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ASSESSING EFFECTS OF RESPONSE TO THE BACTERIAL MENINGITIS EPIDEMIC IN BANALIA,
DEMOCRATIC REPUBLIC OF CONGO IN 2021

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Background

. Banalia health zone in the Democratic Republic of Congo reported a meningitis epidemic in 2021 outside of the epidemic season. We assessing the effects of the meningitis outbreak response carried out.

Aim/Methods

The primary interventions carried out are case detection, laboratory confirmation, case management, and reactive vaccination. Kruskal-Wallis rank sum test, Wilcoxon-Mann-Whitney and negative binomial regression tests were used to assess incidence by age group, sex, and relationship and effects of reactive vaccination and treatment with ceftriaxone.

Results

The epidemic was detected in epidemiological week 30 of 2021 evolved out of epidemic season and lasted about seven months. A total of 2,662 suspected meningitis cases with 205 deaths were reported making a crude fatality rate of 7.7%. The 30-to-39-year age group was the most affected with 927 cases (38%) ($p < 0.001$). Although treatment protocol with ceftriaxone was delayed, it contributed to preventing deaths ($p=0.001$). The predominant pathogen isolated was *Neisseria meningitidis* serogroup W with 47/57(82%) positive specimens and the genome clonal complex was CC11 (92%). Reactive vaccination carried out with a meningococcal multivalent (ACWY) vaccine resulted in an 82% decline in suspected meningitis cases (IRR 0.18, 95% CI 0.02-0.80, $p=0.041$). Psychological support was provided to 761 patients of whom 391(51.4%) were affected by behavioral problems.

Conclusions

Despite the late detection and response to the meningitis epidemic in Banalia, the response interventions implemented had an impact on controlling the epidemic. Setting up a warning system and providing care and support to meningitis survivors were among the best practices.

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