CHAPTER 22

Ethics in Prescribing Herbal Medicine as Primary or Adjunct Treatment and Issues of Drug-Herb Interaction

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SUMMARY

In today's healthcare landscape, herbal medicine has become increasingly common, whether alone or in conjunction with conventional treatments. The growing preference for natural and organic approaches to health and wellness drives this trend. The incorporation of herbal treatments into formal healthcare systems has sparked significant debate and raised several ethical issues as a growing number of people turn to them. The safety and efficacy of herbal medicine are two of the most important issues. The lack of rigorous testing and standardization of herbal remedies, in contrast to conventional pharmaceuticals, results in variations in their potency and potential side effects. The reliability of herbal treatments and the ethical implications for healthcare providers who recommend them are questioned by this inconsistency. Additionally, there is a significant risk of drug-herb interactions, which can either decrease the effectiveness of prescription medications or increase their toxicity, which could have negative effects on patients. Healthcare providers' obligation to provide informed patient care extends beyond the ethical considerations associated with herbal medicine. Healthcare professionals need to be aware of herbal treatments' potential risks and benefits given their growing popularity. They must communicate openly with patients to make sure they are fully aware of the consequences of using herbal medicine, especially when it is used in conjunction with other treatments. The purpose of this chapter is to provide a comprehensive examination of these ethical issues, with a particular emphasis on the implications of using herbal medicine as a primary or adjunctive treatment. The complexities and dangers of drug-herb interactions will be highlighted in the literature review, which will look at existing research. The method used to analyze these issues will be described in detail in the methodology section, and a comprehensive list of the resources used in this investigation will be provided in the references. The purpose of this paper is to contribute to the ongoing discussion regarding the role of herbal medicine in modern healthcare by addressing these ethical considerations.

INTRODUCTION

Phytotherapy, also known as herbal medicine (HM) has been an essential part of peoples' lives and various healthcare systems for centuries. For thousands of years, from the Chinese Materia Medica to Ayurveda, to various indigenous practices, plants or extracts have been used to cure diseases. Over the years, there has been a high demand for the usage of herbal medicine due to the increasing concern of people towards using natural, organic, and holistic methods of medication. The use of these herbs is growing as they can be used singularly or in combination with standard prescription drugs. This has led to the enhancement of a lot of discussion among medical practitioners, especially on the essence of using herbal medicine (Izzo & Ernst, 2009). It is, therefore, not surprising that the assimilation of herbal medical jurisdiction into present-day practices has received much acclaim and controversy. They claim that herbal products are natural and safer for consumption as compared to synthetic products, most of which possess severe side effects. They point to how herbal medicine might be often useful and helpful, for instance, its effectiveness in increasing the recovery rates of diseases, its effectiveness in the prevention of the use of chemical drugs, and its capacity to offer a cure to illnesses, which modern medicine cannot. However, this theoretical view is slightly modified by several ethical issues that might be associated

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with the use of herbal medicine as an adjunct therapy or a substitute for standard medical interventions (Kuralkar & Kuralkar, 2021).

The first one relates to the existence of multiple conflicts of interest widespread in the USA, including potentially dangerous drug-herb combinations that could harm patients". While taking pharmaceutical drugs: medications have gone through rigorous tests as well as are regulated by the FDA standards, herbal products in contrast: They are not standardized, for instance, most of them do not have the standard approved dosage or even potency. Because of this, one can experience unpredictable results whenever using herbal remedies alongside prescription drugs, which may cause the effectiveness of the drugs to reduce or the effects of the drugs to worsen. One of the issues that add up to complications in the usage of herbal products is that the products of herbs are not standardized as the products that have been prescribed by the standard medical practitioner (Barnes et al., 2007). Moreover, the regulation of herbal medicine is not as comprehensive as the regulation of standard conventional drugs. Herbal medicines in many countries are regulated as dietary supplements not medicines hence their regulation is not as stringent as those of drugs (Thakkar et al., 2020). This has the effect of making the quality and safety of the herbal products variable and this is problematic when used in clinical practice. The ethical duties that healthcare providers have of guaranteeing that the cures that prescribe are efficient and safe are questionable when they have to use products that are not as safe as medicinal products (Cuende et al., 2020).

