

Short Communication

Irrational Use of Herbal Drugs: Problem Statement and Ways Ahead

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ABSTRACT

Rational use of drugs refers to the use of right medicine, in right dosage, for right ailment for a right period of time and at right price. Any deviation from these could be called irrational use of drugs. Irrational use of drugs is an important problem worldwide. Deviation from above statement is not uncommon in any part of the globe. WHO estimates that more than half of all medicines are prescribed, dispensed or sold inappropriately, and that half of all patients fail to take them correctly. This is a more serious problem in the field of traditional herbal medicine owing several reasons. The situation is more worsened by the quacks as most of them are not properly trained in herbal medicine and simply continue their legacy. This is sometimes complicated by some other factors such as lack of proper governmental patronization, research and development, standardization and quality control etc. In this paper an attempt has been made to assess the problem statement of irrational use of herbal drugs and ways ahead to address the same in an Indian perspective.

Key Words: Herbal drugs, Irrational use, Problem statement, Ways ahead

INTRODUCTION

Rational use of medicines requires that "patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community".⁽¹⁾ Deviation from the above definition could be termed as the irrational use of drugs which is not uncommon in any part of the world so also in India. The overuse, underuse or misuse of medicines results in wastage of scarce resources and widespread health hazards. Examples of irrational use of medicines include: use of too many medicines per patient ("poly-pharmacy");

inappropriate use of antimicrobials, often in inadequate dosage, for non-bacterial infections; over-use of injections when oral formulations would be more appropriate; failure to prescribe in accordance with clinical guidelines; inappropriate self-medication, often of prescription-only medicines; non-adherence to dosing regimes.⁽¹⁾ This is a more serious problem in the field of traditional herbal medicine owing to several reasons. The situation is more worsened by the quacks as most of them are not properly trained in herbal medicine and simply continue their legacy. This is sometimes complicated by some other factors such as lack of proper

governmental patronization, research and development, standardization and quality control etc. Use of indigenous drugs for various ailments has been rampant all over India, especially in rural areas. Commonly, not taken seriously by clinicians, these indigenous drugs/medicines can be devastating and detrimental for patients and reflect a major public health problem. ⁽²⁾

DISCUSSION

While discussing the irrational use of drugs or in this case herbal drugs several questions come to our mind such as ⁽¹⁾ what is the extent of use of irrational use of herbal drugs? ⁽²⁾ Who are responsible for irrational use of herbal drugs and who are the victims? What factors contribute to the irrational use? And ⁽⁴⁾ what are the biological impacts of irrational use of herbal drugs? In this segment an attempt has been made to answer the above mentioned questions.

Extent of Irrational use of Herbal drugs: A World Health Organization estimate shows that up to 80% of populations in some Asian and African countries still depend on herbal medicines. ⁽³⁾ Here one thing can be mentioned that when there is such a huge usage the possibility of irrational use cannot be denied. One of the recent studies shows that 22% of the preoperative patients use herbal medicine. ⁽⁴⁾ About four decades ago, an outbreak of a veno-occlusive disease with 42% mortality occurred in central India following consumption of cereals mixed with seeds of a plant (*Crotalaria* sp.) containing pyrrolizidine alkaloid. ⁽⁵⁾ A study showed that most Ayurvedic preparations may culminate in lead poisoning as evidenced by higher blood lead, more basophilic stippling, lower hemoglobin, and higher protoporphyrin in patients consuming standard Ayurvedic medicines. ⁽⁶⁾

The Biological Impact: There are several biological consequences accrues to the

irrational use of herbal drugs. Let us take a look on some of the herbal drugs such as *Vaccinium uliginosum* and *Vaccinium oxycoccus* (cranberry) that causes increased risk of bleeding. *Aristolochia* species are known to cause acute renal failure, while aconite roots may cause aconitine poisoning (local anesthetic effects, diarrhea, convulsions, arrhythmias, or death). St John's wort and *Camellia sinensis* (green tea) may antagonize warfarin, thus increasing the risk for thrombotic complications. Blue (*Caulophyllum thalictroides*) and black cohosh (*Actaea racemosa*, *Cimicifuga racemosa*) may be hepatotoxic. *Datura* species may result in anticholinergic poisoning and "yulan" (*Stephania sinica*) may cause tetrahydropalmatine poisoning (depressant action on cardiorespiratory and nervous systems). ^(7,8)

The accused and the victims: Here the question arises who should be accused for the irrational use of herbal drugs, is it the illiterate or not technically qualified personnel or the technical elites should also be included. Well the answer to this dilemma is both the technically qualified physicians as well as the quacks. But in both the cases the common man is the only victim who seeks medical care with a hope to get rid of his ailments. When we talk of qualified physicians it is the iatrogenicity that plays major role while lack of knowledge among the quacks is the major reason for the irrational use of herbal drugs.

Other factors: There are several other factors responsible for the irrational use of herbal drugs, these include:

- Theoretical approach to education at all level: Students at all level are not properly accessed to research both in-vitro and the in-vivo research. This makes the students liable to ignorance about the biological

impact of herbal drugs both therapeutic as well as toxic.

- Lack of proper research and development facilities: This is a problem both with in public set ups as well as private pharmaceutical industries. Many of the educational institutions and research firms lack hi-tech equipments for the research and development in herbal drugs and are the same in many private pharmaceuticals. Moreover the research findings from both these ends are not incorporated in the academic syllabi.
- Quality control and standardization in drug manufacturing set ups: Many of the firms lack or do not adhere to the quality and standard norms.

Ways ahead:

WHO advocates 12 key interventions to promote more rational use:

- Establishment of a multidisciplinary national body to coordinate policies on medicine use
- Use of clinical guidelines
- Development and use of national essential medicines list
- Establishment of drug and therapeutics committees in districts and hospitals
- Inclusion of problem-based pharmacotherapy training in undergraduate curricula
- Continuing in-service medical education as a licensure requirement
- Supervision, audit and feedback
- Use of independent information on medicines
- Public education about medicines
- Avoidance of perverse financial incentives
- Use of appropriate and enforced regulation

- Sufficient government expenditure to ensure availability of medicines and staff.⁽¹⁾

In case of herbal drugs the following points can also be considered in an Indian perspective:

- Improvement in academics
- Inclusion of research findings in curricula (both private and public institutional findings)
- Health education and awareness
- Legislation: ban of street drug vendor such as *Banjaraas* etc.
- Standardization in drug manufacturing industries

CONCLUSION

Irrational use of drugs is one of the most important global health issues. The situation is worse in the realm of herbal drugs. Interventions to combat irrational use of herbal drugs and promotion of a more rational approach require motivation and adherence to strict clinical guidelines at the practioners end and awareness among the general public.

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