

Self-medication of antibiotics: A perspective on alarming situation in Peshawar, Khyber Pakhtunkhwa, Pakistan

Dear Editor,

We read the article, by Ahmad *et al.*^[1] on the “self-medication with antibiotics: General perspective among people in Peshawar and Mardan, two most populated cities of Khyber Pakhtunkhwa, Pakistan.” The percentage of people practising self-medication was surprising and upsetting. These results provoked us to write about prevalence of antibiotics self-medication and measure to deal with this issue.

The term self-medication is defined as using nonprescription medications without the professional assistance by patients according to their own knowledge and understanding. It is a type of self-care and should be responsibly exercised.^[2]

Self-medication is a global issue but in low-income countries, where drugs are accessible to clients easily, it arises greater risks and challenges. In Pakistan, this problem is in its more awful shape because of poor financial situation of its population.^[3]

The survey results were alarming as 78% residents of the urban communities are involved in self-medication, whereas 45.2% of people favor self-medication over physician prescription in perspective of their past diseases and ancestors. These findings show, for Peshawar city, a 9% rise from 69% in 2010 to 78% in 2012.^[1,4]

The survey also revealed that about 63.6% of the residents believed that they know which antibiotic must be taken for which medical condition.

Antibiotic self-medication needs an exceptional consideration; why? Self-medication with different medications can bring about harm to the people

who use it; though, antibiotic self-medications have a worldwide risk of spread of antibiotic resistance.

Hazards linked with antibiotic self-medications can influence the larger population. Thus, it is critical to find reasons of self-medications and systems to counter them; however this does not imply that self-medication issues with other drugs can be overlooked.^[5]

There are several causes of antibiotic self-medication such as crisis situation, lack of expertise, health care expenses, past experience with antibiotics, limited access to advanced care, and easy access etc., Other motive of self-medication with antibiotics is trust of the value of antibiotics in minor ill health.^[6]

Antibiotic resistance is a genuine problem to the treatment and control of infectious diseases. Parameters such as right clinical indication, right dose, required duration of therapy, and route of administration needs to be considered when prescribing antibiotics. Self-medication is possibly preventable cause of antibiotic abuse and resistance.

Aside from resistance, possibility of adverse effects and chances of drug interactions are the other issues linked with antibiotic usage. It is significant to increase awareness about antibiotics importance and related problems with antibiotics use. This will not just help to stay away from harm to the patient who use it; however, likewise will help to spare the available antibiotics for future to be used in the right indication for the right patient.

The source of information for self-medication is mostly media in urban and friends and family in rural areas. Having recognized the sources of information, same sources should be used for increasing awareness about the harmful consequences of antibiotic abuse.

RECOMMENDATION

Antibiotic resistance threatens at all levels of health care and globally challenging for public health interventions. There is no single solution to overcome antibiotic resistance problem. Multi aspects approach supported with strong political will from authorities is needed. As the economic condition plays an important

role to the irrational use of antibiotics, authorities have to set up a health insurance system to assure the healthcare services to their citizens. Antibiotics proper control of the use and misuse is an intricate problem, predominantly in developing countries. However, as in the industrialized world, education of the medical professionals regarding the rational use of antibiotics to be the single most important tool in avoiding further development of resistance through misuse. This has not been successful to date and innovative approaches to achieve this goal are urgently needed. Possible solutions for preventing or at least reducing the misuse of antibiotics among general population in developing nations including Pakistan are:

- Confining sales of antibiotic with medical prescriptions of registered medical practitioner only^[7]
- Compelling the use of mass media such as TV, daily newspaper and internet for improving awareness about adverse consequences of antimicrobial usage. Educational campaigns using mass media can help in group education^[8]
- Outlining and actualizing across the country's self-medication awareness program
- Exposure of students to the concept of antibiotic resistance: Education on antibiotic resistance will be viable long-term measure
- Mass campaigns like road shows to demonstrate the outcome of antibiotic misuse
- Celebrity endorsements for spreading awareness on the abuse of antibiotics
- Consistent surveillance of antibiotic use and resistance
- Drug retailer courses and para-pharmacy programs to promote safer drug practices should be introduced
- Regular license renewal should be considered and incentives should be given to improve quality of service
- Pharmacists ought to be skilled in the development and use of protocols for investigating practice-related problems
- Continuing education for pharmacists should be done and supported to make sure pharmacists' ability to respond to the changing health needs of the public
- There is need for the system to make the existing laws concerning over the counter (OTC) drugs strong to ensure their sale and appropriate use
- Precise pharmacovigilance is required and the patient, pharmacist, and physician must coordinate to report any adverse events

