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Epidemiological, Clinical, Therapeutic, and Evolutionary Characteristics of Herpes Zoster in Patients Hospitalized at the Infectious Diseases Department of Fann Hospital in Dakar

Ndeye Aïssatou Lakhe[1,2*], Daouda Thioub[1], Gaad Idriss Gaad[1], Aminata Massaly[1,2], Ndeye Fatou Ngom[3], Khardiata Diallo-Mbaye[1,2], Aboubakar Sadikh Badiane[1], Ndeye Maguette Fall[1], Mamadou Seck[1], Viviane Cisse-Diallo[1,2], Daye Ka[1,2], Assane Diouf[1,2], Louise Fortes[2,4], Cheikh Tidiane Ndour[1,2], Moussa Seydi[1,2]

[1]Services des Maladies Infectieuses et Tropicales, CHNU de Fann, Dakar, Senegal
[2]Faculté de Médecine, de Pharmacie et d'Odontologie, Université Cheikh Anta Diop de Dakar, Dakar, Senegal
[3]Medicine Department, Health and Sustainable Development Research and Training Unit (UFRSDD), Alioune Diop University of Bambey, Diourbel, Senegal
[4]Services des Maladies Infectieuses et Tropicales, Hôpital Dalal Jam, Dakar, Senegal
Email: *aissatoulakhe@gmail.com, *aissatou.lakhe@ucad.edu.sn

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Abstract

Introduction: Herpes zoster, caused by the varicella zoster virus (VZV), appears as a localized recurrence in a dermatome, mainly during immunocompromised states. The objective of this study was to describe the epidemiological, clinical, therapeutic, and evolutionary characteristics of patients who were hospitalized for herpes zoster. **Patients and Methods:** A retrospective, descriptive study was conducted from January 1, 2018, to June 30, 2024, using records of patients hospitalized for herpes zoster at the Fann Infectious Diseases Department. The data were entered using an Excel spreadsheet and subsequently analyzed using IBM SPSS version 26 software. **Results:** A total of 18 cases were reported (0.4% frequency). The median age was 58 years [33.5 - 62.5], with a female predominance (M/F ratio 0.8). Hypertension and diabetes were frequent comorbidities. All patients had pain and rash, mostly on the hemiface (50%) and hemithorax (22%). Ophthalmic zoster accounted for 44.45% of cases, and HIV infection was found in half. Treatment mainly included step 2 analgesics (66.67%) and antivirals (94.44%). Postherpetic neuralgia occurred in three patients. The mortality rate was 11.11% (two patients), affecting only HIV-positive women, with ophthalmic herpes zoster. **Conclusion:** Herpes zoster remains common in adults and the elderly, sometimes revealing HIV. The

mortality rate is low. Complications, such as postherpetic neuralgia, cause significant disability, even in non-immunocompromised patients.

Keywords

Herpes Zoster, Prevalence, Characteristics, Dakar

1. Introduction

Herpes zoster (HZ), more commonly referred to as shingles, is an acute posterior ganglion radiculitis. The disease results from the reactivation of latent varicella-zoster virus (VZV) within sensory nerve ganglia, a process typically triggered by a decline in cell-mediated immunity [1]-[3]. Immunosenescence explains the higher incidence observed in the elderly population [4]-[6]. HIV infection constitutes another major risk factor [7]-[9], markedly increasing the likelihood of herpes zoster development in younger adult populations [3] [10] [11]. Other comorbidities associated with HZ include malignant blood disorders, organ transplants, particularly bone marrow transplants, diabetes, mental health conditions, and other immune-mediated infections [8] [9] [12].

Clinically, HZ presents as a painful, unilateral vesicular rash distributed along the path of a sensory nerve, most frequently in the thoracic region [13] [14]. However, other sites may be involved, particularly the ophthalmic branch [14] [15]. Complications may arise, most notably postherpetic neuralgia (PHN), which is especially common in immunocompromised patients [12] [14].

In countries with limited resources, particularly in sub-Saharan Africa, research on herpes zoster is very scarce. The coexistence of HIV infection and herpes zoster poses specific challenges for healthcare systems in this region. Senegal, situated in West Africa, has achieved notable progress in controlling infectious diseases, including HIV. Nonetheless, its healthcare system continues to face difficulties in managing complex infections and their complications.

