

Self medication: a potentially avoidable cause of antibiotic misuse and resistance

Sir,

I read the article by Chawla S et al¹ on buying patterns of drugs from pharmacies in Northern India with interest. Overall self medication was reported by close to one third (35.7%) study population. The results prompted me to write about burden of antibiotic self medication and measures to tackle this serious issue.

Self medication with antibiotics is concern not only in India; several studies from different parts of world have shown antibiotics being misused and commonly consumed without prescription.

Skliros E et al have reported 44.6% rural patients in Greece using antibiotics self medication at least once.² Awad A et al³ have also reported high prevalence of self medication with antibiotic in Khartoum State, Sudan. Their study results showed 73.9% of people using either antibiotics or anti-malarial self medication. Antibiotic self medication was reported by 48.1%, whereas 17.5% reported self medication with both (antibiotic and anti-malarial) drugs.³ A study from Pakistan reported 69% of patients using antibiotic self medication during past 12 months.⁴ A study among tertiary level students in Accra, Ghana reported antibiotic self medication prevalence of 70%. The practice of antibiotic self medication was significantly lower among medically inclined students.⁵ In a study from Southern China, 47.8% university student reported self-treatment with antibiotics.⁶ Another study

from Abu Dhabi reported antibiotic self-medication prevalence of 46%.⁷ It would be worthwhile to find out the prevalence of antibiotic self medication in both rural and urban population in India from the study conducted by Chawla S et al.¹

Antibiotic self medication needs a special attention; why? Self medication with other drugs can cause harm only to the person who consumes it; however, antibiotic self medication have a global risk of spread of antibiotic resistance (Figure 1).⁸

Risks associated with antibiotic self medications can affect larger population. Hence it is important to find out reasons of self medications and strategies to counter them; however this does not mean that self medication issues with other drugs can be ignored.

There are many reasons of antibiotic self medication like emergency situation, non-availability of expert, cost effectiveness, prior experience with antibiotics etc.⁴ Other reason of self medication of antibiotics is belief of efficacy of antibiotics in minor illness.⁸

Antibiotic resistance is a serious threat to medical management of infectious diseases. While using antibiotic parameters like right indication, right dose, right duration of therapy and right route of administration needs to be considered. Self medication is potentially avoidable cause of antibiotic misuse and resistance.

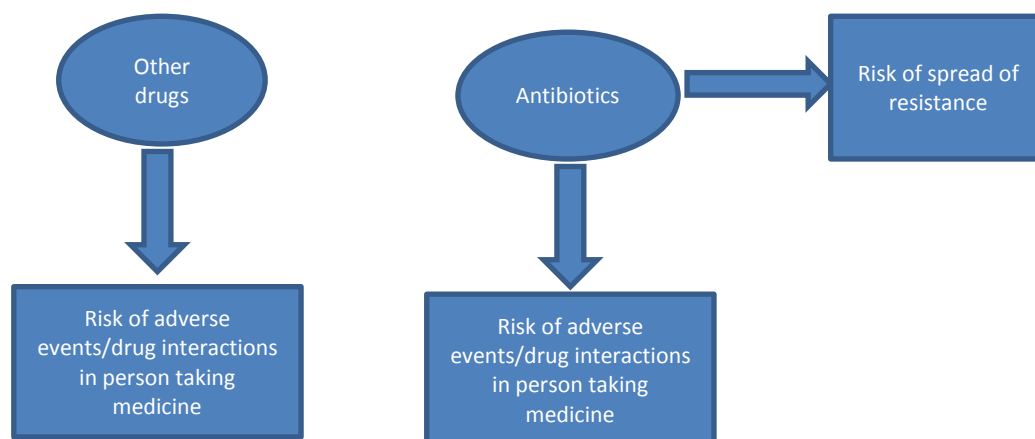


Figure 1: Comparative risks of self medication with antibiotics and other drugs.

Apart from resistance, risk of side effects and chances of drug interactions are the other problems associated with antibiotic usage.

It is important to increase awareness about misuse and problems associated with antibiotic misuse. This will not only help to avoid harm to the patient who consumes it; but will also 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 largely media in urban and friends/family in rural areas.¹ Having known the sources of information, same sources should be used for increasing awareness about the negative consequences of antibiotic misuse.

Possible solutions for preventing or at least reducing the misuse of antibiotics among general population are:

1. Restricting sales of antibiotic with medical prescriptions only.⁹
2. Effective use of mass media like television, newspaper and internet for improving awareness about adverse consequences of antimicrobial usage. Educational campaigns using mass media can help in community education.¹⁰
3. Designing and implementing nationwide self medication awareness program.
4. Exposure of school and college students to the concept of antibiotic resistance: Education on antibiotic resistance will be an effective long term measure.
5. Mass campaigns like road shows to demonstrate the consequences of antibiotic misuse.
6. Celebrity endorsements for spreading awareness on the misuse of antibiotics.
7. Continued surveillance of antibiotic usage and resistance.

CONCLUSION

Antibiotic misuse/self medication is a global concern. It is a risk factor for spread of antibiotic resistance. Self medication is a potentially avoidable cause of antibiotic misuse or antibiotic resistance. Significant efforts are needed for increasing awareness on the adverse consequences of antibiotic self medications.

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REFERENCES

1. Chawla S, Agarwal M, Arora A. Audit of buying patterns of drugs from various pharmacies in Northern India. *Int J Basic Clin Pharmacol* 2013;2:326-9.
2. Skliros E, Merkouris P, Papazafiropoulou A, Gikas A, Matzouranis G, Papafragos C, et al. Self-medication with antibiotics in rural population in Greece: a cross-sectional multicenter study. *BMC Family Practice* 2010;11:58.
3. Awad A, Eltayeb I, Matowe L, Thalib L. Self-medication with Antibiotics and Antimalarials in the community of Khartoum State, Sudan. *J Pharm Pharmaceut Sci*. 2005;8:326-31.
4. Khan SJ, Amanullah, Khan S, Shah N. Self-medication with antibiotics in urban areas of Peshawar. *Gomal Journal of Medical Sciences* 2011;9:19-22.
5. Donkor ES, Tetteh-Quarcoo PB, Nartey P, Agyeman IO. Self-medication practices with antibiotics among tertiary level students in Accra, Ghana: a cross-sectional study. *Int J Environ Res Public Health* 2012;9:3519-29.
6. Pan H, Cui B, Zhang D, Farrar J, Law F, Ba-Thein W. Prior knowledge, older age, and higher allowance are risk factors for self-medication with antibiotics among university students in southern China. *PLoS One*. 2012;7:e41314.
7. Abasaheed A, Vlcek J, Abuelkhair M, Kubena A. Self-medication with antibiotics by the community of Abu Dhabi Emirate, United Arab Emirates. *Infect Dev Ctries* 2009;3(7):491-7.
8. 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.
9. 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.
10. Planta MB. The role of poverty in antimicrobial resistance. *J Am Board Fam Med* 2007;20:533-9.

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