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# Family-Oriented Management of Erectile Dysfunction in a Hypertensive 55-Year-Old: A Case Report and Literature Review

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## Abstract

**Background:** Erectile dysfunction (ED) is a highly prevalent condition among middle-aged and older men, particularly those with chronic diseases such as hypertension. It has profound effects on physical health, psychological wellbeing, and intimate relationships. Despite its high prevalence, ED remains underreported in many low- and middle-income countries due to stigma, sociocultural barriers, and limited awareness. This case report aims to demonstrate the effectiveness of a family-oriented, bio-psychosocial approach in the management of erectile dysfunction in a hypertensive patient within Aminu Kano Teaching Hospital, Kano, Nigeria

**Methods:** This is a descriptive case report of a 55-year-old hypertensive male presenting with erectile dysfunction and poor medication adherence. Clinical evaluation, laboratory investigations, and a holistic management plan involving pharmacologic therapy, lifestyle modification, and partner involvement were implemented.

**Results:** The patient presented with a six-month history of progressive erectile dysfunction, accompanied by marital strain and poor adherence to antihypertensive therapy. Following intervention—including medication adjustment, sildenafil therapy, lifestyle modification, and active involvement of his spouse—there was significant improvement in erectile function,

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blood pressure control, and marital relationship. The patient demonstrated improved adherence and reduced reliance on pharmacotherapy over time.

**Conclusion:** Family-oriented care significantly enhances treatment outcomes in erectile dysfunction by addressing medical, psychological, and relational factors. Primary care physicians should integrate partner involvement and holistic care strategies into routine management of ED, especially in patients with chronic conditions such as hypertension.

**Keywords:** Erectile dysfunction, Hypertension, Family medicine, Sildenafil, Partner involvement.

## Introduction

Erectile dysfunction (ED) is defined as the persistent inability to achieve or maintain an erection sufficient for satisfactory sexual performance [1]. It is a common condition that increases with age and is strongly associated with chronic diseases such as hypertension, diabetes mellitus, and cardiovascular disease [2,3].

It affects approximately 52% of men aged 40–70 years globally and is associated with significant psychosocial burden [1,2]. Estimates suggest that over 150 million men worldwide are affected [3], with projections suggesting this number may double by 2025 due to aging populations and increasing prevalence of cardiovascular risk factors [4]. In sub-Saharan Africa, the burden is substantial but underreported. Studies in Nigeria have documented prevalence rates ranging from 51% among primary care attendees to over 65% among hypertensive patients [5,6].

Hypertension plays a critical role in the development of ED through vascular and endothelial dysfunction. Chronic elevation of blood pressure leads to structural and functional changes in blood vessels, reducing penile blood flow and impairing erectile function [7]. Furthermore, some antihypertensive medications, particularly thiazide diuretics, are known to exacerbate erectile dysfunction [8].

Despite its high prevalence, ED remains poorly addressed in clinical practice, especially in low-resource settings. Sociocultural stigma, misconceptions, and reliance on traditional remedies often delay presentation and appropriate treatment [9]. Additionally, ED is not merely a biomedical condition but a psychosocial one, affecting relationships, self-esteem, and overall quality of life [10].

Family medicine emphasizes holistic, patient-centered care that incorporates biological, psychological, and social dimensions of health. In the context of ED, partner involvement has been shown to significantly improve treatment adherence, satisfaction, and outcomes [11].

This case report highlights the successful management of erectile dysfunction in a hypertensive patient using a family-oriented approach in a Nigerian tertiary healthcare setting.

## Case Presentation

A 55-year-old hypertensive male presented with a six-month history of progressively worsening erectile dysfunction characterized by weak erections and inability to sustain them for satisfactory sexual intercourse, despite preserved libido and adequate foreplay. There was no history suggestive of psychological, neurological, or endocrine causes, and no prior trauma or urogenital symptoms. He had previously maintained normal sexual activity but experienced significant marital strain, with his wife leaving the home due to dissatisfaction. He had resorted to traditional herbal remedies with minimal benefit and sought care due to concern about his sexual performance.