The Department of Infectious and Tropical Diseases (SMIT) at Fann National University Hospital in Dakar functions as a major national referral center, providing specialized care for severe infectious diseases and serving as a sentinel site for surveillance of emerging trends. Its experience with herpes zoster cases provides an opportunity to generate valuable insights into the regional epidemiology, clinical features, and outcomes of this condition. However, only a limited number of studies have addressed herpes zoster in this setting.

Despite the acknowledged relevance of herpes zoster, comprehensive data from West Africa, and Senegal in particular, remain scarce. The limited number of published studies contrasts with the growing need to inform prevention and management strategies tailored to local contexts and population characteristics. Most existing literature focuses either on high-income settings or on specific high-risk groups, leaving significant gaps in our understanding of herpes zoster patterns in

sub-Saharan Africa.

In this context, the present study was carried out to investigate herpes zoster in a specialized referral setting in Dakar. The objectives were to describe the epidemiological profile, clinical presentation, and outcomes of cases managed at SMIT, thereby contributing to a better understanding of herpes zoster in the sub-Saharan African context.

2. Patients and Methods

2.1. Type, Period, and Study Population

The study was conducted from January 1, 2018, to June 30, 2024. This retrospective descriptive study was based on the records of patients hospitalized for herpes zoster in the Infectious and Tropical Diseases Department of Fann Hospital. The study population included all patients diagnosed with herpes zoster. The diagnosis was clinically confirmed by the presence of the characteristic vesicular rash in a unilateral metameric band, painful or not, with or without associated complications. Patients of all ages and both sexes were enrolled. For HIV-positive patients, confirmation of HIV status was made through serology documented in the medical file. Patients with HZ who did not consent to participation in the study were excluded from enrollment, as were individuals for whom hospital records could not be located. Cases with an uncertain diagnosis of HZ or possible confusion with other vesicular dermatoses were excluded.

2.2. Data Collection Tools and Techniques

The data were retrieved from patients' medical records and hospital admission records. The survey form was completed in reliance on the information obtained from the patients' records. Additionally, telephone calls were initiated to patients to complete specific data elements. Accordingly, each patient included in the study was administered an individual survey form. The following items were included in the form:

- Socio-demographic data: age, gender, place of residence, occupation, marital status;
- Clinical data: medical history, predisposing factors (HIV, diabetes, cancer), lifestyle, treatment history (corticosteroid therapy, immunosuppressive drugs), artificial depigmentation, headache, photophobia, malaise, itching, pain, fever, type of lesions (erythema, vesicle, pustule, crust, ulcero-necrotic, non-necrotic), location of lesions, laterality (left, right), associated symptoms, results of ophthalmological examination;
- Paraclinical data: complete blood count, C-reactive protein, glycemia, renal function, HIV test, CD4+ lymphocyte count;
- Therapeutic and evolutionary data: antiviral drugs (acyclovir, valacyclovir), analgesics (WHO analgesic ladder), anticonvulsant drugs (diazepam, carbamazepine, pregabalin), amitriptyline, local skin care, evolution (death, recovery), presence of postherpetic neuralgia (PHN), scarring, sequelae level, time to con-

sultation, time to treatment, hospitalization duration.

2.3. Data Entry and Analysis

The data were initially recorded in an Excel spreadsheet and subsequently analyzed using IBM SPSS version 26 software. Quantitative variables were described in terms of their position (mean, median) and dispersion (standard deviation, interquartile range, or extremes) according to their applicability criterion. The qualitative variables were depicted in absolute terms (frequency) and relative terms (percentage). Microsoft Office Excel Professional Plus 2021 for macOS was employed to create graphs and tables.

2.4. Ethical Considerations

The study was conducted with the approval of the department head. The participation of patients in this study was entirely voluntary. The data collected in the study were de-identified to maintain the confidentiality of the patient information. No financial compensation was provided for the data.

3. Results

3.1. Epidemiological Characteristics

During the seven-year study period, 18 cases confirmed of herpes zoster were identified among 4471 hospital admissions, corresponding to a frequency of 0.4%. The median age of patients was 58 (IQR: 33.5 - 62.5; range: 18 - 75 years). The most represented age group was 50 - 64 years (n = 7; 38.89%). Women predominated, accounting for 55.56% of cases, yielding a male-to-female ratio of 0.8:1. Married individuals represented two-thirds of the cohort (n = 12; 66.67%). Geographic distribution revealed a strong urban concentration, with 88.89% of patients residing in Dakar region (n = 16), predominantly in suburban areas (n = 11). The socio-demographic characteristics of the patients are summarized in **Table 1**.

