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P2408 Bacteraemia in a Nepalese hospital: story from "capital city of enteric fever"

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Background: Kathmandu has been termed as "Enteric fever capital of the world." The laboratories basically focus on isolation and identification of *Salmonella* serovars. However, the story of bacteremia in Kathmandu may not be fulfilled by the character of typhoid bacteria only; a big list of other pathogens can be the agents telling the tale of bacteremia. The purpose of this study was to monitor the organisms causing bacteremia and to determine their antibiogram among patients attending a tertiary care hospital in Nepal.

Materials/methods: A total of 3811 blood samples from bacteremia suspected patients were collected from January 2016 to December 2017 for culture and sensitivity following standard microbiological procedures. Culture was done in BD BACTEC blood culture system and antibiotic susceptibility testing was carried out by Kirby-Bauer disk diffusion method. Fluoroquinolone-resistance among *Salmonella enterica*, methicillin-resistance among *Staphylococcus aureus* (MRSA), and extended-spectrum-beta-lactamase (ESBL)-production among gram-negative isolates were determined following Clinical and Laboratory Standards Institute guidelines.

Results: Out of 3811 samples, significant growth was seen in 10.2% (n=389) cases while contamination was encountered in 2.6%. Among the pathogens recovered, *Salmonella enterica* serotypes Typhi and Paratyphi A were isolated from 42.2% (n=164) samples. Other gram-negative bacilli associated with bacteremia were *Escherichia coli* (24.7%), *Klebsiella pneumoniae* (11.4%), and non-fermentative bacteria (2.6%). Nearly, 6% of the blood culture samples yielded *Staphylococcus aureus* which was followed by *Streptococcus pneumoniae* (3.6%), and other gram-positive cocci (6.9%). Ciprofloxacin was found to be ineffective in 73.8% (n=121) of *Salmonella enterica* isolates *in vitro*, and ESBL was seen in two isolates of serovar Typhi. A high percentage (n=9) of *Staphylococcus aureus* was resistant to methicillin; however, no glycopeptide-resistant/intermediate *S. aureus* were isolated. There were two *Candida krusei* isolates from two intensive care unit patients. ESBL-production was noted in 10.6% (n=34) of the gram-negative bacterial isolates.

Conclusions: There was nearly equal preponderance of Salmonella and non-Salmonella gram-negative bacilli causing bacteremia. Commonly used antimicrobials were found to be of limited use against the pathogens which urges need for antimicrobial stewardship program in hospitals.