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Prevalence of pain among adult patients living with HIV in Uyo, South-South, Nigeria

*Etta O.[1], Edoho I.[1], Kalu Q.[2]

[1]Department of Anaesthesia, University of Uyo Teaching Hospital, Uyo, Akwa Ibom State, Nigeria
[2]Department of Anaesthesia, University of Calabar Teaching Hospital, Calabar, Cross River State

Abstract

Background: HIV infection is a major global public health issue. Pain is a common and debilitating symptom of HIV disease which is gravely underestimated and treated.
Patients And Methods: This was a cross-sectional survey conducted at the HIV Clinic of the University of Uyo Teaching Hospital, after obtaining approval from the Research Ethical Committee. Data was obtained using a Data Sheet and Brief Pain Inventory (BPI) questionnaire. Information obtained included demographic characteristics, duration of infection, clinical stage and treatment. The BPI asked patients to report if they experienced pain, pain score, treatment and interference with their quality of life.
Results: A total of 210 patients participated in the study, 60 males and 150 females, the prevalence of pain was 29.5%, and the average duration of pain was 4-9 months. The commonest site of pain was waist (39.3%), followed by headache (13.1%), neck (11.5%) and Knee (11.5%). Majority of the patients (53.4%) rated their average pain between 1 – 4 on the numerical rating scale. Most of the patients received over the counter analgesics (29.5%) while 27.9% did not take any medication at all. Majority of the patients with pain had mild interference with their quality of life..
Conclusion: The Prevalence of pain among adult HIV Patients is high and grossly undertreated. Training of health workers in pain management may improve the situation.

Keywords: Prevalence of pain,HIV infection, adult patients.

Introduction

HIV continues to be a major global public health issue. Having claimed more than 32 million lives so far.[1] In 2018, 770,000 people died from HIV–related causes globally.[1] Also, in 2018, the prevalence of HIV in Nigeria among adults between 15–49 years was 1.5% (1,900,000 people), while 53,000 people died from an AIDS-related illness.[2]
In a recent Nigerian HIV/AIDS indicator and impact survey (NAIIS), Akwa Ibom State ranked highest with a prevalence rate of 5.5%.[3]
Over the years, concerted effort by the Government in collaboration with International donor agencies have focused on activities to reduce the incidence and mortality from HIV/AIDS, however, little attention have been given to pain in HIV patients.[1,2,3]
In an earlier multi-centre study, Larue and Colleagues[5] had documented that pain is a common and debilitating symptom of HIV disease which is gravely underestimated and treated. Similarly, several other studies have reported a high prevalence of pain in HIV Patients.[5,6,7,8]
The Prevalence of pain in HIV-infected patients in Nigeria varies with different studies. In a previous study, Wahab and Salxmi[7] in Ilorin, Nigeria documented a prevalence rate of 27.8% as against 83.7% reported by Ebirim and Otokwala[8] in Port Harcourt. This study aimed to determine the prevalence of pain in adult HIV patients in Uyo, Nigeria, and discuss the possible factors affecting prevalence, as well as pain management.

Corresponding Author: Dr. Otu Etta

Department of Anaesthesia,
University of Uyo Teaching Hospital,
Uyo, Akwa Ibom State, Nigeria.
E-mail: otuetta@yahoo.com

Patients and methods

This was a cross-sectional survey conducted at the HIV Clinic of the University of Uyo Teaching Hospital from 1st to 31st October, 2019 after obtaining approval from the institution's Research Ethical Committee.

All patients who consented to participate in the study after adequate explanation were recruited, while patients who were already diagnosed with diabetic neuropathy, arthritics and trauma induced pain were exclude.

A data sheet and Brief Pain Inventory (BPI) questionnaire were used in the study. The data sheet included patients' demographics, duration of HIV infection, WHO staging of the disease, type of antiretroviral therapy (ART) and duration of treatment.

The BPI has been used previously to measure pain in HIV/AIDS patients.[4] The BPI ask patients to report if they experienced pain because of the disease during the previous week and to rate their pain (worst, least and on an average) on a 0–10 numerical rating scale. The patients were also asked to rate their quality of life which assessed their general activity, mood, walking and working abilities. In addition, their relationship with others, sleep and enjoyment of life were also assessed.

The principal researcher explained the study tools to all the patients during the regular morning health education talk session before the commencement of the clinic. The questionnaire was administered to the patients by the researchers and some medical officers in the HIV clinic either in English or Ibibio language. Data collected were analyzed using SPSS version 20.0.