3.2. Clinical Features

At admission, one patient was known to be HIV-positive. This individual reported poor adherence to antiretroviral therapy, including an interruption exceeding six months. Two patients (11.11%) had a history of diabetes. The mean delay between symptom onset and medical consultation was 4.11 ± 1.97 days, with 44.45% of patients presenting within three days. The mean interval between the onset of pain and the appearance of rash was 1.83 ± 1.04 days. In most cases (82.35%), the rash developed within 48 hours of pain onset. Pain and rash were reported in all patients (100%). Headache was noted in nine patients (50.0%), while fever was documented in eight (44.44%).

Dermatological examination revealed isolated vesicles as the predominant lesion type (n = 7; 38.89%). Hemifacial distribution was noted in half the patients (9 cases), while hemithorax involvement was observed in four cases (22.22%).

Table 1. Distribution according to the sociodemographic characteristics of herpes zoster cases at the infectious diseases department of Fann hospital in Dakar, 2018-2024 (n = 18).

Sociodemographic characteristics	Frequency (n)	Percentage (%)
Year		
2018	5	27.78
2019	3	16.67
2020	2	11.11
2021	1	5.56
2022	1	5.56
2023	4	22.22
2024	2	11.11
Gender		
Male	8	44.44
Female	10	55.56
Age range (years)		
<20	1	5.56
[20 - 34]	4	22.22
[34 - 49]	3	16.67
[50 - 64]	7	38.89
≥65	3	16.67
Marital status		
Married	12	66.67
Single	4	22.22
Divorced	1	5.56
Widowed	1	5.56
Profession		
Housewife	6	33.33
Retailer	2	11.11
Retired	2	11.11
Fisherman	1	5.56
Civil servant	1	5.56
Driver	1	5.56
Cook	1	5.56
Marabout	1	5.56
Student	1	5.56
No profession	1	5.56

Continued

Unspecified	1	5.56
Region and departments		
Dakar region	16	88.89
Dakar	5	27.78
Pikine	3	16.67
Rufisque	3	16.67
Guediawaye	2	11.11
Keur Massar	2	11.11
Thiaroye	1	5.56
Diourbel region	1	5.56
Fatick region	1	5.56

Ophthalmic herpes zoster was the most common form (n = 8; 44.45%). Among these, one patient presented with a marked decrease in visual acuity. Another developed keratitis with severe conjunctival and palpebral oedema, leading to complete eye occlusion and requiring surgical intervention. Table 2 summarizes the clinical profile of the patients in the study. The particularities of HIV-infected patients are shown in Table 3.

Table 2. Sociodemographic, clinical, and evolutionary profile of patients admitted for herpes zoster at the infectious diseases department of Fann Hospital in Dakar, 2018-2024 (n = 18).

Patients	Age	Sex	HIV	Consultation period (days)	Type of lesions	Location	Topography	Laterality	Time to treatment (days)	Hospital duration (days)	Outcome	Sequelae
1	58	F	Oui	4	Vesicle	Ophthalmic	Hemiface	Right	2	10	Recovery	Keloid scars, Pruritus
2	61	F	Non	5	Vesicle, Crust	Ophthalmic	Hemiface	Left	4	5	Recovery	Pruritus
3	38	F	Oui	2	Ulcero-necrotic	Sacral	Buttocks	Right	1	7	Recovery	Keloid scars, Pruritus
4	21	M	Oui	4	Vesicle, Crust	Intercostal	Hemithorax	Left	2	3	Recovery	None
5	18	M	Non	6	Vesicle	Intercostal	Hemithorax	Left	5	3	Recovery	PHN*
6	59	F	Non	2	Vesicle, Pustule	Ophthalmic	Hemiface	Left	6	8	Recovery	Keloid scars
7	30	M	Oui	3	Vesicle	Ophthalmic	Hemiface	Right	3	9	Recovery	Pruritus
8	32	M	Oui	2	Vesicle, Crust	Crural	Thigh	Right	8	14	Recovery	None
9	75	F	Non	2	Vesicle, Pustule	Ophthalmic	Hemiface	Left	2	5	Recovery	None
10	39	M	Non	2	Vesicle	Intercostal	Hemithorax	Left	2	5	Recovery	None
11	48	F	Oui	8	Vesicle	Crural	Thigh	Left	5	8	Recovery	None

