Problem of the Management of Haemorrhagic Fevers: Experience of Ebola Virus Disease in the Province of North Kivu and Ituri (DR Congo) and the Importance of Early Diagnosis

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Abstract

Ebola is a serious, often fatal disease with a fatality rate of up to 90%. The short-term objective of this letter to the listeners is to make known the signs of the Ebola virus to the population and to promote the early diagnosis in our environment. We applied an observation of the cases of the Ebola epidemic in our environment. It is not always possible to quickly identify patients with Ebola virus disease. For this reason, it is important that health workers apply the usual precautions to all patients, regardless of diagnosis, in any professional practice and at any time. With the support of the Congolese government and several other organizations, the Congolese government is expected to launch a program of mass awareness and vaccination against the Ebola virus.

Subject Areas

Virology

Keywords

Management, Ebola, North Kivu, Early Diagnosis

1. Introduction

Ebola virus disease is a serious illness, often fatal, with a fatality rate of up to 90% [1]. As the name suggests, it is caused by the Ebola virus, which belongs to the

filovirus family. However, even in developed countries where various researches are carried out in the field of treatment, Ebola still remains a great challenge of medicine today, because it is generally grafted with a heavy mortality. In West Africa, the epidemic that raged in 2014, reported a lethality of 39.5% with 11,323 deaths out of 28,646 reported cases [2]. During the last outbreak in Guinea following an Ebola strain, 90% of patients died from the disease [3]. Few epidemiological studies are reported in Africa in general, most countries lacking national annual registration registers. Some hospital studies nevertheless give an idea of the statistics. The Ebola virus belongs to the genus Ebolavirus of the family Filoviridae (filovirus), to which the Marburg virus also belongs. All are characteristic filamentous looking viruses. There are six types of viral species [2]. Within the genus Ebolavirus: Bundibugyo ebolavirus, Tai forest ebolavirus, Reston ebolavirus, Sudan ebolavirus, Zaire ebolavirus and Bombali ebolavirus [2]. There is therefore a real opportunity for survival if the diagnosis is made early and the treatment started in time. The experience reported in North Kivu of DR Congo treated jointly with the Ebola treatment center (CTE) of Butembo. The Ebola virus is a relatively difficult virus to diagnose. Human-to-human transmission of the Ebola virus is primarily linked to direct or indirect contact with blood and body fluids [4]. It is not always possible to quickly identify patients with Ebola virus disease as the initial symptoms may lack specificity. For this reason, it is important that health workers apply the usual precautions to all patients, regardless of diagnosis, in all professional practices and at all times. The warning signs are sometimes severe bleeding and organ failure which can lead to death [5]. Symptoms that the population and the nursing staff should identify and recognize from the start are: pain in certain areas such as the abdomen, joints, muscles or chest; in the whole body: goosebumps, dehydration, fatigue, fever, physical discomfort, loss of appetite or sweating; gastrointestinal: diarrhea, nausea, bloody vomiting or vomiting; and finally common symptoms mental confusion, coughing up blood when coughing, sore throat, headache, red spot on the skin or red eyes. Confirmation of the diagnosis is made after laboratory examination but before there remains a suspect case. Once diagnosed at the early stage, more than 80% of cases are properly managed with safety measures to avoid any contamination and sometimes there is a cure [6]. The prognosis is reserved for the late stage.

According to Table 1, including 716 cases (682 confirmed and 34 probable) including 459 deaths, *i.e.* a lethality of nearly 64.1% among the confirmed and probable cases. The lethality among the confirmed cases was 75.3%. Of the 392 cases observed in women, 47.4% (204) are women of reproductive age (15 to 49 years of age). Children represent a disproportionate number of cases compared to the previous epidemic. Thirty-eight percent (n = 167, 38.8%) of the cases are under the age of 18, and 13.7% (n = 59) are young children under the age of 5. Health workers were not spared the virus, 65 cases or 9.1% of cases (Figure 1).

The difficulty linked to the diagnosis of the Ebola virus is common to many

Table 1. Frequency of Ebola virus patients.