Results

A total of 210 patients participated in the study, 60 males and 150 females. The mean age of the patients was 42.4 years with a range of 18 – 80. Majority of the patients (86.7%) were employed. Only 3.8% patients were uneducated, the rest had primary (28.6%), secondary (42.4%) and Tertiary (25.2%) education. Table I.

Table II shows the clinical and treatment profile of the patients. The mean duration of HIV infection was 7.3 years with a range of 1 – 19. Majority of the patients (82.9%) were in WHO stage I disease, followed by 12.4% (Stage II), 3.8% (Stage III) and

Table I: Demographic Variables

Variable		Values
Sex:	n (%)	
	Males	60
	Females	150
Age:		
	Mean	42.4
	Range	18-80
Occupation: n (%)		
	Unemployed	28 (13.3)
	Employed	182 (86.7)
Level of Education n (%)		
	Uneducated	8 (3.8)
	Primary	60 (28.6)
	Secondary	89 (42.4)
	Tertiary	53 (25.2)
Smoking n (%)		
	Smokers	2 (1.0)
	Non Smokers	208 (99.0)

Table II: Clinical and Treatment Profile

Variable	Values
Duration of Infection (yrs):	
Mean	7.3
Range	1 – 19
Clinical Stage: n (%)	
I	174 (82.9)
II	26 (12.4)
III	8 (3.8)
IV	2 (0.9)
Types of ART Regimen: n (%)	
AZT/3TC/NVP	7 (3.3)
AZT/3TC/EFV	4 (1.9)
TDF/3TC/EFV	51 (243)
TDF/3TC/ATV	2 (1.0)
TDF/3TC/DTG	116 (55.2)
ABC/3TC/EFV	17 (8.1)
ABC/3TC/NVP	3 (12.4)
TDF/3TC/ALLUVIA	10 (4.8)
Duration on ART (years)	
Mean	6.8
Range	1 – 17
Type of Comorbidity: n (%)	
Nil	142 (67.7)
Hypertension	59 (28.1)
Diabetes	4 (1.9)
Asthma	1 (0.5)
Hypertension/Diabetes	3 (1.4)
HIVAN	1 (0.5)
Type of Opportunistic Infection: n (%)	
Nil	201 (95.7)
Oral Thrush	8 (3.8)
Tuberculosis	1 (0.5)

Table III: Prevalence of Pain

Variable	Value
Presence of Pain: n (%)	
Yes	62 (29.5)
No	148 (70.5)
Duration of Pain (months):	
Mean	4.9
Range	1 – 60
Site of Pain: n (%)	
Headache	8 (13.1)
Neck	7 (11.5)
Chest	2 (3.3)
Abdomen	3 (4.9)
Waist	24 (39.3)
Knee	7 (11.5)
Leg	5 (8.2)
Ankle	3 (4.9)
Foot	1 (1.6)
Upper Limb	2 (3.2)

Table IV: Pain Assessment and Treatment Profile

Category	Value
Worst Pain Rating: n (%)	
0	0 (0)
1 – 4	21 (33.9)
5 – 6	19 (30.6)
7- 10	22 (35.5)
Least Pain Rating: n (%)	
0	12 (19.4)
1 – 4	44 (66.1)
5 – 6	8 (13.0)
7 – 10	1 (1.6)
Average Pain Rating: n (%)	
0	7 (11.3)
1 – 4	33 (53.2)
5 – 6	13 (21.0)
7 – 10	9 (14.5)
Pain Medication taken: n (%)	
Nil	17 (27.9)
Paracetamol only	14 (23.0)
Diclofenac or Ibuprofen	11 (18.0)
Tramadol	1 (1.6)
OTC Mixture	18 (29.5)
Percentage Pain Relief: n (%)	
0	2 (4.4)
10 – 40	25 (56.0)
50 – 60	5 (11.1)
70 – 100	13 (29.0)

0.9% (Stage IV). The commonest ART regimen used was Tenofovir(TDF), lamivudine(3TC) and Dolutegravir(DTG) – 55.2% followed by Tenofovir, Lamivudire and Efavirenz (EFV) – 24.3% and others. The mean duration of ART treatment was 6.8years. Hypertension(28.1%) was the commonest co-morbidity observed, while majority of the patients (95.7%) had no opportunistic infection.

Table III shows that pain was experience by 62 (29.5%) respondents, while the average duration of pain was 4.9 months. The commonest site of pain was waist (39.3%), followed by headache (13.1%), neck (11.5%) and Knee (11.5%)

In Table IV, 33.9% of the respondents rated their worst pain between 1–4, while 30.6% and 35.3% rated their worst pain between 5–6 and 7–10 respectively in the numerical rating scale. Majority of the patients 66.1% rated their least pain between 1–4, similarly, 53.4% of the patients also rated their average pain between 1–4.

