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Multiple Sclerosis in Nigeria: Public Awareness and Early Diagnosis - Narrative Review

Caroline Folashade Olatigbe*

School of Science & Engineering, Atlantic International University, Pioneer Plaza, 900 Fort Street Mall 905, Honolulu, Hawaii 96813, USA.

***Correspondence:**
Caroline Folashade Olatigbe, School of Science & Engineering, Atlantic International University, Pioneer Plaza, 900 Fort Street Mall 905, Honolulu, Hawaii 96813, USA.

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ABSTRACT

Multiple Sclerosis (MS) is a non-communicable, chronic, and debilitating neurological disorder, predominately in women between the ages of 20 and 40. The underlying cause is unknown, with global incidence rising. Regions previously considered to have low or no incidence, are now reporting increasing incidence, notably, the sub-Saharan region.

Public health campaigns are shifting towards increased awareness and early detection. This is imperative in MS, as early diagnosis has been associated with reduced symptom severity and slower disease progression as it enables timely initiation of disease-modifying therapies (DMT).

Ultimately, improved awareness and early intervention could enhance the quality of life for individuals living with MS. Additionally, these measures could extend productive years and yield economic benefits at the individual and national level. This review highlights the urgent need for public awareness campaigns targeting MS in Nigeria.

Keywords

Multiple Sclerosis, Nigeria, Public Health, Early Diagnosis, Disease-Modifying Therapy, Epidemiology, Non-Communicable Diseases, Sub-Saharan Africa.

Introduction

The full aetiology of Multiple Sclerosis (MS) is not known. It is hypothesised a result of genetic and environmental factors [1]. Indeed, the risk of MS among first-degree relatives is 10-15 times higher compared to the general population [2].

Lifestyle-related and environmental factors, are now being associated with an increased risk of developing MS [3]. Smoking, childhood obesity and a high body-mass index (BMI) have all been implicated [4]. Environmental factors, including, migration, Vitamin D deficiency, infection (e.g. Epstein-Barr virus) and stress are also linked with the development of MS [4].

Diagnosis is typically made during adulthood (between the ages of 20 and 40 years), with MS being the leading course of permanent disability in young adults [5]. The prevalence is higher in women than in men ranging from two times to four times [6]. In the MS International Federation (MSIF) latest epidemiologic data it was captured that Females (69%) are twice as likely to experience the condition compared to Male counterparts (31%) [7].

MS is characterised by an autoimmune response, resulting in the destruction of myelin sheath [8]. Destruction may be profound, leading to a wide range of neurological symptoms with patients often present with visual symptoms. In the most advanced stages, many patients are unable to independently weight bear, requiring the assistance of mobility adjuncts such as wheelchairs and frames.

MS may be classified into the time-course of the condition; with the Relapsing-Remitting MS (RRMS) subset most common [8].

This involves new or worsening symptoms (relapses) followed by periods of partial or complete recovery (remissions). This may eventually progress into the secondary progressive subset [2,10].

Magnetic resonance imaging (MRI) is widely used in western nations for early detection and treatment. Lumbar puncture supports the diagnosis of MS with analyses for oligoclonal bands [2]. The Mc Donald criteria combines clinical findings with MRI results and is widely utilised to aid diagnostic certainty [2,11].

MS, however, still remains a challenge to diagnose. In addition, there is no effective cure, though, early diagnosis and treatment initiation have been shown to be beneficial in slowing disease progression [12].

Disease Modifying Therapy (DMT) such as biological treatment have shown promise in not only in reducing relapse rates and lesion formation, but also in potentially slowing further neurological progression [13,14]. Initiating treatment early with these agents can play a critical role in symptom control, which may lead to reduced pain, improved daily function, and enhanced overall quality of life for patients living with MS.

In addition, low cost treatments including Vitamin D supplements, stress management and a healthy diet, are recommended in preventing relapse in MS [15,16]. In addition, drinking black and green tea that contain polyphenols, coffee and non-alcoholic beer are postulated to reduce the risk of MS [6].

MS appears to be more common in the northern hemisphere with an increased risk of developing MS with increasing latitude [17,18]. Genetic susceptibility occurs in individuals of Scandinavian or northern European ancestry [17]. Colder areas are reported to have the highest prevalence of MS worldwide. African, Asian, or Native American descents are historically believed to have the lowest risk for developing MS [2,6,17]. Indeed, early research indicated that MS did not occur in black populations [19], though studies have disputed these beliefs [20].