Continued

12	63	M	Oui	6	Vesicle	Intercostal	Hemithorax	Right	5	10	Recovery	Pruritus
13	58	F	Non	3	Vesicle, Pustule	Auricular	Ear, Hemiface	Left	1	10	Recovery	None
14	61	F	Oui	3	Vesicle, Crust	Ophthalmic	Hemiface	Right	5	2	Death	-
15	29	M	Oui	4	Vesicle, Pustule, Crust	Auricular	Ear	Right	2	9	Recovery	PHN*
16	73	F	Non	5	Vesicle, Pustule, Crust	Ophthalmic	Hemiface	Left	3	10	Recovery	PHN*
17	64	F	Non	5	Vesicle, Crust	Ophthalmic	Hemiface	Right	2	4	Recovery	None
18	73	F	Oui	8	Vesicle	Ophthalmic	Hemiface	Right	8	8	Death	-

*PHN: Postherpetic Neuralgia.

Table 3. Profiles of HIV-infected herpes zoster patients hospitalized in the infectious diseases department of Fann Hospital in Dakar, 2018-2024 (n = 10).

Patients	Age	Sex	Consultation period (days)	Type of lesions	Location	Laterality	Time to treatment (days)	Hospital stay (days)	Outcome	Sequelae
1	58	F	4	Vesicle	Ophthalmic	Right	2	10	Recovery	Keloid scars, Pruritus
2	38	F	2	Ulcero-necrotic	Sacral	Right	1	7	Recovery	Keloid scars, Pruritus
3	21	M	4	Vesicle, Crust	Intercostal	Left	2	3	Recovery	None
4	30	M	3	Vesicle	Ophthalmic	Right	3	9	Recovery	Pruritus
5	32	M	2	Vesicle, Crust	Crural	Right	8	14	Recovery	None
6	48	F	8	Vesicle	Crural	Left	5	8	Recovery	None
7	63	M	6	Vesicle	Intercostal	Right	5	10	Recovery	Pruritus
8	61	F	3	Vesicle, Crust	Ophthalmic	Right	5	2	Death	-
9	29	M	4	Vesicle, Pustule, Crust	Auricular	Right	2	9	Recovery	PHN*
10	73	F	8	Vesicle	Ophthalmic	Right	8	8	Death	-

*PHN: Postherpetic Neuralgia.

3.3. Biological Data

All patients were tested for HIV, with 10 positive cases (55.55%). Hematological assessment was available for 14 patients. White blood cell counts had values within normal limits in 85.71%. Elevated C-reactive protein (>6 mg/l) was identified in three-quarters of evaluated patients. Elevated blood glucose, urea, and creatinine levels were documented in three patients (23.08% of those with available data). Complete laboratory findings are summarized in Table 4.

3.4. Therapeutic Data

The mean interval from rash onset to antiviral therapy initiation was 3.67 ± 2.2

Table 4. Distribution of herpes zoster cases by biological characteristics at the infectious diseases department of Fann Hospital in Dakar, 2018-2024.

Biological data	Frequency (n)	Percentage (%)
Leukocytes (n = 14)		
Normal (≤10 G/L)	12	85.71
Elevated (>10 G/L)	2	14.29
Hemoglobin (n = 14)		
Anemia (≤11 g/dl)	2	14.29
Normal (>11 g/dl)	12	85.71
Platelets (n = 14)		
Normal (≤400,000/mm^3)	14	100
C-reactive protein (n = 12)		
Normal (≤6 mg/l)	3	25
Elevated (>6 mg/l)	9	75
Urea (n = 13)		
Normal (≤0.5 g/l)	10	76.92
Elevated (>0.5 g/l)	3	23.08
Creatinine (n = 13)		
Normal (≤13 mg/l)	10	76.92
Elevated (>13 mg/l)	3	23.08
Blood glucose level (n = 13)		
Normal (≤1.10 g/l)	10	76.92
Elevated (>1.10 g/l)	3	23.08
HIV test (n = 18)		
Positive	10	55.56
Negative	8	47.06

days. More than half of patients (55.55%) received treatment within 72 hours. Acyclovir was prescribed to all patients, and one additionally received topical ganciclovir ophthalmic ointment (5.56%). Step-2 analgesics were administered to 12 patients (66.67%), neuroleptics in seven cases (38.89%), and pregabalin in two patients (11.11%). Standardized local wound care with aqueous eosin solution was provided to all patients.

