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Reviewing and Investigating the Clinical Dilemmas of Herbal Drugs

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Abstract

This paper is based on the clinical challenges of herbal drugs and is comprised of an introduction, history (well-known points reported and supported by literature) and the different types of challenges faced by the community while using herbal drugs. Rather than on focusing a particular herb, only the main prospective challenges that are faced by a pharmacist or any herbal drug user have been discussed. It includes key points reported in the history of Pakistan, issues like license, pharmacovigilance, herb challenges (external and internal) and their solutions. This review article will enlighten the major concept and basis of herbal drugs challenges that will help you to further work on this area of the drugs as the use of herbal drugs is Increasing worldwide day by day.

Keywords: *Pharmacovigilance, License, Herb challenges*

Introduction

Herbs are an important part of life without them life cannot exist because herbs are not only a functional food but can also be used to treat different diseases or prevent problems. Healthcare providers and patients alike face a multitude of difficulties while using herbal medications in clinical settings. The apparent efficacy and natural nature of herbal treatments have led to a major global upsurge in their popularity and use in recent years. However, this development has also highlighted several clinical conundrums and complexity that demand careful thought and research (World Health Organization, 2004).

Herbs are classified according to their family, constituents, pharmacological uses and properties. Even though herbs are very useful to human beings a different kinds of challenges herbs can face whenever it used by human beings, here we discuss some type of challenges external or internal which can face any herb or herbalist whenever they use

herbs as a drug also we concluded history as herb use in past their problems in pharmacovigilance, license issues of herbs that we use normally as a herbs (Ekor, 2014).

This article begins with history and challenges, data collection websites, problems, results and discussion. This paper explores the complex field of clinical issues related to herbal medications. Instead than concentrating on a single botanical species, it attempts to offer a thorough synopsis of the main problems that pharmacists and consumers of herbal drugs face (Kumar & Clark, 2012). Using historical viewpoints backed by a wealth of research, this study aims to clarify the complex web of issues related to the use of herbal remedies.

This study emphasizes the changing nature of herbal medication usage and the associated regulatory and safety problems through an examination of significant historical moments, primarily in the context of Pakistan. Those who use herbal treatments face a wide range of hurdles, from pharmacovigilance procedures to license needs, from exterior herb issues to internal physiological considerations.

Through an explanation of these issues and possible remedies, this review article aims to improve comprehension of the basic ideas behind the use of herbal drugs. It is critical for academics and healthcare providers to successfully negotiate these complications as the use of herbal medications grows across the world. This article facilitates informed decision-making and advances clinical practice by providing a solid foundation for future investigation and research in the exciting topic of herbal medicine.

Methodology

All the data for writing this article is reviewed by using different sources such as Google, Google Scholar, Research Gate, and WHO websites. From the chosen literature, pertinent information about problems, historical viewpoints, legal concerns, and remedies will be taken out. To find recurring themes, emerging patterns, and gaps in the body of current knowledge, the data will be synthesized.

The gathered data will be examined to determine the most pressing clinical challenges confronting healthcare providers and herbal medication consumers. This analysis will divide obstacles into three categories: license issues, pharmacovigilance concerns, and challenges connected with certain herbs.

History Of Herbal Drug Challenges

The use of herbal drugs in ancient times was reported in India, China and Egypt that can be used to diagnose, treat and prevent diseases. Since 300 BC, herbal drugs have ruled the world. Shamans were the first that use herbs as drugs. Later developmental era began and herbs started using for prevention or cure of a disease. In ancient times, ephedra (Chinese medicine) was mostly used herb to treat asthma and hay fever. It was also prescribed for common, colds and congestion. In many conditions, literature does not support all the sections so it is not safe to use. It has been banned since 2004 because some species like Ephedranevadensis do not contain ephedrine. History indicates that vinblastine and vincristine used as cancer-preventive agents, since about 1,000 years ago. History also indicates that shikimic acid was used to prepare anti-viral drugs. In the Western era of ancient times, they used opium poppy extract and egg shells to treat sentry and opium (morphine) to reduce pain. In Egypt, housewives used a garlic and ginger mixture to treat sore throat. In Indian traditions, which are 1500 BC long, they used all beneficial herbs like ginger, garlic, Black pepper, etc. in their food to prevent and cure diseases. (Petrovska 2012 & Suntar 2020)

