

Male Sexual Dysfunctions after a Stroke at the Hubert Koutoukou Maga National Hospital and University Centre in Cotonou, Benin

Authors : Richard Houeze¹ , Alexandre D. Faton² , Mendinatou A. Houessou³, Jennifer N. Mapaga⁴ , Géraud Houansou¹, Eugénie Dansou⁵, Salim Djaouga¹ , Richmine Covi¹ , Gédéon Balley¹, Constant Adjien¹

Affiliations

1. University Clinic of Neurology, CNHU-HKM, Cotonou, Benin
2. Department of Neurology, University of Parakou, Benin; Neurology Unit, Departmental University Hospital Center of Borgou, Parakou, Benin
3. University Clinic of Physical Medicine and Rehabilitation, CNHU-HKM, Cotonou, Benin
4. Department of Neurology, University of Health Sciences, Libreville, Gabon
5. University Clinic of Internal Medicine, CNHU-HKM, Cotonou, Benin

Corresponding author: Richard Houeze. Email: houezer3@yahoo.fr

Received: 23-04-2025 ; Revised: 22-09-2025 Accepted: 22-09-2025

DOI: <https://dx.doi.org/10.4314/eajns.v4i3.5>

ABSTRACT

Background: Sexuality is an integral part of quality of life, and the impact of sexual dysfunction on patients with a recent stroke is known to be significant. **Objectives:** To study male sexual dysfunction following stroke at the National University Hospital Center Hubert Koutoukou MAGA in Cotonou in 2022. **Methodology:** This was a cross-sectional study conducted over three months. The Men's Sexual Health Questionnaire (MSHQ) score was used to assess sexual dysfunction. A score < 65% of the maximum was indicative of male-specific sexual dysfunction. We had a total of 46 patients with a mean age of 56.89 ± 11.25 years. **Results:** We observed prevalence of sexual dysfunction in 22(47.8%) cases, including sexual activity and desire (n=24; 52.2%), erectile dysfunction (n=11; 40.7%) with discomfort reported by (n=12; 44.4%), ejaculation disorders (n=3; 11.7%), with discomfort (n=8; 29.6%), and marital dissatisfaction (n=13; 28.3%) of patients. Factors associated with this dysfunction were marital status, time post-stroke, level of functional independence, quality of life, and site of brain injury. **Conclusion:** Male post-stroke sexual dysfunction remains high and influences couples' quality of life, requiring special attention.

Key words: Male sexual dysfunction, stroke, Cotonou.

Introduction

Stroke is the second leading cause of death globally, after cardiovascular diseases, accounting for 10% mortality (1). Stroke

mortality remains disproportionately high in developing countries such as Benin, where it is 23.2% (2). This contrasts with lower rates

reported in high-income countries, highlighting significant disparities in stroke management, access to acute care, and long-term rehabilitation services. Beyond mortality, stroke is a major cause of long-term disability, with survivors frequently experiencing motor, cognitive, and psychosocial impairments that significantly reduce autonomy and quality of life (QoL).

Sexual health is an important yet underexplored dimension of QoL following stroke. Sexual dysfunction (SD) is common among stroke survivors, especially in younger patients with neurological deficits, but it is rarely addressed in clinical practice. Patients seldom seek care due to stigma or lack of awareness, while healthcare providers often prioritize motor recovery over sexual health. Stroke-related SD arises from disruption of central and peripheral neural pathways, including autonomic and somatic systems, with the hypothalamus and limbic structures

playing central roles (3). About half of patients regain sexual function within two to three years, often in parallel with improvements in functional status and psychosocial well-being.

Male sexual dysfunction after stroke may manifest as reduced libido, impaired arousal, erectile difficulties, ejaculatory disorders, or anorgasmia, with prevalence varying across studies (4–7). In African settings, these issues are further obscured by cultural taboos, leaving many cases unrecognized or untreated. To address this gap, the present study investigated the prevalence and determinants of male sexual dysfunction among stroke patients attending the University Neurology Clinic at CNHU-HKM, Cotonou, in 2022.

Methods

Study design and setting: This cross-sectional, descriptive, and analytical study was conducted at the University Neurology Clinic (CUN) of the National and University Hospital Center Hubert Koutoukou Maga (CNHU-HKM) in Cotonou, Benin. The study included all post-stroke male patients seen in consultation over a three-month period in 2022.