The first of these is an ethical issue concerning the cooperation between different healthcare workers and their patients, on the use of herbal medicine. Consumers likewise consider herbal products safe since they are derived from natural products and sometimes do not divulge to their physicians the use of these products. This can result in unintended drug-herb interactions that erode the efficacy of orthodox medicines and can even be dangerous to the health of patients. The provision of herbal treatment to patients and the conversations that healthcare providers have with the patients entail an ethical responsibility for the providers to employ abstract and detailed conversations with the patients about the use of herbal medicine (Gagnier et al., 2006). This chapter intends to discuss various ethical issues relating to the utilization of this form of treatment with special reference to situations where the patient relies on herbal medicine alone or in a complementary fashion with modern medicine. Thus, this paper aims to present a clear picture of the difficulties and the ethical issues concerning the implementation of HMCM into contemporary healthcare systems based on the findings of the existing literature as well as the analysis of the case studies. The following areas of discussion will be included: drug-herb interactions, the sufficiency of regulation and standardization of herbal products, and the moral obligation of practitioners regarding recommending the use of herbs to their clients.

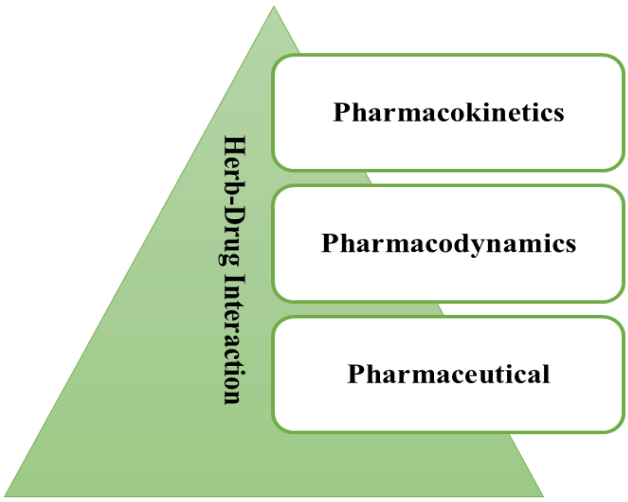

Fig 1. Herb-drug interaction

ETHICAL CONSIDERATIONS IN THE USE OF HERBAL MEDICINE

Several principles should be considered to considerations of ethical herbal medicine. The first concerns arise in terms of informed consent. It is also important that patients should be made to understand the benefits as well as the risks of the use of herbs and the likelihood of an herbal medicine interacting with other medicines that they take. It is thus the social responsibility as well as the ethical responsibility of health care providers to ensure that patients are fully aware of these risks and or consequences in as much as they are making their treatment choices (Bent, 2008). Second, there are moral issues compared with the shortfall of administrative and license structures in the natural medication industry. In contrast to pharmaceutical products, which must undergo stringent testing by regulatory agencies, herbal products flood the market. The potency, purity, and efficacy of the final products, as well as the patient safety, may vary depending on the starting materials, solvents, and conditions used. Since adulteration of these products is on the rise, manufacturers and regulators now have a responsibility to ensure that they are safe for consumption. Third, one of the wellsprings of moral concern is the probability of medication spice connections. Most patients take herbs in addition to their prescribed medications, and the doctor is unaware of this. This can have several negative effects, including a decrease in the drug's potency or an increase in toxicity. As a result, it falls on medical professionals to be aware of the possibility of drug-herb interactions and to inform patients about these interactions.