History Of Herbal Drugs In Pakistan

Pakistan uses herbs to treat kind disorders but due to side effects, it has stopped using them. For example, sea apple was used to treat dermatitis but later it was discovered that it produces anti ketone bodies. History reviews that drugs have their major and safer use to human beings but also they show some adverse effects to human beings and it's been a challenge to herbs. (Alamgeer, et al. 2018 & Martins et al., 2023). A recent investigation

reported that many new technologies have been developed to standardize and check the purity of herbs that are used in oral medicine.

Chamomile is used as an anxiolytic in the USA. But it can interfere with other supplements in the human body that's why care is necessary.

Feverfew leaves are used in China and Egypt to treat fever and chills. But it causes mouth ulcers and cannot be used with war far in and anti-coagulant medicines.

Ginseng root is used as a tranquilizer or to manage stress but it causes tachycardia and high blood pressure. These above examples concluded that not every herb is free from side effects but it can be used in different areas according to their specific function and pharmacological properties. Literature supports their adverse effects and nowadays it's been challenged that their side effects cannot be neglected. Here, the knowledge pharmacists play the most important roles they know the proper use of drugs in specific medical conditions. (Joharchi and Amiri 2012, & Hamedi et al., 2022)

Pharmacovigilance In Herbal Drugs

Herbal drugs consist of the whole plant or a specific plant part, which can be used to cure or prevent diseases in the human population. Despite that, all herbal drugs are not perfect. There are always some chances of error in manufacturing, dosing, and administering the drug, or herbal drugs with their profound adverse or side effects have also been a challenge in their use as medicine.

Adverse Reactions of Herbal Drugs

When we use ginger it can cause heartburn and diarrhoea so we do not use it in patients that already suffering from diarrhoea. When we apply it topically, it can cause skin rashes and irritation. So people with sensitive skin are also advised to avoid the use of such types of herbal drugs. This becomes another challenge of herbal drugs while using them. (Nainwal2010)

Drug Interactions

Ginger is not used with war far in a sit cause blood clotting. Ginger is not used with anti-diabetics drugs as they can cause low blood sugar levels (Regu et al., 2022).

Regulatory Status of Herbal Drugs

Herbal drugs are used in developed and undeveloped countries, but maintaining their regulatory status is important and beneficial. Literature supports that we need proper policies and methods that notify the proper use of herbal drugs for the prevention and cure of disease. Regulatory status ensures the safety, efficacy and quality of the herbal drugs and supports specific indications and scientific calculations. Most importantly it overcomes the need for laws and regulations in approving the correct and rational use of herbal drugs. (Ekor 2014 and Dasari et al., 2022)

License Issues to Herbal Drugs

License is the most important parameter in the manufacturing and selling of any kind of medicine. In Pakistan, particularly in Sindh, different kinds of drug licenses and forms are available. Different kinds of Nutraceutical and Cosmeceutical companies are working in Pakistan and they use some synthetic products in preparation of herbal products. Many people use herbal medicines without any knowledge of the drug and its history. They just use herbal drugs as a source of income and risk the lives of people. In Pakistan, Form 5 is used to register herbal drugs and these drugs are also sold under this form. It is a big challenge towards herbal drugs that individual sale forms are not available. Herbal drugs are sold at different places but lack the correct knowledge and patient condition then to give any herbal drug. Thus it's been a challenge to herbal drugs and also pharmacists. Here we will discuss some common types of challenges in herbs and their perspective solution.

Herb Challenges

Every herb has its particular uses and misuses. But nowadays the world is facing a lot of challenges while using herbal drugs. These challenges are defined as the problem of suffering relative herb when it is used commonly in the community without any kind of knowledge.

