Most recommendations happened on the first day of urgent or emergency review accounting for 62.2 % of cases.

The mean time to ADT initiation was 16.29±63.05 days with a range of 424 days and a minimum of 1 day. Most ADT initiation was on the first day (40%). The difference between the time of ADT recommendation and ADT initiation was delayed in 15.6% (7 cases). Reasons for delay included financial constraints (50%), withheld consent (25%), awaiting histology (1%), uncontrolled co-morbidity (1%) in those opting for surgical ADT, and delay with investigations critical to clinical decision making (1%).

Palliative ADT was presumptive in 95.6% (43 out of 45 patients). Administration was done pre-biopsy in 48.84%, at the time of biopsy in 44.19%, and post biopsy (but pre-histology) in 6.98%. Cumulatively, IM estradiol 20 mg was administered in 58.14%, subcutaneous goserelin in 39.54%, oral bicalutamide 150 mg in 2.33%, oral bicalutamide 50 mg in 81.40%, and BTO was done in 30.23%. The exact administered combinations for the 43 patients who received presumptive ADT with percentages are shown below in Table 1 along with the ADT choices after histologic diagnosis was made.

Results of paired samples t test for pain severity, lower limb power and functional status in the pre-treatment and at 4 weeks post treatment are shown in Table 2.

Table 1: Palliative ADT before (Presumptive) and after histologic diagnosis.

Palliative ADT options	Frequency for presumptive ADT, N (%)	ADT choices after histologic diagnosis, N (%)
IM estradiol 20 mg only	2 (4.65)	
IM estradiol 20 mg + bicalutamide 50 mg daily	7 (16.28)	
Bicalutamide 150 mg daily only	1 (2.33)	
Bicalutamide 50 mg daily only	3 (6.98)	
Subcutaneous Goserelin + bicalutamide 50 mg daily	4 (9.30)	23 (51.11)
BTO only	4 (9.30)	
BTO + bicalutamide 50 mg daily	6 (13.95)	21 (46.67)
IM estradiol 20 mg + subcutaneous Goserelin +	13 (30.23)	

Continued.

Palliative ADT options	Frequency for presumptive ADT, N (%)	ADT choices after histologic diagnosis, N (%)
bicalutamide 50 mg daily		
IM estradiol 20 mg + BTO in <2 weeks of injection	1 (2.33)	
IM estradiol 20 mg + bicalutamide 50 mg daily + BTO in <2 weeks of injection	2 (4.65)	
Declined treatment and lost during follow up		1 (2.22)

Table 2: Paired t-test of pain severity, lower limb power and functional status in pre-pADT and 4 weeks post pADT.

Pairs	Statistic	Mean	N	Standard deviation	Standard error	P value
1	Pre-treatment pain severity score	8.81	27	0.736	0.142	0.000
	Pain severity score at 4 weeks post therapy	1.48	27	2.486	0.479	
2	Power in the lower limbs (Pre-treatment)	3.08	13	1.656	0.459	0.001
	Power in the lower limbs at 4 weeks Post therapy	4.31	13	1.494	0.414	
3	Pre-treatment functional status score	2.98	45	0.892	0.133	0.000
	Functional Status at 4 weeks Post therapy	1.58	45	0.866	0.129	

The functional status score change over 4 weeks in those that received ADT in less than 7 days was 1.5±0.73 while in those greater than 7 days, it was 1.34±1.08. An independent sample t-test did not reveal any significant difference in short term outcomes (p=0.57).

