

Antibiotic Stewardship in Pakistan: A solution to Antibiotic Resistance

Mazhar Hussain

Antibiotics resistance is rising at a high rate in all regions of the world, with main cause of it being irrational use of the antibiotics. Today it is regarded as one of the biggest health threats to the populations globally, and researchers have consistently raised voice, which is based on the sound evidence.¹ As described earlier, overuse of the antibiotics is one of the causes of antibiotic resistance, it can occur naturally occasionally. The underlying key factor is that relevant standard treatment protocols and guidelines are not mostly followed to manage or treat the infections. Additionally, incorrect diagnosis, wrong dosage, lack of the source control, poor qualities of the drugs, extended hospital stay, increasing prevalence of resistant organisms along with co infections are other important causes of antibiotic failure.²

Many studies have reinforced these findings and found that inappropriate antibiotic prescription practices, frequent over the counter availability and sale of the antibiotics, wide spread irrational use of the antibiotics in veterinary medicine, poor or ineffective functioning of the drug regulatory authority in the country and inefficient patient health education system about antibiotic usage, are others major causes of the antimicrobial resistance in the developing countries. Considering this grave situation of the prevalence and factors associated with antibiotic resistance, stewardship regarding antibiotic use is an important healthcare system strategy to counter or overcome the bacterial resistance, caused by the irrational usage of the antibiotics and/or prolonged hospital stay.

Another important factor related with antibiotic resistance is that although the topic concerned to the antibiotics is mostly taught in every medical colleges during undergraduate education in Pakistan but very unfortunately the missing components is of antibiotic stewardship, in undergraduate curriculum of MBBS and allied health sciences studies. Whereas, when compared with the developed countries such as the United States and England, medical schools effectively emphasize on the important and key relevant components of the antibiotic stewardship, throughout undergraduate and postgraduate studies. However even in their medical schools, mostly the content of antibiotic stewardship is mainly taught by the lectures, and only few of the medical schools focus on teaching antibiotic stewardship principles and make it part of the interprofessional curriculum on the antibiotic stewardship. The antibiotic stewardship practice is a very vast subject indeed and for undergraduate students, it needs to be tailored to the requirements of the community where it is going to be practiced. This has been noted that the key elements of the antibiotic stewardship must emphasize on these fundamental areas such as leadership in antibiotic stewardship, commitment to the stewardship, functional accountability system existence, ensuring drug information expertise, and action, tracking, and reporting on the antibiotic stewardship related events . Moreover, it's a multidisciplinary approach which shall form the basis to implement the policies and interventions for improving the optimal antibiotic usage for the patients.

Pakistan is facing many drug resistance diseases like typhoid fever, and multidrug resistance Tuberculosis. The strains of the microorganisms which are having increasing resistance include Staphylococcus aureus, Klebsiella pneumoniae, Salmonella typhi, Enterobacter species and Pseudomonas Aeruginosa. There is a dire need to incorporate the principles and practices of the antibiotic stewardship in Pakistan, to encounter alarmingly high paced increase in antibiotic resistance.

Reference

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Dr. Mazhar Hussain
Associate Professor,
Department of Pharmacology,
Sheikh Zayed Medical College Rahim Yar Khan.
Sheikh Zayed Medical College/Hospital,
Rahim Yar Khan.