Types of Challenges

Mostly, there are two types of challenges: External challenges and internal challenges. (Zhang, et al. 2012)

a. External challenges:

It includes contamination, misidentification, and adulteration which can be seen in herbs that are commonly used in daily life, for example; contamination of herbs due to many reasons like bacterial contamination, heavy metals contamination and pollution (Yang et al., 2021). But we ignore these challenges due lack of interest towards these challenges and also not believing in any of our problem-solving abilities. Pharmacists must cope with these challenges. (Balekundri & Mannur 2020)

i. Challenge: Red pepper contains as per Gillum growth is due to improper storage conditions which are very harmful.
Solution: Pharmacists should check red pepper when using it as a herbal drug and also maintain its storage condition.

ii. Challenge: Ginger can also be contaminated by mycotoxin. It produces a bad smell and it's been a challenge to ginger when it is consumed by normal people. Solution: Stocked ginger should not be used as an herbal drug or in preparation for any remedy aiming for use in daily life.
Adulteration: The herbs can adulterate intentionally with some other similar material or species of herbs.

iii. Challenge: Red chillies are adulterated with red brick. This is done by the farmers and shopkeepers to enhance their financial status. Solution: the government should facilitate the farmers and shopkeepers in different aspects of life so they can work hard and honestly without fear of being poor. Pharmacists can solve these issues by ensuring the proper packaging, storing and harvesting conditions.

iv. Challenge: Tea can be adulterated by adding graphite substance which results in an increase in the tea powder amount but decreases the efficacy of the tea.
Solution: it can be identified by ensuring proper packaging of these powders. Also, the government should make sure to follow all the GMPs when selling this kind of herb.
Misidentification: It means that substances or herbs defined based on their taxonomic groups may be different from the herbs that are available in the market due to misidentification. Only educated people can know the AL trademarks of herbs and this also requires the services of the pharmacist.

External challenges of herbs.

Table 1.

DRUG	SCIENTIFIC NAME	REAL	FAKE	FAMILY	REMARKS
Afsantin (flower)	Artemisiaabsinthium L	*		Asteraceae	Indigenous.
	Helichrysumgraveolens		*	Asteraceae	indigenous

This data can show that the same herb in two different species are present it can be a challenge to herb use with true identification and use. (Zhang, et al.2012)

Internal Challenges:

Internal challenges include the basis of active constituents that besides giving beneficial health effects, also because serious health factors to man. Proper guidance from pharmacists to use herbal drugs is necessary to cope with such challenges. It also involves the proper monitoring of the patient before using of herbal drug to ensure that the patient is not allergic to that herbal drug. It can also deal with the complexity and uniformity of drugs. (Zhang et al. 2012)

Conclusion and Discussion

All the above discussion is based on the available literature on herbal challenges that supports the fact that besides giving profound preventive and curative effects, herbs also give Jordan life-threatening side effects. These side effects, sometimes, are the result of external challenges of herbs and sometimes may be due to internal challenges. Therefore, while using herbs as an herbal drug one must consider all the challenges and try to overcome the challenges before using any herbal drug to minimize the health deteriorating effects that later can result in serious health problems.
Finally, this analysis has thrown light on the substantial clinical problems regarding the use of herbal medications, notably in Pakistan. An examination of historical views, licensing difficulties, pharmacovigilance concerns, and obstacles related with both external and internal herb usage revealed that the use of herbal treatments is fraught with complexity. Even though herbal medicines are becoming more and more well-liked worldwide, these challenges must be recognized and resolved to guarantee the safe and efficient usage of these treatments.

Future Suggestions:

In the future, there will be a lot of significant issues in the field of using herbal pharmaceuticals that require further research and attention. Primarily, enhanced pharmacovigilance protocols are needed to monitor and mitigate the risks associated with herbal remedies, particularly in regions with possibly laxer regulatory frameworks. Additionally, efforts should be made to inform and educate the public on the safe use of herbal drugs, stressing the need of consulting with healthcare professionals and adhering to dosage guidelines.

Furthermore, it is advised that future studies examine the efficacy and safety features of certain herbal remedies, using rigorous scientific methods to provide evidence-based viewpoints. Collaboration between healthcare professionals, researchers, and traditional medicine practitioners can lead to better patient outcomes via the sharing of information and experience.
All things considered, overcoming the clinical conundrums surrounding herbal medicines requires a multimodal approach involving community outreach initiatives, scientific advancements, and legal changes. By proactively addressing these challenges, we may optimize the therapeutic effects of herbal treatments while upholding the greatest standards of patient safety and care.

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