He was a known hypertensive on amlodipine and bendrothiazide but had poor medication adherence due to financial constraints. He had no history of diabetes or prior urological procedures. His social history revealed recent reemployment after a period of financial instability, and healthcare expenses were paid out-of-pocket. On examination, he was anxious but otherwise stable, with a blood pressure of 150/90 mmHg and normal findings across cardiovascular, neurological, abdominal, and urogenital systems, in-

cluding normal genitalia and prostate.

A diagnosis of erectile dysfunction secondary to hypertension with poor drug adherence was made. The International Index of Erectile Function (IIEF) done on him was 10 (moderate erectile dysfunction). He was counseled extensively on the condition, including the role of hypertension and medications, and advised on lifestyle modification such as regular exercise and adherence to a DASH diet. Bendrothiazide was replaced with indapamide, and he was encouraged to involve his wife in care.

At first follow-up visit after a month, his investigations were largely normal (FBG-4.6mmol/l, urea 2.6mmol/l, K-3.6mmol/l, CL-98mmol/l, N-142mmol/l, Cr- umol/l. ECG- normal sinus rhythm, no abnormality detected. Full blood count. PCV was 0.40 l/l; WBC was 6.3 x109/l(normal); Platelets count was 200 x109/l (Normal); MCHC 33.6 g/dl (Normal); MCH= 28.6 pg; MCV= 85.0 fl(Low), blood film report showed normocytic, normochromic cell with normal WBC morphology and adequate platelets. The white blood cells differential count was: neutrophils 47 %; eosinophil 02 %; basophils 00 %; monocytes 08 %; lymphocytes 43 %. Urinalysis =protein negative; glucose ++; ketones negative; bilirubin negative urobilinogen, normal, pH. 7.0; Specific gravity 1.010; nitrite negative; blood, ascorbic acid and leukocytes were negative. Lipid Profile- cholesterol;175mg/dl, Triglyceride;40mg/dl, HDL; 89mg/dl, LDL; 76mg/dl. He was advised to continue with lifestyle changes.

At second follow up visit after 2 months, he came with his wife. She was counselled and educated. She was advised to return to his house so that the effect of the treatment can be monitored. Sildenafil 50mg daily for 5 days and subsequently on the days he needed to have intercourse. He was asked to take it one hour before bed, he was asked not to take more than one tablet in 24 hours, and not to take it with heavy meal. He was also asked to ensure adequate foreplay before sexual intercourse. He was asked to ensure lifestyle changes and adherence.

Over subsequent follow-ups (monthly), the patient demonstrated significant improvement in erectile function, IIEF-22 (no erectile dysfunction) with reduced dependence on medication, better blood pressure control, and restored marital harmony. Both partners reported improved communication and satisfaction, and he remained compliant with treatment and lifestyle modifications. He was maintained on monthly follow up visit at the general outpatient clinic.

## Discussion

Erectile dysfunction (ED) is a multifactorial condition with complex interactions between vascular, neurological, hormonal, and psychological systems. In this case, the patient's ED was primarily associated with poorly controlled hypertension, medication-related factors, and psychosocial stressors, all of which are well-documented contributors in the literature.

The pathophysiology of ED in hypertensive patients is largely mediated through endothelial dysfunction. Normal erectile function depends on the release of nitric oxide (NO) from endothelial cells and non-adrenergic, non-cholinergic neurons. Nitric oxide activates guanylate cyclase, leading to increased cyclic guanosine monophosphate (cGMP), which facilitates smooth muscle relaxation and penile erection [12].

In hypertension, chronic vascular stress leads to endothelial damage, reduced nitric oxide bioavailability, and increased oxidative stress. These changes impair vasodilation and reduce penile blood flow, resulting in erectile dysfunction [7,13]. Structural vascular changes such as arterial stiffness and atherosclerosis further exacerbate the condition.