With respect to pain medication, 29.5% of the patients received over the counter (OTC) analgesic mixture, while 27.9% did not take any analgesics at all. A few patients received paracetamol (23%), Diclofenac or Ibuprofen (18%) and only one patient (1.6%) took tramadol. Most of the patients (56%) had between 10 – 40% pain relief after their medication.

Table V shows that majority of the patients with pain had mild interference (1–4 on the numerical rating scale), in general activity (34.4%), mood (48.4%), walking ability (43.5%) and work (42%). On the other hand, most of the respondents reported no interference (0) with their relationship with others (58.1%), sleep (36%) and enjoyment of life (62%).

Table V: Level of Pain Interference with quality of life

Category	Value	n (%)		
	0	**1 – 4**	**5 – 6**	**7 – 10**
Activity	18 (29.0)	30 (48.4)	6 (9.7)	8 (13.0)
Mood	24 (39.0)	30 (48.4)	4 (6.5)	4 (6.5)
Walking ability	20 (32.3)	27 (43.5)	10 (16.1)	5 (8.1)
Work	22 (35.5)	26 (42.0)	7 (11.3)	7 (11.3)
Relationship with others	36 (58.1)	24 (39.0)	2 (3.2)	0 (0)
Sleep	39 (63.0)	13 (21.0)	5 (8.1)	5 (8.1)
Enjoyment of life	32 (62.0)	21 (34.0)	5 (8.1)	4 (6.5)

Discussion

The Prevalence of pain in our study was 29.5%. This is comparable to 27.8% reported by Wahab and Salami,[7] but differs significantly from 87.2% documented by Ebirim and Otokwala[8] in the same south-south region of Nigeria. This is probably due to our patients characteristics. Our patients were predominantly in clinical stage I disease (82.9%), this was similar to the series report by Wahab and Salami[7] in which 78.4% were in clinical stages I and II. The report by Ebirim and Otokwala did not indicate the clinical stages of their patients, however, it can be inferred from the 20% of their patients who had chest infections such as pulmonary tuberculosis, Pneumonia and Bronchitis, that a good number of the patients had a higher clinical stage diseases.

Pain experienced by HIV Patients can be due to the HIV infection itself or its consequences (infection, tumors), treatment for AIDS or unrelated to the disease or treatment.[7] In addition it has been associated with age,[9] female sex,[10] longer duration of HIV infection and treatment with antiretroviral medications, particularly protease inhibitor-based regimen,[11] advanced disease stage and the number of health comorbidities.[13]

In our study, waist (low back) pain (39.3%) was the commonest site of pain, followed by headache and knee pains. Other researchers have shown pain to be commoner in other body regions such as chest,[8] headache[5,6] and lower limbs.[8] The high rate of joint pain in our study may be unconnected with HIV infection, but rather osteoarthritis (OA). The mean age (42.4 years) of respondents in our study was high compared to those studies that documented high pain occurence in other body regions.[5,6] Osteoarthritis has been established as the most common source of pain and disability in the elderly,[14] while there remains considerable heterogeneity in defining osteoarthritis among epidemiological studies, the evidence is conclusive that age remains the single greatest risk factor for the development of OA in susceptible joints.[14]

Majority of our respondents (53.2%) reported mild pains (1-4 on the numerical rating scale) on the average pain rating. This agrees with findings from previous studies which documented predominantly mild pain in their patients' study population.[5,6]

In addition, this study also revealed that pain was not properly managed in the patients. while 27.9% of the patients took no analgesics at all for their pain, majority took over the counter (OTC) analgesic mixture prescribed and dispensed by patent medicine dealers. This poor management of pain in HIV infected patients has been observed by precious researchers.[5,6,7,8] In our HIV clinic all the services including consultation, laboratory investigations and medications are provided pro bono. This may negatively affect the patients' attitude in reporting other complaints outside HIV. In addition, majority of the patient attending the clinic have appointment for drug refill which are done by nurses and other support staff without consulting the doctors. Also, most of the medical officers and other workers in the HIV clinic are not trained pain managers, hence may be limited in their approach to pain patients.

A deliberate effort to encourage the patients to report their pain and seek proper treatment, and training of health workers on pain management may reduce the prevalence of pain and improve the quality of life of patients living with HIV and AIDS.

Conclusion: The Prevalence of pain among adult HIV Patients is high and grossly undertreated. Training of health workers in pain management may improve the situation.

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Conflict of Interest: Nil.

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