3.5. Evolutionary Data

Hospital length of stay averaged 7.22 ± 3.19 days (range: 2-14 days). Post-hospital discharge follow-up revealed complications such as pruritus (44.44%), scarring with keloids (16.67%), and postherpetic neuralgia (PHN) in 3 patients (16.67%).

Table 5 detailed the characteristics of patients with PHN. Mortality occurred in two cases (11.11%). Both deceased patients were HIV-positive women with ophthalmic herpes zoster. One case involved suspected varicella-zoster virus (VZV) encephalitis, but the patient died prior to confirmation of the diagnosis.

Table 5. Profile of patients with postherpetic neuralgia at the infectious diseases department of Fann Hospital in Dakar, 2018-2024 (n = 3).

Characteristics	Patient 1	Patient 2	Patient 3
Age (years)	18	29	73
Sex	Male	Male	Female
Marital status	Single	Single	Widowed
Address	Fatick	Dakar	Dakar
Consultation period (days)	6	4	5
Time from pain to rash (days)	2	2	2
Type of lesion	Non-necrotic	Non-necrotic	Necrotic
Location	Hemithorax	Ear	Hemiface
Laterality	Left	Right	Left
Topography	Intercostal	Auricular	Ophthalmic
HIV Serology	Negative	Positive	Negative
CD4	-	Not done	672
Treatment time after rash (days)	5	2	3
Hospital duration (days)	3	9	10
Outcome	Recovery	Recovery	Recovery
Keloid scars	No	No	No
Pruritus	Yes	Yes	Yes
Sequelae level	Moderate	Moderate	Minimal
Antiviral treatment	Acyclovir	Acyclovir	Acyclovir

4. Discussion

This study examined the frequency, sociodemographic distribution, clinical presentation, therapeutic management, and clinical outcomes of herpes zoster patients requiring hospitalization in an infectious disease department within a resource-limited setting.

4.1. Sociodemographic Aspects

Herpes zoster is a relatively uncommon condition among hospitalized patients. The frequency observed in our cohort was notably low at approximately 0.4%. These results align with findings from two major dermatology departments in Dakar in 2019 [16]. In sub-Saharan Africa, the lack of an effective disease surveillance

system represents a major challenge to accurately estimating herpes zoster incidence. As a result, limited epidemiological data are available. Higher frequencies have been documented in Mali and Cameroon, where prevalence exceeded 3% [17] [18]. These disparities can be attributed to methodological differences. In Cameroon, the series included HIV-positive patients, a population known to have higher herpes zoster prevalence. In Mali, data were collected through dermatology consultations. In contrast, enhanced monitoring protocols in Europe have revealed a more widespread prevalence of the disease burden. For example, Germany reports an annual incidence of over 400,000 cases [19].

Herpes zoster is not considered a sex-linked disease [20]. The female predominance noted in our series corroborates the findings of several studies [2] [3] [8] [13]. The age-related epidemiological pattern observed in our study strongly supports established literature demonstrating increased herpes zoster incidence with advancing age, particularly among individuals aged 50 years and older [4] [8] [13] [20]. Also, hospitalization rates increase sharply in this age group [2] [3] [21]. Our cohort's median patient age of 58 is consistent with this trend. The increased susceptibility to herpes zoster with aging is attributed to immunosenescence [5]. Beyond acute disease manifestations, herpes zoster in elderly populations frequently results in a loss of autonomy and reduced social engagement, impacting their quality of life [6] [14].