DISCUSSION

Demographic pattern

The mean age of 70.6 years observed in this study is consistent with the established epidemiological profile of prostate cancer as a disease predominantly affecting older men. Similar age distributions have been reported across Sub-Saharan Africa, where the mean age at diagnosis typically ranges from the mid-60s to early 70s, aligning with global trends of advancing age.[3,5,9,10,12]

All patients in this cohort presented with locally advanced or metastatic disease, with 82.2% demonstrating metastases. Histologically, nearly all cases were adenocarcinoma, with a predominance of high-grade disease (ISUP grade 5 in 68.2%). These findings are consistent with previous Nigerian studies. Abiahu et al reported adenocarcinoma in all cases, with high-grade disease (ISUP grades 4 and 5) accounting for 50%, while Mbaeri et al similarly documented the hundred percent adenocarcinoma.[3,12] The markedly elevated PSA levels observed in this study further support the presence of advanced disease, as PSA levels exceeding 100 ng/ml are commonly associated with metastatic burden.[5,10]

Although the age distribution of prostate cancer is broadly similar worldwide, stage at presentation differs significantly. In sub-Saharan Africa, a substantial proportion of patients present with advanced disease, as observed in this study.[3,5,10,12,18,19] In contrast, in high-income countries, widespread screening programs facilitate early detection, with only approximately 10% of patients presenting with metastatic disease.[5,20,21] This disparity underscores the critical role of early detection systems in improving outcomes.

Emergency presentation pattern and symptom burden

Severe pain was the most common presenting symptom in this cohort, affecting 60% of patients, predominantly localized to the lower back. This finding aligns with previous studies in sub-Saharan Africa.[11,12,18,19] Ayun et al reported pain as the second most common presentation (50.6%), while Mbaeri et al observed moderate to severe lumbar pain in all patients prior to neurological compromise.[11,12]

The predominance of pain reflects the biological behavior of advanced prostate cancer, which frequently metastasizes to the axial skeleton via the valveless venous plexus of the Batson, resulting in the significant morbidity.[22]

Lower limb weakness, observed in 31.1% of patients, further supports the presence of vertebral metastases with spinal cord or nerve root compression. Malignant spinal cord compression is well-recognized oncological emergency, occurring in 1-12% of patients with metastatic prostate cancer and typically presenting with back pain followed by progressive neurological deficits.[12,23]

Other common emergency presentations included nephropathy symptoms, symptomatic anaemia, and haematuria. Obstructive nephropathy may arise from bladder outlet obstruction or bilateral ureteric obstruction, leading to hydronephrosis and renal impairment. Anaemia in these patients may result from tumour-related bleeding, bone marrow infiltration, chronic disease/renal

dysfunction. These complications are characteristic of advanced disease and often necessitate urgent intervention.

Clinical response to presumptive ADT

A key finding of this study is the rapid and significant clinical improvement following initiation of presumptive ADT (pADT). Previous evidence has demonstrated that ADT provides substantial benefits in patients with advanced prostate cancer, including improved quality of life and reduced disease-related morbidity.[24]

In this study, all patients with pain initially reported severe pain; however, within four weeks of initiating ADT, nearly 90% experienced significant pain reduction, with almost half becoming pain-free. The mean pain score decreased significantly from 8.81±0.74 to 1.48±2.49 ($p<0.001$). This marked improvement likely reflects suppression of androgen-driven tumour activity, particularly in the patients with the metastatic bone disease.

Neurological function also improved significantly, with mean lower limb power increasing from 3.08±1.66 to 4.31±1.49 ($p=0.001$). This shift from moderate weakness to near-normal strength suggests that early hormonal therapy may halt or reverse neurological deficits associated with spinal cord compression. Similar findings have been reported by Chen and Mbaeri et al.[12,25]

Importantly, these improvements occurred despite the absence of adjunctive interventions such as spinal decompression surgery or radiotherapy, which were not readily accessible. This underscores the critical role of ADT as a readily available and effective intervention in resource-limited emergency settings.

Functional status also improved significantly, with mean scores improving from 2.98±0.89 to 1.58±0.87 ($p<0.001$). This reflects enhanced patient independence and ability to perform activities of daily living, which is particularly important in emergency contexts where caregiver burden and hospitalization costs are substantial.

ADT also contributed to the resolution of other complications. Nephropathy symptoms resolved in over 80% of affected patients, while haematuria improved rapidly in most cases. Prostate cancer is known to be associated with hyperfibrinolysis, which can lead to severe bleeding.[26,27] Intractable haematuria observed in a minority of patients was attributable to alternative pathology (urothelial carcinoma) or delayed therapeutic effect associated with GnRH agonists.

