

# In Hospital death among under five years children hospitalized with meningitis in the Eastern of the Democratic Republic of Congo

Jeannière Tumusifu Manegabe<sup>1,2</sup>, Furaha Bidhoro<sup>1,2</sup>, John Peter Mulindwa<sup>1,2</sup>, Muke Kitoga<sup>1,2</sup>, Fikiri Bavure<sup>3</sup>, Mambo Mwilo<sup>1,2</sup>, Kanku Tudiandike<sup>1,2</sup>, Archippe Muhandule Birindwa<sup>1,2,3\*</sup>

<sup>1</sup>Université Evangélique en Afrique, Bukavu, Democratic Republic of the Congo <sup>2</sup>Panzi Hospital, Bukavu, Democratic Republic of the Congo

<sup>3</sup>Department of Infectious Diseases, Institute of Biomedicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden

**INTRODUCTION:** Meningitis is a major public health problem needing timely diagnosis, appropriate treatment, prevention and control. Despite the advances in diagnosis and treatment of infectious diseases, meningitis is still considered as an important cause of mortality and morbidity, especially in the paediatric population of lower income countries such as the Democratic Republic of the Congo (DR Congo). In this study, we aimed to analyse the fatality aspect of suspected meningitis among children under five years.



**METHODS:** A prospective, descriptive study was carried out in the Paediatrics departments of four hospitals in the South- Kivu province in the Eastern part of the DR Congo from April 2021 to March 2022. Of the 1386 children enrolled, 251 children were suspected of meningitis. This study captures data generated in the framework of routine medical practice, which includes medical history, clinical diagnosis and results of locally conducted laboratory tests.



## RESULTS

Risk factor		Death	OR IC95%	P Value
Age (month)	< 2m	27(37.5%)	2.36 (1.12-4.94)	0.022
	3-24	25 (29.1%)	1.89 (0.89-4.02)	0.097
	25-59	18 (19.4%)		1
Vaccine	Yes	24 (34.3%)		1
	No	46 (65.7%)	2.5(1.4-4.4)	0.002
Malnutrition	No	45 (22.8%)		1
	Yes	25 (50%)	3.5 (1.8-6.6)	0.0002
CSF WB	< 10	29 (18.8)		1
	10-99	22(40)	2.87 (1.46-5.63)	0.002
	≥ 100	19(55.7%)	3.5 (1.71-7.83)	0.0006
Stay (days)	1-3	56 (93.3)	231 (62.5-853.5)	< 0.0001
	4-10	6 (5.7)		1
	11-20	6 (9.7)	1.76 (0.54-5.74)	0.34
	≥21	2 (8.3)	1.5 (0.28-7.93)	0.63

**CONCLUSION :** Mortality associated with meningitis remains very high in pediatric settings. Training of health workers on resuscitation and intensive care as well as raising awareness among the population on respecting the vaccination schedule and consultation in tertiary hospitals as soon as serious symptoms occur would lead us to reduce this mortality as desired by WHO through its plan to defeat meningitis by 2030.

Our Acknowledgment to the children 'prize foundation for funding this research and their fight against children mortality