Inclusion criteria were male sex, age ≥ 18 years, stroke confirmed by neuroimaging, at least one month since the stroke event (to exclude acute-phase effects), medical stability and ability to participate in assessments, sufficient cognitive function to complete questionnaires, history of sexual activity prior to stroke (to enable comparison), willingness

to discuss sexual health, and provision of informed consent.

Exclusion criteria were: aphasia, pre-existing erectile or other sexual dysfunction prior to stroke, history of sexual behavior disorders, genital malformations, recent pelvic trauma, confusion or delirium, severe cognitive impairment precluding questionnaire completion, and refusal or inability to provide informed consent.

Sexual function was assessed with the Men's Sexual Health Questionnaire (MSHQ), which evaluates sexual activity in the preceding month. A total score < 82 indicated impaired sexual function. Domain-specific dysfunctions (e.g., erectile dysfunction, decreased libido, dissatisfaction) were defined as subscores $< 65\%$ of the maximum value. Patients were

considered to have sexual dysfunction if they were sexually active during the preceding month and had an abnormal total score, or if they were sexually inactive but reported abnormal subscores for desire, activity, or satisfaction (8).

Data were analyzed with SPSS version 20. Descriptive statistics summarized quantitative (mean, SD, range) and qualitative (frequency, percentage) variables. Associations were tested with chi-square, with significance set at $p < 0.05$.

Results

The study sample consisted of 46 patients (Figure 1). The mean age was 56.64 ± 11.25 years (range 30 - 78 years), with 56.52% aged 60 or older.

Among the 46 stroke patients included in our study sample, **27 (58.7%)** had been sexually active during the four weeks preceding the interview. All patients who were not sexually

active ($n=19$) presented with either a sexual desire disorder and/or marital dissatisfaction.

The prevalence of male sexual dysfunction (MSD) was 47.8%. The most common dysfunctions were reduced sexual activity and desire (52.2%) and erectile dysfunction (40.7%), with 44.4% reporting erection-related discomfort (Table 1).

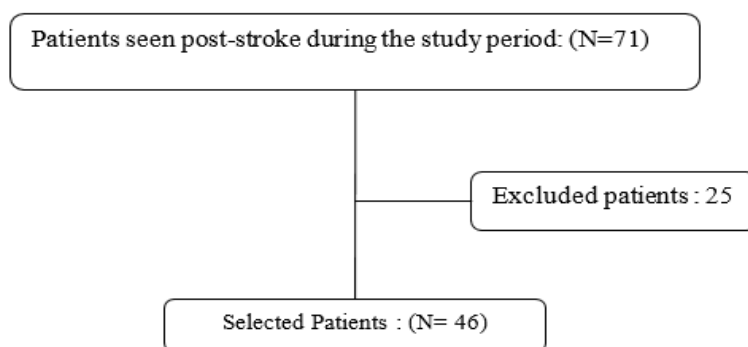


Figure 1: Flowchart of participants. During the study period, 71 post-stroke patients were seen. Out of these, 25 did not meet the study requirements and were excluded (14 aphasia, 6 confusions, 5 Refusal to consent). This left 46 patients selected to participate in the study.

Table I: Distribution of sexual dysfunction in males

	Frequency	Percentage (%)
Sexual activity and desire disorders (N=46)	24	52.2
Erectile dysfunction (n=27)	11	40.7
Discomfort related to erection (n=27)	12	44.4
Ejaculatory disorders (n=27)	3	11.7
Discomfort related to ejaculation (n=27)	8	29.6
Marital dissatisfaction (n=46)	13	28.3

Most patients with MSD had at least a secondary level of education (82.6%); 43.5%

were civil servants, 45.7% belonged to the middle socioeconomic class, and 71.7% were

married. A prior history of stroke was reported in 28.3% of cases, while 91.3% had hypertension and 15.2% had diabetes. Among those with MSD, 86.4% were receiving antihypertensive treatment, most commonly angiotensin-converting enzyme inhibitors (78.3%). In addition, 20.9% were on antidiabetic therapy, predominantly oral agents (19.6%). The mean time since stroke onset was 20.57 months. Most patients with MSD were seen either in the early recovery phase (37.5%) or chronic sequelae phase (33.3%) of stroke (Figure 2).

