

## **The Susceptibility Pattern of *Salmonella* Species to Commonly Used Antibiotics in the Bamenda District Health Area, Cameroon**

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**Background:** The susceptibility of *Salmonella* bacteria to commonly used antibiotics is threatened by the emergence of resistance strains. The organism has rapidly gained resistance to antibiotics like ampicillin, ceftriaxone, and cotrimoxazole, and also to previously efficacious drugs like ciprofloxacin. The objective of this study was to provide information about the level of resistance that is presented by *Salmonella* isolates to commonly prescribed antibiotics to incite continuous monitoring of antibiotic sensitivity patterns; to provide suitable guidelines for treatment and thereby reducing mortality due to therapeutic failure.

**Methods:** A cross-sectional study was carried out from September to November 2014 at the Regional Hospital Bamenda, Cameroon. The study population was patients of all age groups presenting with symptoms of Salmonellosis. The *Salmonellae* were isolated from stool by culturing in *Salmonella-Shigella* Agar and Kligler Iron Agar, the later in which the isolates produced specific biochemical characteristics which were conclusive. Antibiotic susceptibility was done by the disc diffusion method using Mueller-Hinton Agar following both CLSI and EUCAST manual instructions.

**Results:** A total of 253 samples were collected and 22 cases were positive for *Salmonella* species with a prevalence of 8.70%. The susceptibility of the isolated *Salmonellae* to seven antibiotics with ciprofloxacin having an overall sensitivity of 52.38%, ofloxacin, 47.62%, ceftriaxone, 47.62%, and gentamicin, 38.10%. Chloramphenicol had sensitivity percentage of 28.57%, while co-trimoxazole and amoxicillin had a high resistance level of 100.00% (0% sensitivity).

**Conclusions:** The fluoroquinolones were found to be the best drugs for the treatment of typhoid; but there was also a noticeable emergence of Amoxicillin-, Cotrimoxazole-, Chloramphenicol-resistant *Salmonella* accentuating the growing concern about the presence and the spread of multidrug resistant Salmonellosis; underscoring the need for the rational application of antibiotics and other necessary interventions that will help to control the menace of antibiotic resistance.