



(RESEARCH ARTICLE)



Infectious morbidity and mortality in the infectious diseases department of the CHU Yalgado Ouédraogo in Burkina Faso in 2019

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Abstract

Introduction: Infectious diseases remain a major public health problem in developing countries. The objective of this study was to determine the epidemiological and clinical profile of infectious pathology in the infectious diseases department of CHU Yalgado Ouédraogo in Ouagadougou.

Patients and method: This was a cross-sectional and retrospective study that took place in the infectious diseases department of the Yalgado Ouédraogo University Hospital from January 1, 2019 to December 31, 2019. Were included all patients hospitalized in the said service during the study period. For each patient retained sociodemographic, clinical and diagnostic data were collected.

Results: In one year, 159 patients had been hospitalized in the infectious diseases department of the YO UHC. The mean age of the patients was 42±9 years with extremes of 15 and 80 years. The female sex was the most represented (55.5%) with a sex ratio of 0.8. The majority of patients (64%) came from the province of Kadiogo. The most frequently diagnosed infectious diseases were HIV infection (24%), pulmonary infections (21.8%), malaria (14%), dengue fever (9%), urinary tract infections (7.5%), meningitis (3.8%), typhoid fever (3%), rabies (3%), chicken pox (3%), tetanus (3.8%), toxoplasmosis (3.8%), and cutaneous leishmaniasis (3%). The signs of severity presented by our patients were dominated by dyspnea, severe anemia, and severe dehydration. The delay of consultation was 13.5 days and the average duration of hospitalization was 9.8 days, with a hospital mortality of 24%.

Conclusion: HIV infection, malaria and pulmonary infections were the most frequent reasons for hospitalization. It is therefore important to strengthen the technical facilities of hospitals for early diagnosis and appropriate management of infectious pathology

Keywords: Infectious pathologies; Epidemiology; Clinic; CHU Yalgado Ouédraogo

1. Introduction

Infectious diseases are a major public health problem in the world, particularly in developing countries [10]. Over the last 30 years [11], they have shaken the world with devastating epidemics or pandemics. The ongoing Covid-19 is testing the health systems in all countries of the world [16]. In addition to this infection, diseases such as SARS-Cov-1, MERS-Cov, Ebola virus disease, influenza, dengue, yellow fever, measles, cholera, and plague continue to rock the world. So do HIV/AIDS, malaria and tuberculosis [12,16]. Morbidity and mortality from infectious diseases remain a concern in Burkina Faso [14,15]. The aim of this study is to investigate the epidemiological and clinical profile of infectious pathology in the infectious diseases department of CHU Yalgado of Ouagadougou in 2019.

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2. Patients and method

The study took place in the infectious diseases department of the CHU YO, which is a third-level reference hospital in Burkina Faso. It is a cross-sectional and retrospective study with descriptive aim that took place in the infectious diseases department of the Yalgado Ouédraogo University Hospital from January 1, 2019 to December 31, 2019. All patients admitted and hospitalized in the said department were included. The hospitalized patients were either referred by the emergency department, the outpatient department of the infectious diseases, or other departments of CHU Yalgado Ouédraogo. The following data were collected for each patient: age, profession, area of residence, mode of admission, length of stay in hospital, medical history, clinical signs, diagnosis, and patient progress. The diagnosis was made on the basis of the history, the systematic clinical examination and the complementary examinations. When confirmation by complementary examinations was not possible, the diagnosis was retained after a therapeutic test. Patients with surgical pathology were not included

3. Results

3.1. Epidemiological aspects

In one year, 159 patients were hospitalized in the infectious diseases department of the YO University Hospital. The average age of the cases was 42 ± 9 years with extremes from 15 to 80 years. The most represented age group was 30 to 44 years. Females accounted for 64% of the patients with a sex ratio of 0.57. The majority of patients were from the city of Ouagadougou (64%). Forty-five percent of patients (45%) were housewives.

3.2. Clinical aspects

3.2.1. Medical history

The pathological history of the patients was dominated by arterial hypertension (see Table 1).

Table 1 Dispatching of patients according to pathological history

Pathologies	Number	%
HTA	3	43
Epilepsy	1	14
Hemorrhagic stroke	1	14
Cardiothyreosis	1	14
Behavioral disorder	1	14
Total	7	100

3.2.2. Clinical signs of the patients

Dyspnea, severe anemia, and severe dehydration were the most frequently encountered signs of severity. The signs of severity noted on admission are summarized in Table 2.

Table 2 Dispatching of patients according to signs of severity

Signs of severity	Number	%
Dyspnea	9	20
Severe anemia	7	16
Severe dehydration	7	16
Cachexie	5	11
Bleeding	5	11
Coma	5	11
Severe sepsis	4	9
Hypovolumic shock	1	2
Paraplegia	1	2
Lethargy	1	2

3.2.3. Infectious diseases diagnosed

The pathologies diagnosed were dominated by HIV infection, pulmonary infections and malaria (see Table 3).

Table 3 Dispatching of patients by diagnosed infectious diseases

Diagnosed pathologies	Number	%
HIV infection	38	24
Lung infections	34	21,7
Malaria	22	14
Dengue	15	9
Urinary tract infections	12	7,5
Meningitis	6	3,8
Cerebral toxoplasmosis	6	3,8
Tetanus	6	3,8
Cutaneous leishmaniasis	5	3,1
Rage	5	3,1
Chickenpox	5	3,1
Typhoid fever	5	3,1
Total	159	100

3.3. Evolution

The average time to hospital was 13.5 days and the average length of hospitalization was 9.8 days. In-hospital mortality was 24%. The majority of deaths (87.5%) occurred in patients living with HIV.

4. Discussion

With a proportion of 24%, HIV infection was the most frequent reason for hospitalization. It was involved in the majority of deaths (87.5%). While in developing countries, this infection remains one of the leading causes of death, the opposite is true in developed countries, where it has become a chronic disease thanks to the availability of powerful antiretroviral drugs [1]. Pulmonary infections with a proportion of 21.7% were dominated by tuberculosis which was frequently associated with HIV. In the literature, the rate of TB-HIV co-infection reaches 65% in some African countries [2]. Several studies have shown that TB is the first opportunistic infection during the course of AIDS [3,4,7]. And HIV/AIDS infection favors an increase in the number of cases and deaths due to tuberculosis [7,13]. Malaria was the third leading cause of hospitalization. It is therefore important to intensify community awareness and management of uncomplicated malaria in order to reduce the proportion of severe forms that cause death [15]. Five cases of rabies were hospitalized. It is important to take measures for the prevention of this zoonotic disease, which is always fatal once reported [17]. Vaccine-preventable diseases such as tetanus are still prevalent. This could be explained by the fact that after tetanus immunization in early childhood under the expanded program on immunization, no policy of booster vaccinations is in place to promote tetanus control in adults [18]. Mortality in our series (24%) was lower than in the Ouédraogo series (33.3%). It was mainly related to immunosuppression due to HIV in the majority of cases [9,14]

5. Conclusion

Mortality due to infectious diseases remains high. It is important to strengthen the technical facilities of hospitals for accurate diagnosis and appropriate management of cases. The persistence of vaccine-preventable diseases requires the adoption of new vaccine strategies to include adults. The fight against vector-borne diseases such as malaria and dengue requires the promotion of sanitation, the use of insecticide-treated mosquito nets and vaccination. Early detection and management of patients living with HIV is essential to reduce lethality from opportunistic infections.

Compliance with ethical standards

Disclosure of conflict of interest

All authors declare that they have no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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