Patients with MSD most often presented with mild stroke severity (48%) and mild disability (48%), though two-thirds (66.7%) were

classified as functionally dependent. Impaired quality of life was reported in 58.3% of cases, including 23% with mild to moderate impairment. Anxiety disorders were observed in 35.4% and depressive symptoms in 37.5%. Ischemic stroke was the most common subtype (64.6%), with lesions predominantly affecting the left cerebral hemisphere (64.6%).

Factors significantly associated with MSD included being unmarried, post-stroke consultation within 3 months, functional dependence, impaired quality of life, and lesion in the left cerebral hemisphere (Table 2).

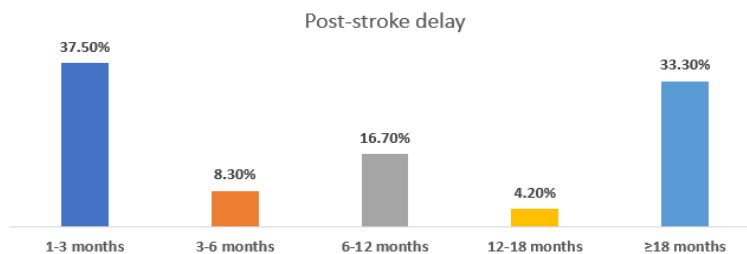


Figure 2: Distribution of patients (N=46) with MSD according to post-stroke delay.

Table 2: Association between post-stroke delay, clinical characteristics, and MSD. N=46

	MDS+	MDS-	p-value	OR	IC 95%	
Post-stroke delay						
<3 months	18(81.8%)	4(18.2%)	0.026	3.750	1.122	12.531
≥3 months	30(54.5%)	25(45.5%)				
Marital status						
Married	25(52.1%)	23(47.9%)	0.017	0.284	0.098	0.820
Unmarried	23(79.3%)	6(20.7%)				
Functional independence						
Normal	18(45.7%)	19(54.3%)	0.006	0.263	0.099	0.696
Pathologic	32(76.2%)	10(23.8%)				
Quality of life						
Normal	20(47.6%)	22(52.4%)	0.004	0.227	0.081	0.634
Impaired	28(80.0%)	7(20.0%)				
Lesion location (hemisphere)						
Right	17(50.0%)	17(50.0%)	0.047	0.387	0.150	0.997
Left	31(72.1%)	12(27.9%)				

Discussion

This study highlights male sexual dysfunction (MSD) as a frequent but underrecognized consequence of stroke in the African context. Addressing such a culturally sensitive issue is particularly important, given its substantial effect on quality of life and relationships, yet its frequent omission from clinical practice.

Although limited by its small, urban-based sample, the research provides useful information about the burden of MSD after stroke in Benin. The prevalence observed is consistent with findings from Sub-Saharan Africa and other regions, underscoring the global relevance of post-stroke sexual health. The significant associations with marital status, shorter post-stroke delay, functional dependence, impaired quality of life, and left-hemispheric lesions confirm the multifactorial nature of these disorders. These findings align with previous studies from Sub-Saharan Africa and other regions, confirming stroke as a condition predominantly affecting older adults (mean age 56.6 years), and its multifaceted impact on sexual function (11).

The mean age of participants (56.6 years) aligns with reports from Benin, Congo, Burkina Faso, and Nigeria, with a range of 52.9 to 59.12 years (9-12). This supports the established notion that stroke predominantly affects older adults, explained by the vulnerability of the aging cardiovascular system (13). The urban predominance of patients (97.4%) reflects the study setting in Cotonou and its surrounding cities, which host most of the country's institutions and attract a highly educated, largely civil servant population. This contrasts with the national profile, where educational attainment is lower (14).