4.2. Clinical Aspects

Patients with herpes zoster typically seek medical care early, often within the first three days of symptom onset. This behavior results in relatively brief consultation delays. This pattern of early referral has been consistently reported in population-based and clinical studies, particularly in primary care settings, where most patients report promptly after rash or pain onset [22]. In our study, nearly one-third of patients consulted within 48 hours of symptom onset, likely due to the severity of acute pain. Pain constitutes the cardinal clinical manifestation of herpes zoster and was universally reported. However, atypical or painless presentations, although less common, can hinder timely diagnosis and increase the risk of inadequate management [23] [24]. Other clinical features such as fever and headache were present in less than half of the cases, aligning with previous reports from the region [17] [18]. The rash typically appeared rapidly, on average two days after the pain onset, and was predominantly vesicular, in agreement with prior literature [4] [18].

A striking finding was the predominance of ophthalmic herpes zoster, which accounted for half of our cases, a proportion substantially higher than the 10 to 20% risk commonly reported [2] [15]. This risk increases with advanced age [25]. Ophthalmic involvement presents headache as the predominant symptom, with associated complications including keratitis, uveitis, conjunctivitis, and blindness [2] [15] [25], as observed in two of our patients. The risk of severe sequelae, including permanent visual impairment, underscores the need for rapid diagnosis, timely referral to an ophthalmologist, and early antiviral therapy. In our set-

ting, systematic ophthalmological evaluation was often insufficient, highlighting a clear need to implement routine specialist assessment for ocular herpes zoster. Additionally, thoracic herpes zoster ranked second in lesion distribution in this series, differing from most studies, where it represents the primary site [16]-[18].

Investigations frequently aim to detect comorbidities HIV infection, malignancies, or other infectious complications. HIV infection is a well-established risk factor for herpes zoster [8] [9] [20], and a primary comorbidity particularly prominent in African series [3] [18]. The risk of herpes zoster increases with declining CD4 count [6] [7] [26]. Among our HIV-positive patients, CD4 counts were available for only three individuals (30%), all of whom exhibited levels below 200 cells/mm^3. The limited availability of CD4 count data represents a significant limitation in this study. This missing data restricts our ability to accurately correlate the severity of herpes zoster with the degree of immunosuppression, which is a critical factor in understanding the disease's pathophysiology. In the absence of comprehensive immunological profiling, the association between immune status and clinical outcomes remains insufficiently defined. Future studies should systematically incorporate CD4 monitoring to address this gap. Although highly active antiretroviral therapy (HAART) decreases this risk, it remains elevated compared to the general population [7]. In our series, over half of the patients tested were HIV-positive, consistent with a Nigerian study reporting a prevalence of nearly 70% [3]. These findings confirm that herpes zoster frequently serves as a marker for undiagnosed HIV infection, with an especially high positive predictive value in cases of ophthalmic involvement [3]. However, within our series, ophthalmic herpes zoster was equally distributed between HIV-negative and HIV-positive patients, with four patients in each group. These data indicate that HZ ophthalmicus is not restricted to HIV-infected individuals. Nonetheless, HIV infection predisposes to more severe clinical manifestations, including necrotic and hemorrhagic forms, as well as complications like postherpetic neuralgia [3] [21] [25]. In this study, three cases of postherpetic neuralgia (PHN) were identified, two of them occurring in HIV-negative patients, with no apparent correlation to lesion anatomical site.

Additional comorbid conditions that enhance herpes zoster susceptibility include diabetes mellitus [9] [27], autoimmune diseases [8] [28], and hematological malignancies [29]. Two cases of diabetes were identified in this study. Psychological stress, frequently overlooked, is an important trigger [30] [31], particularly when severe and occurring within the preceding three months [32]. Our study did not assess stress levels. Future clinical evaluations should inquire systematically about recent stressful life events such as examinations, work overload, or bereavement. This would add a valuable dimension to future studies.

4.3. Therapeutic Aspects

Herpes zoster treatment objectives encompass pain alleviation, acceleration of lesion healing, and prevention of postherpetic neuralgia [4] [33]. Thus, effective

pain management is paramount, though its efficacy, both acute and chronic, tends to decline with patient age [33]. All our patients received analgesics, with opioids and tricyclic antidepressants reserved for severe and refractory pain. Antiviral therapy, mainly acyclovir, was systematically administered. Acyclovir remains the most commonly used antiviral in low- and middle-income countries due to accessibility [34], as observed in our cohort, whereas valacyclovir with superior bioavailability is less frequently used because of cost constraints. Antiviral administration within the initial 72-hour window generally reduces acute pain duration and rash severity, accelerates healing, and mitigates complication risk [4] [35]. Furthermore, antiviral therapy reduces viral dissemination and prevents new lesion formation. More than half of our patients received antivirals within this critical time frame. Nevertheless, starting antiviral therapy beyond 72 hours may still be clinically justified, particularly with continued lesion development or complication occurrence [35] [36].

