Editorial

IMPACT OF OVER THE COUNTER ANTIBIOTICS PURCHASE ON EMERGING ANTIBIOTIC RESISTANCE IN PAKISTAN

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Pakistan is currently the third largest consumer of antibiotics in lower middle-income countries (LMICs) after China and India. Alongside this antimicrobial resistance (AMR) is currently the third leading cause of death in Pakistan, accounting for approximately 700,000 deaths annually with a projected increase to 10 million by 2050 worldwide with chances of high emergence of multi-drug-resistant pathogens.[1] It is a huge challenge we are facing when it comes to AMR. This rising trend in antimicrobial resistance (AMR) will make it difficult and expensive to treat serious infections. Patient load in hospitals will increase with serious resistant infections leading to extended sickness or ineffective therapy. Unsupervised polypharmacy can result in adverse drug reactions eventually leading to higher death rates due to prolonged/ineffective antimicrobial therapy. In LMICs low literacy rate, lack of awareness, and believing that antibiotics can cure all fevers are the contributing factors towards increasing rates of AMR.[2] According to the data available, more than 60% Pakistani population practice self-medication with antibiotics without a physician's prescription at least once in a year. The practice of self-medication increases with age; it was significantly higher among individuals over 40 years old (64.7%) compared to those under 20 years old (53.6%). The most common reasons for self-medication with previously prescribed antibiotics included using antibiotics that had been stored at home, having previously used the antibiotic for the same symptoms (33.9%), not having enough time to visit a physician (32.6%), believing that their condition was not serious (26.0%), and the convenience of purchasing antibiotics at a retail pharmacy.[3] In Pakistan, we have lived through it between year 2016 and 2021, when an outbreak of extensively drug resistant (XDR) typhoid affected thousands, especially in Sindh. That outbreak was a warning, but one we seem to be ignoring. A common man expects antibiotics to "work instantly" or imagine them as "magic bullets" leading to blaming the drug or the doctor. Many factors contribute to the worsening of antibiotic resistance, including human misuse of antibiotics. For the treatment of infections, when the drug of choice does not show its effect, the quacks are prescribing on their own that is extremely dangerous for human health. A patient walks into the pharmacy with only fever or flu, but on his way back, he is loaded with a broad-spectrum antibiotic. Neither the patient asks any relevant questions nor is the pharmacist trained, and the drug is sold. Adding more to it, within clinics and hospitals, physicians are often pressurized by patient's expectations of long list of fancy medicines on the prescriptions and they prescribe multiple antibiotics even for a viral illness or a mild bacterial infection that does not at all require antibiotics unlike practices in west where culture reports are awaited except for cases where empirical therapy is required.[4] Well, it is believed that there is a well-established link between the sale and purchase of antibiotics without a physician's prescription

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and rise of antibiotic resistance. The battle against AMR is not only fought in hospitals but also in pharmacies, clinics and even in street markets. Over-the-counter access and misuse of antibiotics contribute significantly to the development and spread of resistant bacteria in communities as well as health care settings. This misuse accelerates the selection of resistant strains making infections difficult to treat, thus leading to increased risk of complications. Longer hospital stays and higher mortality rates. Many studies emphasize that restricting OTC sales and enforcing prescription only policies are crucial steps in fighting resistance.[5] In a 2024 report, the World Health Organization listed Pakistan among countries with high levels of unregulated antibiotic use and escalating rates of resistance trend. A 2021 WHO-supported study noted that 60–70% of antibiotics are dispensed OTC in community pharmacies, despite being Schedule G (prescription-only) drugs.[6] Recently, the Punjab Health Care Commission (PHCC) organized a meeting, a "consultative meeting to discuss the issue of hypersensitivity testing practices prior to beta-lactam antibiotic administration and anti-microbial resistance". There is a need to urge both the public and policy makers to take AMR seriously and support "4Rs" slogan regarding the rationale of the drug: "To have the Right drug, for the Right Person, over the Right time, for the Right disease" Pakistan's Drug Sale Rules, though well-defined on paper, are rarely followed in reality. Pharmacies across the country frequently dispense antibiotics like candy, no prescription needed, no guidance offered. Despite being classified as prescription-only drugs, antibiotics are sold by unlicensed personnel, often without even asking about symptoms. Antibiotic and antimicrobial stewardship is indispensable for combating antibiotic resistance. Netherlands and Sweden, where antibiotic stewardship has been applied in the outpatient setting, are the countries that have the lowest rates of antibiotic resistance in Europe. There is dire need to cope up with this emerging AMR in our country. Government of Pakistan should take this into consideration, work on healthcare infrastructure and raise awareness programs in hospitals using social media platforms to avoid antimicrobial resistance against common pathogens which are mainstay in saving lives of millions. To conclude, integrating education on the rationale of antibiotic use, resistance patterns, and procurement policies into the curriculum promotes awareness among future clinicians.

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