Neurological diseases are well recognized causes of sexual dysfunction (SD), as they disrupt the processing of sexual stimuli, leading to altered desire, impaired arousal, or limited genital response. Several studies have demonstrated reduced sexual satisfaction after stroke, and the prevalence of erectile dysfunction in our study is comparable to reports ranging from 48% to 59% (16-19), though some studies describe even higher rates of 62%–66% (4, 11, 18-22). Other dysfunctions such as decreased libido, incomplete erections, and ejaculation problems have been reported with a prevalence of 17%–42%, sometimes resolving within seven weeks post-stroke, though symptoms may persist or worsen in others (3,6). In our sample, ejaculation disorders occurred in 11.7% of cases, with erection-related discomfort in 29.6%, figures that are lower than the 40%–78% reported in similar studies (4,10,11,20-22).

Marital status significantly influenced outcomes: married men were 3.5 times less likely to experience SD ($p=0.017$), highlighting the protective role of spousal support. Conversely, patients consulting within three months of stroke onset had a 3.7-fold higher risk of SD ($p=0.026$), likely reflecting the impact of psychological factors early after the event. During this period, sexual concerns may be overshadowed by motor deficits, while negative self-image related to disability, reduced self-esteem, and fear of poor sexual performance contribute to avoidance of intimacy. Patients may also experience jealousy or suspicion toward their partners, further straining relationships and exacerbating dysfunction. As Na et al. note, poor mood, impaired quality of life, and loss of independence strongly influence sexual health (19). The partner's role is also crucial;

fear of causing harm, emotional distancing, or difficulty adapting to the patient's physical changes may reciprocally reduce sexual desire.

Additional psychological factors, such as fear of triggering a recurrent stroke during intercourse, are also reported contributors to SD (23, 24). In our study, sexual dysfunction was more frequent among patients living alone, those with functional dependence, impaired quality of life, and those with left-hemispheric lesions. The multifactorial etiology of SD is well established, involving both organic and psychological dimensions, including depression, anxiety, comorbid conditions (e.g., hypertension, diabetes), and treatment-related effects (3).

The role of lesion location remains debated. Some authors report higher rates of dysfunction following right-hemisphere strokes (25, 26), likely due to its dominance in emotional processing, attention, and activation functions. Right-sided lesions have been linked to impaired libido and erectile capacity through disruption of limbic and cortical pathways (26). Others, however, have

found stronger associations with left-hemisphere lesions, often mediated by post-stroke depression (27), while some studies show no clear relationship between hemisphere and sexual outcomes (28). Collectively, these findings underscore the complex interplay between neurological injury, psychological adaptation, and interpersonal dynamics in shaping post-stroke sexual health.

Conclusion

Male sexual dysfunction is a frequent but under-recognized consequence of stroke, with disturbances in sexual activity and desire being the most common. These disorders negatively affect mood, self-image, and overall quality of life. Significant risk factors identified include unmarried status, early post-stroke phase, functional dependence, impaired quality of life, and left-hemispheric lesions. Stroke should not be regarded as an obstacle to a fulfilling sexual life. Sexual health must be integrated into post-stroke rehabilitation, with greater awareness among both healthcare providers and patients.

References

1. Feigin VL, Brainin M, Norrving B, et al, I. World Stroke Organization: Global Stroke Fact Sheet 2025. *Int J Stroke*. 2025 Feb;20(2):132-144. doi: 10.1177/17474930241308142.
2. Fotso, S. M., Choki, B., Agbetou, M., Kossi, et al. 16-4-Epidémiologie des accidents vasculaires cérébraux au Bénin: revue systématique et méta-analyse. *J Epidemiol Popul Health*. 2024;72:20262972, 202629.
3. Calabrò RS, Gervasi G, Bramanti P. Male sexual disorders following stroke: an overview. *Int J Neurosci*. 2011;121(11):598-604. doi: 10.3109/00207454.2011.600647.
4. Soulier, B. Un amour comme tant d'autres ? Handicaps moteurs et sexualité. 1st ed. Paris :Association des Paralysés de France (APF), 290p.
5. Denys P, Soler J-M, Giuliano F. Sexualité du patient neurologique. *Progrès en Urologie*. 2013;23:712-7.
6. Korpelainen JT, Keulenen ML, Kemblait H et al. Sexual dysfunction in patients. *Acta Neurol Scand*. 1998;98(6):400-5.
7. Thompson HS, Ryan A. The impact of stroke consequences on spousal relationships from the perspective of the person stroke. *J Clin Nurs*. 2009;18(12):1803-11.
8. Kocjancic E, Chung E, Garzon JA, et al. International Continence Society (ICS) report on the terminology for sexual health in men with lower urinary tract (LUT) and pelvic floor (PF) dysfunction. *Neurourol Urodyn*. 2022;41:140–165 DOI: 10.1002/nau.24846.
9. Gnonlonfoun D, Azon-Kouanou A, Adjien KC, et al. L'association HTA et diabète, facteur