Incidents of MS have now been reported in Sub-Saharan Africa hot regions, such as Nigeria [21]. There is, however, a general lack of overall awareness and limited availability of diagnostic tools resulting in underreporting of the condition [4,19,21]. This is of an immense disadvantage in a condition that requires early diagnosis and early initiation of treatment to prevent the onset of the debilitating aspect of MS. Furthermore, a delayed diagnosis impacts patients quality of life with depression, loss of income and family strain being prevalent amongst suffers of MS.

Increased public awareness could lead to earlier clinical presentation, improved diagnosis detection and robust epidemiological data.

This study aims to review summaries of current public health awareness of multiple sclerosis in Nigeria. Purpose is to conduct early diagnosis of public awareness in multiple sectors in Nigeria.

Method

Literature search strategy

PubMed and Google Scholar databases were systematically searched. Articles from 1995 to 2025 were included in the review. The search terms were as follows: (Multiple sclerosis) OR (MS)) AND (Nigeria)) AND (prevention)), Clinical Trials.

The inclusion criteria were articles that referenced the occurrence and treatment of MS, especially studies conducted in Nigeria mentioned.

Titles and abstracts were screened for key terms, such as multiple sclerosis, Nigeria. Articles unrelated to the topic were excluded. Full-text articles meeting the inclusion criteria underwent further review.

Results

There are no official published statistics for multiple sclerosis prevalence in Nigeria.

Case Studies

The incidence of MS in Nigeria follows the trend observed in Africa, generally lower than in the Temperate Zones.

Five documented cases / case series studies were reviewed.

Case Study 1: University of Calabar Teaching Hospital, Calabar: [8]

This was the first documented Nigerian MS literature article. It concerned a male patient from the Niger Delta region. The diagnosis was based solely, on clinical presentation of relapsing, remitting signs, and evidence of multi-focal involvement of the central nervous system. Further MRI and laboratory investigations were not performed [19]. The patient was believed to have experienced two episodes of MS. At age 41, the patient experienced the first episode and subsequent diagnosis made at the 32-month period following the second episode. The patient died at age 45 [19]. Treatment involved a combination of corticosteroid therapy and Baclofen for the treatment of the painful muscular spasms. No DMT was administered (see Table 1).

Case Study 2: Lagos University Teaching Hospital, Nigeria, Okubadejo et al., 2014

Large descriptive study involving adult data from 3500 patients with five definite cases from Lagos in South West geopolitical region. Data pertained to adults from January 2008 to December 2012. The duration of symptoms prior to diagnosis ranged from three months to five years [21]. Diagnosis was based on clinical presentation, MRI, and lumbar puncture showing oligoclonal bands. The five definite cases with MS diagnosis, all hada relapsing remitting form of MS. The peak age of diagnosis was in the fourth decade. The female to male ratios 3:1. Three patients were treated with DMT and two used long-term low dose oral prednisolone (see Table 1).

Case Study 3: Ahmadu Bello University Teaching Hospital, Nigeria, Anyiam et al., 2019

A rare case of MS in a 10-year-old child was documented in the North Western Zaria region. The patient presented following a two-year history vision impairment, mobility difficulty and slurred speech. Further MRI imaging of the brain and spinal cord MRI confirmed a diagnosis of the primary progressive form of multiple sclerosis (PPMS) [11]. The patient was treated with daily physiotherapy, prednisolone 2 m/kg/day 6 hourly, and unspecified multivitamins before being discharged. The family could not afford the repeat brain MRI to demonstrate separation of the lesions in time. The facilities for CSF monoclonal IgG (Lumbar Puncture) were not available. The patient, was ultimately lost to follow-up (see Table 1).

Case Study 4: University of Nigeria Teaching Hospital, Enugu, Nigeria, Campbell et al.,2022

A Case Study of Balo's concentric sclerosis (BCS), considered a rare variant of multiple sclerosis (MS) that normally has a benign course was reported in a 31 year old male [22]. The reporting hospital was based in the Southern Eastern region of Enugu. The patient presented with throbbing headaches and behavioural changes. Diagnosis was confirmed with a brain MRI scan, though, Cerebrospinal fluid (CSF) oligoclonal bands were negative, and CSF chemistry and cell count were normal. The patient was treated with a combination of steroids and immuno suppressive agents (intravenous methylprednisolone and followed by a maintenance dose of oral prednisolone (see Table 1).