Antihypertensive medications have varying effects on sexual function. Thiazide diuretics, such as bendrothiazide, are frequently implicated in ED due to their effects on plasma volume, electrolyte balance, and possibly reduced penile perfusion [8,14]. In contrast, calcium channel blockers like amlodipine are generally considered neutral with respect to sexual function.

The index case, there was substitution of bendrothiazide with indapamide, a thiazide-like diuretic with a more favorable metabolic profile, this has likely contributed to improvement in overall patient condition. There is significant evidence that medication adherence and optimization are necessary in managing ED in hypertensive patients [15].

Lifestyle interventions are important tools in the management of both hypertension and ED. Regular physical activity improves endothelial function, enhances nitric oxide production, and reduces cardiovascular risk factors [16]. Dietary approaches such as the DASH diet have been shown to lower blood pressure and improve vascular health.

The patient adhered to exercise and DASH diet, he ensured other lifestyle changes as well. These has contributed to both improvement in erectile function and good BP control. This reinforces the concept that ED can serve as an early marker of cardiovascular disease and should prompt comprehensive risk factor management [17].

Erectile dysfunction has profound psychosocial implications. It is associated with poor marital relationship, depression, reduce self-esteem, and anxiety [10,18]. In this case, the patient experienced anxiety related to sexual performance and marital strain, which lead to a cycle of dysfunction and separation with his wife.

The wife had left the home for some time, this has underscores the relational impact of ED.

In many cultural context in Nigeria, sexual performance is closely tied to perceptions of masculinity and marital stability. Failure to meet these expectations can lead to separation and divorce in many homes.

A key strength of this case is the integration of family-oriented care. Family medicine emphasizes the inclusion of family members in the management of health conditions, particularly those with psychosocial dimensions.

Involving sexual partner in the management of ED has lead to good treatment outcomes, improve communication, emotional support, improved sexual satisfaction and strengthen relationship stability [11,19].

His wife was actively involved in his care, she participated in counseling sessions, which helped to dispel misconceptions, rebuild trust, and restore intimacy. She eventually returned home which marked a turning point in both relational and clinical outcomes.

Phosphodiesterase type 5 (PDE5) inhibitors, such as sildenafil, are the first-line pharmacologic treatment for ED [20]. They work by inhibiting the breakdown of cGMP, thereby enhancing the effects of nitric oxide and promoting vasodilation.

The patient responded well to sildenafil, with gradual reduction in dependence over a period of six months. This highlights the importance of combining pharmacologic therapy with lifestyle and psychosocial interventions for sustainable outcomes.

The patient initially attended a traditional herbalist clinic, this is a common practice in Nigeria and many African countries [21]. While traditional medicine plays an important cultural role, unregulated use may delay appropriate medical care and expose patients to potential harm.

Stigma associated with ED further enhances delay presentation. Many men are do not discuss sexual health issues due to embarrassment or fear of judgment [9]. This underscores the need for proactive inquiry by healthcare providers.

This case has also reflect broader health system challenges in Nigerian setting, including poor health insurance coverage, out of pocket health care financing and poor access to continues care.

Financial constraints contributed to poor medication adherence in this patient.

Strengthening primary healthcare systems, integrating sexual health services, and promoting health insurance coverage are critical steps in improving outcomes.

Primary care physicians play a pivotal role in the detection and management of ED. Key recommendations include routine screening for ED in patients with chronic diseases, comprehensive medication review and lifestyle counseling addressing psychosocial factors and encouraging partner involvement.

From a public health perspective, there is a need for community education to reduce stigma, awareness campaigns on ED and its treatment, regulation of herbal medications and integration of sexual health into primary care services

## Conclusion

Erectile dysfunction in hypertensive patients is a multifaceted condition requiring a holistic approach. This case demonstrates that integrating medical treatment with lifestyle modification and family-oriented care leads to significant improvement in both clinical and psychosocial outcomes. Primary care physicians should adopt a comprehensive, patient-centered approach to ED management.

## Conflict of Interest

There is no conflict of interest to declare.

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