- prédictif de mauvais pronostic des accidents vasculaires cérébraux en milieu hospitalier à Cotonou. *Revue Le Bénin Médical*. 2016;62(2):8-12.
10. Diaweta J, Banzouzi P, Mpandzou G, et al. Post-stroke sexual disorders and its real-life experience within couples in Brazzaville. *World J Neurosci*. 2021 Feb 25;11:22-33.
 11. Akinpelu AO, Osose AA, Odole AC, Odunaiya NA. Sexual Dysfunction in Nigerian Stroke Survivors. *Afr Health Sci*. 2013;13:639-45.
 12. Somda AP, Ouédraogo PV, Kpoda BN, et al. Dépression Post Accident Vasculaire Cérébral : Aspects Epidémiologiques et Cliniques au Centre Hospitalier Universitaire Sourô Sanou de Bobo-Dioulasso. *Health Sci*. 2022;23(5):143-6.
 13. Akigbe G. Etude des facteurs de risque et des facteurs de pronostic des AVC [PhD Thesis]. Faculté des Sciences de la Santé de Cotonou ; 1993. 133 p.
 14. Institut National de la Statistique et l'Analyse Economique (INSAE) du Bénin [En ligne]. Troisième Recensement General de la Population et de l'Habitation (RGPH-3). 2002.
 15. Bener A, Al-Hamaq AO, Kamran S, Al-Ansari A. Prevalence of erectile dysfunction in male stroke patients, and associated co-morbidities and risk factors. *Int Urol Nephrol*. 2008;40(3):701-8.
 16. Kimura M, Murata Y, Shimoda K, Robinson R. Sexual dysfunction following stroke. *Compr Psychiatry*. 2001;42:217-22.
 17. Ossou-Nguie PM, Odzébé AS, Bandzouzi-Ndamba B, et al. Dysfonction érectile après un accident vasculaire cérébral à Brazzaville. *Rev Neurol*. 2012;158:538-42.
 18. Schmitz MA, Finkelstein M. Perspectives on poststroke sexual issues and rehabilitation needs. *Top Stroke Rehabil*. 2010;17:204-213.
 19. Na Y, Htwe M, Rehman CA, Palmer T, Munshi S. Sexual dysfunction after stroke—A biopsychosocial perspective. *Int J Clin Pract*. 2020;74:e13496.
 20. Amarenco G. Troubles génito-sexuels et activité sexuelle après une attaque cérébrale. *Correspondances en neurologie vasculaire*. 2004;5(1):18-20.
 21. Hawton K. Sexual adjustment of men who have had strokes. *J Psychosom Res*. 1984;28:243-9.
 22. Monga TN, Lawson JS, Inglis J. Sexual Dysfunction in Stroke Patients. *Arch Phys Med Rehabil*. 1986;67:19-22.
 23. Chambon X. Analyse de la sexualité de la personne hémiplegique. *Progrès en urologie*. 2013;23:712-7.
 24. Monga TN, Ostermann HJ. Sexuality and sexual adjustment in stroke patients. *Phys Med Rehabil State Art Rev*. 1995;9:345-59.
 25. Agarwal A, & Jain DC. Male sexual dysfunction after stroke. *Journal of the Association of Physicians of India*, 1989;37:505–507.
 26. Coslett HB, & Heilman KM. Male sexual function. Impairment after right hemisphere stroke. *Archives of Neurology*, 1986;43:1036–1039.
 27. Goddess ED, Wagner NN, & Silverman D. Post stroke activity in CVA patients. *Medical Aspects of Human Sexuality*, 1979;13:16–30.
 28. Giaquinto S, Buzzelli S, Di Francesco L, Nolfi G. Evaluation of sexual changes after stroke. *J Clin Psychiatry* 2003;64:302–307.