Case Study 5: University of Abuja Teaching Hospital, Onwuegbuzie, et al., 2023

A ten-year (Jan 2011 to Dec 2020) hospital based, descriptive correctional study was carried out in Abuja [14]. 36 patients were recruited, with 24 patients analysed making this the largest study in Nigeria conducted on MS patients. Diagnosis was based on full clinical assessment, MRI of the brain and spine, and cerebrospinal fluid analysis. The 2010 Mc Donald Criteria was used to confirm the final diagnosis [14]. The mean age of onset 31.8 ± 8.8years, with more females (91.7%) affected than men. The study showed that relapsing-remitting disease occurred in the majority of patients (79.2%) secondary progressive in 16.7%, and progressive-relapsing 4.2%. Most patients 95.8% were treated with Methylpredn is one (steroid) a limited number treated with DMT agents 54.2 %) (see Table 1).

Table 2: Latitude of the Nigerian main Geo-Political regions.

Geo-Political Region	Approximate Latitude Range °N
North West	10°N -14°N
North East	9°N - 13°N
North Central (Middle Belt)	7°N - 10°N
South West	6°N - 8°N
South South (Niger Delta)	4°N - 6°N
South East	5°N - 7°N

Discussion

In recent times, Nigeria has made progress in its diagnosis and management of MS. There is an increased availability of diagnostic equipment including MRI scanners, though, this is mainly isolated to tertiary hospitals. In addition, Nigeria has a substantially greater number of neurologists, when compared to other African nations. Furthermore, there has been a greater emphasis in the medical school curriculum on neurological conditions. Guidelines and protocols used in the United Kingdom and United States including the McDonald Scale have been implemented into Nigerian hospitals.

In this review, MS cases were reported from hospitals situated in the main geo-political regions (see Table 1). No case, however, was identified from the North East of Nigeria, the zone with the largest landmass and one of the highest latitudinal ranges (see Tables 1 & 2).

Table 1: Nigerian origin cases discussed in this narrative review.

Author(S) Name	State	Region	Study Type	Age at Diagnosis/ presentation of symptoms	Method of Diagnosis: MRI Scan (Yes or No)	Year Study published	MS Type
Kobina Keme-Ebiet et al.,	Cross River State	South South, (known also as The Niger Delta region)	Case study	41	No made from clinical history	2008	Relapsing Remitting
Okubadejo et al.,	Lagos State	South West	Descriptive study	Peak age 40 decade Duration prior to diagnosis ranged from 3 months - 5 years	Yes	2014	Relapsing Remitting
Anyiam et al.,	Kaduna	North West	Case Study	10 years	Yes	2019	Primary Progressive MS
Campbellet al.,	Enugu	South East	Case Study	31 Male	Brain MRI	2022	Balo's concentric sclerosis (variant form)
Onwuegbuzi et al.,	Abuja	North Central	Descriptive cross-sectional study	Mean age: 31.8 ± 8.8	Brain MRI findings McDonald scale)	2023	79.2% Relapsing Remitting 16.7%. Secondary Progressive

Note: No documented cases identified from the North East Zone.

Epidemiological data

InSub Saharan regions, prevalence rates are reportedly to be one in every 20,000 [19]. The study by Okubadejo et al., [21] however, reported an incidence of 1.26 per 1000 (see Table 1), indicating that Nigerian rates may be greater than that of comparative African nations.

In 2008, five cases were documented in Nigeria, the prevalence rate for 2020-2022was 1 in 20 000 (i.e.,10,048) cases) according to the MFI (The Multiple Sclerosis International Federation). This still indicates a low occurrence of MS in Nigeria.

Potential Causes of low incidence

The low incidence rates of MS in Nigeria are multifactorial. Phenotypic differences in Black African patients compared to Caucasians have been postulated [23]. In addition, as observed by Modi et al., [23]. Black patients presenting with MS symptoms typically more likely to be diagnosed with 'A diagnosis of uncertainty' or 'An idiopathic/non-specific CNS demyelination' compared to Caucasian counterparts [23].

Cultural norms, Nigerian patients tend to seek profession advice only following the onset of serious aspects of the disease, as illustrated by the first documented case with medical help only being sought following a fall [19] (see Table 1).

Cultural beliefs, misconceptions of neurological symptoms and reliance on spiritual powers could impact timely diagnosis [21]. Indeed, the first documented case in 2008; the patient was removed from hospital during the initial episode for divine healing by a pastor, preventing further investigation [21]. When symptoms reoccurred, the pastor was contacted first the patient was only brought into hospital following a severe deterioration of his condition.

Furthermore, the large population of over 206 million in Nigeria, is only represented by 81 neurologists who are mainly situated in urban areas. This is also the case for diagnostic tools such as MRI and Lumbar Puncture, thus, limiting the parity of MS diagnosis in more rural areas.