Settings	Effectif	%
Confirmed	682	95.3
	34	4.7
Likely case fatality rate in confirmed and Probable cases	392	64.1
Male	286	39.9
SEX		
Women	430	60.1
Total	716	100
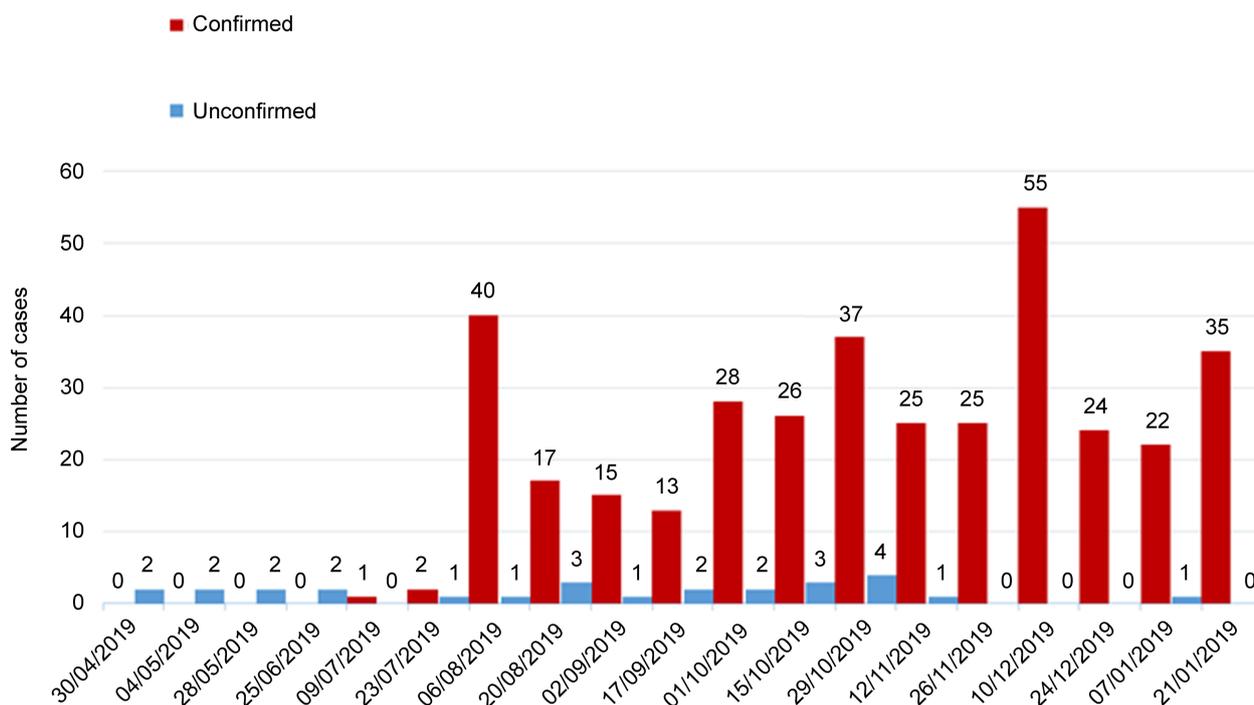
Figure 1. Confirmed and probable cases and deaths from Ebola virus disease by date of onset of signs, from May 1, 2018 to January 27, 2019, North Kivu and Ituri provinces.

African countries struck by this virus. A study indicated that in Guinea, Liberia and Sierra Leone, announced that the epidemic had already exceeded more than 15,000 dead [6]. The results were similar in a study in Nigeria which shows such an incidence [7].

It is a fact that DR Congo is a country with limited resources. However, measures that can improve the response and management and reduce mortality linked to Ebola are very accessible. There are assets which can already be exploited. In Kinshasa there is a virology unit at the IRNB which is looking into the matter. It is sponsored by the Congolese government and certain donors. It benefits from a multidisciplinary approach with different services. The challenge for Ebola in the context of our environment remains the role of awareness and education of the masses. This is probably what health care providers and nation-

al health policy still need to work on. In this case, in the case of the Ebola virus, an immediate transfer of patients showing signs of call to the referral center is essential. The systematization of virological examinations would allow early targeting of the population at risk.

2. Conclusion

With the support of the Congolese government and several other organizations, the Congolese government should launch a program of mass awareness and vaccination against the Ebola virus. A similar project has been launched in endemic areas in Africa. According to a study, the results of an awareness campaign have made it possible to significantly reduce the spread of the virus through hygiene measures [8]. The short-term goal is to educate people about the signs of Ebola and to promote early diagnosis. In the long term, the objective is to extend the popularization process to most of the so-called family viruses in order to significantly reduce the mortality rate.

Conflicts of Interest

The authors do not declare any conflict of interest.

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