ABSTRACT

Background: Non-Mycobacterium tuberculosis bacterial lower respiratory tract infection (LRTI) is among the most prevalent diseases affecting humans across the globe. There is an increased antimicrobial drug resistance by bacteria causing LRTI. The main objective of this study was to investigate the bacteriological profile, risk factors and susceptibility patterns in non-tuberculosis lower respiratory tract infections among patients attending Kisugu Health Centre III

Methodology: A cross-sectional study design was used to recruit 236 participants at Kisugu Health Centre III by consecutive sampling. Sputum samples were collected and analyzed for Non-MTB bacterial causes of lower respiratory tract infections using microbiological standard procedures. Antimicrobial susceptibility tests were performed using disc diffusion technique following Kirby-Bauer method. Data was cleaned and analyzed using SPSS (version 16.0). Ethical approval was sought from the IHSU-REC

Results: The study yielded a prevalence of Non-MTB bacterial causes of LRTIs of 31.78% (75/236) [95%, CI=25.89-38.13]. The commonest Non-MTB bacterial isolates in the study were P. aeruginosa (38.67%), S. aureus (21.33%) and K. Pneumoniae (17.33). Others included S. Pyogenes (9.33%), S. pneumonia (6.67%), M. catarrhalis (5.33%) and H. influenza (1.33%). The study revealed that poor social behaviors like smoking ($X^2=20.86$, P- value<0.001), excessive consumption of alcohol ($X^2=20.20$, P-value<0.001) and HIV infection ($X^2=15.52$, P-value<0.001) predispose one to contracting bacterial Non-MTB LRTIs. Also young and elderly people stand higher chances of contracting these infections.

Conclusion and recommendations: The prevalence of Non-MTB bacterial lower respiratory tract infections was high with a relatively high rate of antibiotic resistance among bacteria like P. aeruginosa. Continuous surveillance of antibiotic susceptibility patterns of bacteria to different antimicrobials and introduction of PCR for other bacteria other than TB alone is recommended. The Government of Uganda should introduce policies to prevent use of drugs across the counter without prescription from doctors.

Key words: Prevalence, Non-MTB bacterial LRTIs, Antimicrobial susceptibility pattern, Kisugu Health Centre III.