High medical costs and poor healthcare could also contribute to overall low incidence rates. Treatment is also overall expensive and not easily accessible. Okubadejo et al., noted that the annual high cost ($21, 000) for DMT compared to $112 for oral prednisolone presented a major cause of non-adherence [21]. Typically, in Nigeria such treatment is funded by the individual, whereas, in western countries financial assistance is provided by governments or insurance companies [24].

Future Public Health Developments in Nigeria: Benefits

Robust Epidemiological Data

There is a need for epidemiological studies to estimate the true prevalence and incidence in Nigeria, importantly to include rural areas. Analysis should be performed to observe trends at a minimum according to age of onset, ethnicity, disease severity, geographical location, migration type of treatment, and adherence to treatment.

Research tailored to MS patients can also summarise the profile of a typical Nigerian MS patient, confirm the phenotype, the disease severity and onset of the deliberating aspect of the disease. This can establish the course of a typical Nigerian MS patients and provide adequate information for early diagnosis. In the first documented case the patient had lived in the UK for a period prior to the onset of MS. The effect of Vitamin D (higher vitamin D levels are generally observed in tropical regions) and air pollution, can also be established.

A nationwide public health awareness program, can initiate the process of obtaining robust epidemiological data providing awareness of the condition among the populace. The programme should focus on public education and remove cultural misconceptions among the general population especially in rural areas.

Nation awareness of the condition

Case studies identified indicated non awareness of symptoms, hence lack of immediate correct diagnosis. Health literary information that highlights awareness of presenting symptoms such as blurred vision, fatigue and falls will primarily enable MS patients to understand their condition better, recognise symptoms. This could turn led to increased early diagnosis, treatment.

Awareness of the genetic / familial component of MS and variant forms will be of immense benefit to the whole populations and healthcare professionals. PPMS was observed in a child (Case Study 3). This is important as variant forms exist [2]. A rare case of BCS was reported in a young Nigerian (Case Study 4), with the authors stipulating this could be the first case in sub-Saharan. It was considered benign, steroids and immunosuppressive normally effective in the treatment are readily available in Nigeria. This indicates the need for further public awareness and evaluation of patients suspected to have multiple intracranial lesions following neuroimaging.

Public awareness campaigns that emphasize the importance of starting treatment early to slow the disease progression that is currently lacking will be of immense importance. Potentially offer hope for patients and inclusion in emerging treatments. The result of early detection and treatment initiation can result in increased quality in life and productive years in MS patients providing economic benefits.

The benefits of collaboration with stakeholders and multidisciplinary approach will be paramount to obtain additional information from all geographical regions. There needs to be adequate funding and a multiple disciplinary approach to target public campaigns to adapt to the need of the different groups and to ensure a successful outcome. It will be critical for increase in resources to ensure that diagnostic tools, (i.e., MRI) are readily available nationwide to prevent limitation in the diagnosis of MS.

In Case Study 4 the child was lost to follow-up due lack of funds.

The Nigerian Society of Neurological Sciences and private organisations have been involved in increasing the awareness of MS; with private organizations providing some levels of rehabilitation. Noting that Ocrelizumab a DMT was readily available in Nigeria. In addition, a MS population-based registries should be setup to aid understanding, capturing the incidence, geographic distribution, clinical pattern, type (relevant diagnosis information, age at onset, sex), method of diagnosis treatment including data on adherence the impact of cost burden of medication. Long term there could potentially be a place for MS patient driven group in Nigeria. These have been successful in distributing information and providing support and services, in high income countries [24].

This can provide a pathway for further research and clinical trials to understand the profile of a Nigerian MS patient.

Robust epidemiological data that indicates an increase incidence can aid the case for Global / international assistance in treatment cost, and improve outcome of this debilitating condition that could fatal. Also, in addition ensure eligible patients are treated with immunomodulating agents and candidates for future agents. Finally result from any further research could add to the Global data that's currently skewed to the Western world.

Conclusion

MS is a growing global condition. It requires a multiple disciplinary approach and specific targeting by policy makers. There has been progression in the public health awareness of MS in Nigeria especially among neurologist. There is a needhowever, for accurate epidemiology data. Public health campaigns targeting MS in Nigeria are needed to promote awareness of the condition. This should help address knowledge gaps, reduce underdiagnosis, and promote early treatment.