4.4. Evolutionary Aspects

The average hospitalization duration for uncomplicated HZ is approximately seven days for patients over 50, with longer duration in the presence of postherpetic neuralgia [20]. Our data showed similar hospitalization lengths.

Postherpetic neuralgia (PHN) remains the most common complication, with reported frequency ranging from 5% to over 30%, depending on study design, patient age, and definition criteria [2]. In our study, PHN occurred in three patients, consistent with this range. No correlation between advanced age and postherpetic neuralgia was observed in our series, as cases involved two younger adults aged 18 and 29, and one elderly patient aged 73. This contrasts with most studies reporting higher postherpetic neuralgia incidence in patients aged 50 years and older [4] [21] [36]. Additional risk factors for PHN include ophthalmic herpes zoster [4], comorbidities such as diabetes or immunosuppression [37]. Postherpetic neuralgia may persist beyond one year in 30% - 50% of patients [2], representing a significant therapeutic challenge [4] potentially causing physical disability, emotional distress, loss of autonomy, and insomnia [1]. Due to study limitations, the duration of postherpetic pain could not be formally assessed due to absent formalized follow-up protocols.

Herpes zoster–associated mortality remains generally low [2] [38]. In hospital settings, case-fatality rates can reach up to 15% [34]. Our study recorded two deaths among 18 patients (11.1%), both involving HIV-positive women over 60 years with ophthalmic herpes zoster. Advanced age [2], female sex [34] [38] and comorbidity such as HIV infection [21] have been identified as mortality risk factors in herpes zoster. One patient was suspected of VZV meningoencephalitis but died rapidly before confirmation, while the second died two months after hospitalization; in this latter case, herpes zoster was unlikely to be the direct cause. The complex interplay of multiple risk factors likely contributed to these fatal outcomes.

Long-term follow-up is crucial for managing herpes zoster complications. Our co-

hort lacked structured follow-up protocols, including defined schedules and geriatric assessments, despite the risk of frailty and loss of autonomy in older patients. This gap underscores the urgent need for geriatric involvement in patient management.

Given herpes zoster risks, routine vaccination is recommended for individuals aged 50 years and older, as well as immunocompromised patients, including those with HIV [39]. Two vaccines have demonstrated strong efficacy in reducing herpes zoster incidence, hospitalizations, ophthalmic involvement, and postherpetic neuralgia [40] [41], and are considered cost-effective [39]. Consequently, several high-income countries have integrated vaccination into immunization programs for older adults [42] [43].

In Senegal, herpes zoster vaccination remains unavailable and is therefore not routinely offered to older adults. Further epidemiological studies assessing herpes zoster incidence locally are essential to support national vaccine policy decisions.

This study has several limitations. The relatively small sample size of 18 cases over a six-year period substantially limits statistical power and precludes meaningful subgroup analyses or the identification of significant associations. The retrospective design introduces inherent constraints, including incomplete laboratory data for several parameters, which further limit the robustness of the findings. The single-center nature of the study restricts external validity, as results may reflect institutional practices and patient demographics specific to SMIT Fann rather than broader regional patterns. Despite these limitations, the study provides valuable insights into the epidemiological and clinical profile of herpes zoster in a sub-Saharan context. Future research should focus on prospective cohort designs with larger sample sizes, standardized diagnostic criteria, systematic laboratory assessments, and structured follow-up protocols to strengthen the evidence base and better inform prevention and management strategies.

5. Conclusion

Herpes zoster is infrequent at Fann Hospital, predominantly affecting older adults with very low case fatality, mostly attributable to comorbidities rather than the infection itself. Broader risk factors beyond HIV, such as stress, malignancy, and diabetes, warrant systematic evaluation. Ophthalmic involvement is frequent, underscoring the need for routine ophthalmologic referral. In resource-limited settings, restricted access to affordable antivirals and effective, well-tolerated treatments for postherpetic neuralgia remains a major barrier. Strengthening patient management requires targeted policy interventions.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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