These findings collectively support the clinical utility of pADT in stabilizing patients with life-threatening complications, particularly in settings where delays in histological confirmation are unavoidable.

Diagnostic delays

This study identified significant delays in obtaining histological diagnosis. The mean time to prostate biopsy exceeded two weeks, with more than half of patients experiencing delays beyond seven days. These delays were multifactorial, involving both clinical and systemic factors. While some delays were due to medical contraindications such as severe anaemia or infection, approximately 20% were related to patient factors, including financial constraints and withheld consent.

Pathology turnaround times further compounded these delays, with mean reporting times exceeding two weeks. Administrative inefficiencies accounted for the majority of delays, consistent with reports from other resource-limited settings.[5,14]

Cumulatively, these factors resulted in a mean time to histological diagnosis of 36.98±46.05 days, with more than half of patients experiencing delays beyond 21 days. Such delays provide strong justification for the use of pADT in critically ill patients, as postponing treatment may lead to worsening morbidity or mortality.

The absence of widespread health insurance coverage in Sub-Saharan Africa exacerbates these challenges, as most healthcare expenses are paid out-of-pocket. In this context, early initiation of pADT may reduce costs associated with prolonged hospitalization and supportive care, while facilitating earlier functional recovery.

Role of presumptive ADT in emergencies

A notable finding of this study is the high prevalence of pADT use, with 95.6% of patients receiving therapy prior to histological confirmation. Nearly half of these treatments were initiated before biopsy.

While clinical guidelines in high-income countries generally recommend histological confirmation before initiating definitive therapy this approach may not be feasible in emergency situations within low-resource settings.[21] In such contexts, early initiation of ADT based on strong clinical suspicion is often justified to prevent deterioration.

The rapid clinical improvement observed in this study supports the effectiveness of this approach. Interestingly, no significant difference in outcomes was observed between patients who initiated ADT within seven days and those who started later, suggesting that while early initiation is beneficial, modest delays may not significantly alter short-term outcomes.

Patterns of ADT utilization

The spectrum of ADT modalities used in this study reflects real-world practice in resource-limited settings. Bicalutamide was the most commonly used agent

(83.72%), likely due to its affordability, availability, and ease of administration. While low-dose bicalutamide (50 mg) is typically used as adjunct therapy, higher doses (150 mg) have demonstrated efficacy in selected patients.[28,29]

Intramuscular estradiol valerate was the second most commonly used option (58.14%). Its rapid onset of action, affordability, and reversibility make it an attractive option in emergency settings. Concerns regarding cardiovascular risks associated with oral estrogen have been mitigated with parenteral formulations, which bypass hepatic first-pass metabolism.[33] Evidence suggests comparable safety profiles to LHRH analogues.[34]

Goserelin, a GnRH agonist, was also commonly used but has limitations, including initial testosterone flare and higher cost.[37] GnRH antagonists, although more rapid in action, are less accessible due to cost and availability constraints.[38,39]

Bilateral orchiectomy (BTO) was utilized in 30.23% of patients. Despite its irreversible nature, it remains a cost-effective option that provides rapid androgen suppression amongst elderly frail patients. However, its acceptance may be limited by psychological and cultural factors.[40]

Strengths and limitations

The prospective design of this study allowed systematic evaluation of clinical presentation, treatment timelines, and early outcomes. It also provides valuable data from a region with limited published evidence.

However, limitations include the relatively small sample size and focus on short-term outcomes. Long-term survival and disease progression were not assessed. Larger multicentre studies are needed to validate these findings and further evaluate the safety and effectiveness of pADT.

CONCLUSION

Prostate cancer emergencies in Nigerian hospitals are predominantly associated with advanced metastatic disease and significant diagnostic delays. Presumptive ADT provides rapid symptomatic relief and represents a practical and effective strategy in resource-limited settings.

Strengthening early detection, improving diagnostic pathways, and developing context-specific treatment guidelines are essential to reduce emergency presentations and improve outcomes.

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