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Tackle the 'Superbug' – Antimicrobial resistance before it kills

Sonu Baisoya

Venus Remedies Limited, India

Antimicrobial resistance (AMR) increasing at alarming rate both in the community and in hospitals, now becoming a serious threat to global public health. By 2050, It is estimated that 10 million people will die each year if current trend rising continues at same rate; one person dying every three second if there is no action taken against this bad-bug. Bacterial infections are the highest burden on developing nations. In India, estimated 4.1 lakhs children aged below 5 years die due to pneumonia annually which accounts for 25% of all child deaths in India. All of the existing antibiotics becoming non-effective due to emerging resistance in the nosocomial pathogens and needs emergency measurements to tackle and combating AMR. Increased prevalence of extended spectrum beta lactamases (ESBLs) was noted in 1990s and now metallo-beta lactamases (MBLs) and multidrug-resistant pathogens are spreading widely, contributing major threat for the management and treatment of ICU patients along with

outpatients. WHO highlights emergence and serious threat to the global public health due to spreading of critical priority pathogens (*Acinetobacter baumannii*, *Pseudomonas aeruginosa* and *enterobacteriaceae*) which has been a major concern in developed and developing nations. High rate of AMR is due to lack of surveillance mechanisms or system for actual monitoring and its utility, ineffective healthcare facility, hospital control policies, poor sanitation and use of antimicrobials for animals. Cooperation and co-ordination among countries is required to tackle the global emergence and spread of AMR. Their regulatory bodies need national action plans to counter superbug. Antibiotic resistance breakers (ARB) can play a vital role to combat AMR and void the discovery of new antibiotics. Greater research and innovation are required for development of new drugs, vaccines and diagnostic tools for combating AMR and for a better future.

sonu.baisoya65@gmail.com