References

1. Westerlind H, Ramanujam R, Uvehag D, et al. Modest familial risks for multiple sclerosis: a registry-based study of the population of Sweden. Brain. 2014; 137: 770-778.
2. Garg N, Smith TW. An update on immunopathogenesis, diagnosis, and treatment of multiple sclerosis. Brain Behav. 2015; 5: e00362.
3. Pakpoor J, Schmierer K, Cuzick J, et al. Estimated and projected burden of multiple sclerosis attributable to smoking and childhood and adolescent high body-mass index: a comparative risk assessment. Int J Epidemiol. 2021; 49: 2051-2057.
4. Aderinto N, Muili AO, Opanike J. Navigating the journey of multiple sclerosis management in Africa, overcoming hurdles and harnessing opportunities: a review. Ann Med Surg Lond. 2023; 85: 1774-1779.
5. Silfverberg T, Zjukovskaja C, Ljungman P, et al. Haematopoietic stem cell transplantation for treatment of relapsing-remitting multiple sclerosis in Sweden: an observational cohort study. J Neurol Neurosurg Psychiatry. 2024; 95: 125-133.
6. Dastoorpoor M, Nabavi SM, Majdinasab N, et al. A case–control study of drinking beverages and the risk of multiple sclerosis in Iran. J Health Popul Nutr. 2023; 42: 22.
7. Walton C, King R, Rechtman L, et al. Rising prevalence of multiple sclerosis worldwide: Insights from the Atlas of MS, third edition. Mult Scler. 2020; 26: 1816-1821.
8. Faraji F, Ahmadi F, Mohaghegh P, et al. Temporal Incidence and Prevalence Trends of Multiple Sclerosis in Markazi Province, Iran. Mult Scler Relat Disord. 2022; 60: 103691.
9. McKay KA, Kwan V, Duggan T, et al. Risk factors associated with the onset of relapsing-remitting and primary progressive multiple sclerosis: a systematic review. Biomed Res Int. 2015; 2015: 817238.
10. Kuhn AW, Yu JK, Gerull KM, et al. Virtual Reality and Surgical Simulation Training for Orthopaedic Surgery Residents: A Qualitative Assessment of Trainee Perspectives. JB JS Open Access. 2024; 9: e23.00142.
11. Anyiam JO, Musa S, Aliyu H, et al. Primary progressive multiple sclerosis in a 10-year-old Nigerian boy. Sahel Medical Journal. 2019; 22: 105-108.
12. Kasper DL, Fauci AS, Hauser SL, et al. Harrison's principles of internal medicine (19th Edition. ed.). New York: McGraw Hill Education Medical. 2015.
13. Freedman MS. Long-term follow-up of clinical trials of multiple sclerosis therapies. Neurology. 2011; 76: S26-34.
14. Onwuegbuzie G, Alabi P. Clinical Presentation Of Multiple Sclerosis In A Tertiary Health Care Centre, Abuja. Br J Med Health Res. 2023; 10: 1-13.
15. Guglielmetti M, Al-Qahtani WH, Ferraris C, et al. Adherence to Mediterranean Diet Is Associated with Multiple Sclerosis Severity. Nutrients. 2023; 15: 4009.
16. Scazzone C, Agnello L, Bivona G, et al. Vitamin D and Genetic Susceptibility to Multiple Sclerosis. Biochem Genet. 2021; 59: 1-30.
17. Williams R, Rigby AS, Airey M, et al. Multiple sclerosis: it epidemiological, genetic, and health care impact. J Epidemiol Community Health. 1995; 49: 563-569.
18. Simpson S Jr, Wang W, Otahal P, et al. Latitude continues to be significantly associated with the prevalence of multiple sclerosis: an updated meta-analysis. J Neurol Neurosurg Psychiatry. 2019; 90: 1193-1200.
19. Keme-Ebi IK, Asindi AA. Locked-in Syndrome in a Nigerian male with Multiple Sclerosis: a case report and literature review. Pan Afr Med J. 2008; 1: 4.
20. Langer-Gould A, Brara SM, Beaber BE, et al. Incidence of multiple sclerosis in multiple racial and ethnic groups. Neurology. 2013; 80: 1734-1739.
21. Okubadejo N, Ojo O, Lawal T, et al. Unveiling Multiple Sclerosis in Nigeria: The Conundrum of Diagnosis and Access to Disease Modifying Therapies (P5.152). Neurology. 2014; 82: P5.152.

22. Campbell FC, Oti B, Ndafia NM, et al. Balo's concentric sclerosis a rare variant of multiple sclerosis in a Nigerian adult male: A case report. Surg Neurol Int. 2022; 13: 486.

23. Modi G, Mochan A, Du Toit M, et al. Multiple sclerosis in South Africa. S Afr Med J. 2008; 98: 391-393.Organization WH. Atlas: multiple sclerosis resources in the world. 2008.