- There is an urgent call for, to educate the public about the consequences of self-directed use of antibiotics. All sources should be mobilized to create awareness among the public about the advantages of seeking a professional consultation before purchasing any drug over the counter^[9]
- An electronic prescription system should be introduced in the pharmacies and polyclinics should be provided with the tools to counter-check for any possible errors or ambiguities before dispensing antibiotics. Medications with low safety profiles and high abuse potential may not be sold without a prescription.^[10]

CONCLUSION

The image of developing nation including Pakistan in provision of health promotion and awareness wears a terrible look as lack of awareness and noncompliance with the health regulations make it easier for the general public to be exposed to the risk of careless self-medication. The standard of community pharmacies in Pakistan is below par and the knowledge of the pharmacy workers is inadequate. Prescription-only drugs are easily available over the counter. Major efforts are desirable for increasing awareness on the undesirable consequences of antibiotic self-mediations in Pakistan. Policy and rules concerning sale of drugs from pharmacy shops should be closely monitored by government health authorities.

Iftikhar Ali, Aziz Ullah Khan

Department of Pharmacy Services, Northwest General Hospital and Research Centre, Peshawar, Khyber Pakhtunkhwa, Pakistan

Address for Correspondence:

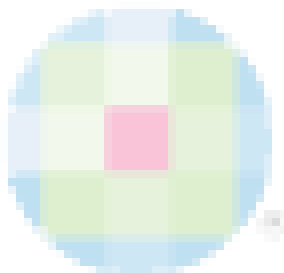
Dr. Iftikhar Ali,
Department of Pharmacy Services, Northwest General Hospital and Research Centre, Sector A3, Phase V, Hayatabad, Peshawar, Khyber Pakhtunkhwa, Pakistan.
E-mail: iftikhar_rph@yahoo.com

REFERENCES

1. Ahmad H, Sherwani SK, Nisar W, Ahmad T, Shah S, Ahmad W, *et al.* Self-medication with antibiotics: General perspective among people in Peshawar and Mardan (two most populated cities of Khyber Pukhtoonkhwa-Pakistan). *Int J Pharm Sci Res* 2013;4:1809-14.
2. WHO. The Role of the Pharmacist in Self-care and Self-medication. WHO; August 13, 2013. Available from: <http://www.apps.who.int/medicinedocs/en/d/Jwhozip32e/5.html>. [Last cited on 2015 Jan 10].

3. Sturm AW, van der Pol R, Smits AJ, van Hellemond FM, Mouton SW, Jamil B, *et al.* Over-the-counter availability of antimicrobial agents, self-medication and patterns of resistance in Karachi, Pakistan. *J Antimicrob Chemother* 1997;39:543-7.
4. Sheraz JK, Aman U, Shimal K, Nazeer S. Self-medication with antibiotics in urban areas of Peshawar. *Gomal J Med Sci* 2011;9:19-22.
5. Patil AD. Self medication: A potentially avoidable cause of antibiotic misuse and resistance. *Int J Basic Clin Pharmacol* 2013;2:498-9.
6. Grigoryan L, Monnet DL, Haaijer-Ruskamp FM, Bonten MJ, Lundborg S, Verheij TJ. Self-medication with antibiotics in Europe: A case for action. *Curr Drug Saf* 2010;5:329-32.
7. Dreser A, Vázquez-Vélez E, Treviño S, Wirtz VJ. Regulation of antibiotic sales in Mexico: An analysis of printed media coverage and stakeholder participation. *BMC Public Health* 2012;12:1051.
8. Planta MB. The role of poverty in antimicrobial resistance. *J Am Board Fam Med* 2007;20:533-9.
9. Emeka PM, Al-Omar M, Khan TM. Public attitude and justification to purchase antibiotics in the Eastern region Al Ahsa of Saudi Arabia. *Saudi Pharm J* 2014;22:550-4.
10. Khan TM. The consequences of nonprescription medication sales in Saudi Arabia's community pharmacies: Regulations without implementation. *Ther Adv Drug Saf* 2014;5:173-4.

Access this article online	
Quick Response Code: 	Website: www.archivepp.com
	DOI: 10.4103/2045-080X.160993



Dispatch and return notification by E-mail

The journal now sends email notification to its members on dispatch of a print issue. The notification is sent to those members who have provided their email address to the association/journal office. The email alerts you about an outdated address and return of issue due to incomplete/incorrect address.

If you wish to receive such email notification, please send your email along with the membership number and full mailing address to the editorial office by email.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.