Drug-Herb Interactions

The possibility of drug-herb interactions, or interactions between herbs and pharmaceutical drugs, is one of the most pressing ethical concerns associated with the use of herbal remedies. Pharmacokinetic interactions, which affect the absorption, distribution, metabolism, and excretion of pharmaceutical drugs, and pharmacodynamic interactions, which involve the effects of pharmaceutical drugs on the body, are the two main types of interactions that can occur as shown in Fig 1. Supplements made from herbs can interfere with these processes, which could make medications less effective or more toxic, which could cause serious side effects for patients. For example, St. John's wort, a well-known herbal remedy used to treat depression, has been found to interact with

antidepressants, anticoagulants, and oral contraceptives, among other medications. These interactions have the potential to reduce the effectiveness of the medications, sometimes rendering them completely ineffective. This could fail the treatment and have unintended outcomes like pregnancies that were not planned. Ginkgo biloba, which is commonly taken to improve memory, is another example. Ginkgo biloba can thin the blood, increasing the risk of bleeding and posing significant health risks when used in conjunction with antiplatelet and anticoagulant medications (Hazra et al., 2024).

These instances demonstrate how important it is for medical professionals to consider the possibility of drug-herb interactions and provide their patients with the appropriate advice. When doctors and nurses don't know what herbal remedies their patients are taking or don't have the knowledge or foresight to know if they might interact with them, they run into an ethical problem. This problem is made worse by the fact that many patients don't tell their doctors about their herbal medicine use, either because they think these medicines are safe or because they don't want to be told off for using non-traditional treatments. As a result, it is now common practice for medical professionals to actively inquire about the herbal products that their patients use. They can learn about the treatments' potential benefits and risks and give their patients well-informed advice, resulting in safer and better healthcare outcomes (Paudyal et al., 2022).

Several investigations have substantiated the risks of interactions between drugs and herbs and have associated them with different levels of risks. For instance, St. John's Wort one of the herbs used in the treatment of depression was found to interfere with several categories of drugs such as antidepressants, anticoagulants, and oral contraceptives. Such interactions can produce either subpar efficacy of the drugs or enhanced side effects with which the patients are at risk of being compromised (Ernst & Pittler, 2002). We have also seen that ginkgo biloba which is used for the enhancement of memory, and which is commonly used together with other smart drugs has been seen to have an interaction with antiplatelet and anticoagulant medications thus increasing the chances of bleeding. In the same context, garlic supplements which are used often as supplements for heart problems may cause interaction with anticoagulants, thus drawing the same risks. These cases illustrate the need to understand how herbal products, especially those used in combination with conventional drugs, behave in pharmacokinetic and pharmacodynamic terms. Thus, knowing about these interactions is crucial to enhancing patient safety and the level of efficacy of both herbal and pharmaceutical remedies. When taking herbal supplements along with prescribed medicines, cases like the following are not well managed hence the following are the risks. Healthcare providers should also ensure they are familiar with these risks because when there is a lack of knowledge or communication concerning the risks, client harm may occur. Due to these combined effects, it is most important to provide adequate education on these interactions of herbs and conventional medicines.

Regulation and Standardization of Herbal Products

The difficulty of regulation and standardization is yet another significant ethical issue that arises about herbal products. Herbal remedies are frequently categorized as dietary supplements, in contrast to conventional pharmaceutical drugs, which must undergo stringent testing to meet strict standards for safety, efficacy, and quality. They are not subject to the same stringent regulatory oversight as others. The composition of herbal products can vary significantly because of this lack of regulation. Some may be ineffective due to subtherapeutic levels of active ingredients, while others may contain toxic levels of contaminants that pose significant health risks to consumers. The ethical responsibilities of healthcare providers and manufacturers are seriously questioned by the absence of standardized production procedures. It is a moral obligation on the part of manufacturers to guarantee the quality, effectiveness, and safety of their herbal products. However, the current regulatory framework frequently allows for a great deal of variation, resulting in products that may not be sufficiently tested or standardized (Aidonojie et al., 2022). The trust that consumers and healthcare providers have in these products may be damaged by this variability. When it comes to recommending herbal remedies, the lack of regulation and standardization presents a challenge for healthcare providers. In an ideal world, they should have the assurance that the products they recommend to their patients have undergone extensive testing and are safe to use. They must, however, frequently rely on products that have not been subjected to the same stringent standards as conventional medications. This uncertainty highlights the need for stricter regulation and standardization of herbal products, which could put patients at risk. In the absence of such measures, patient safety may be compromised, and the ethical integrity of herbal remedy recommendations may continue to be questioned (Thakkar et al., 2020).

Ethical Communication and Patient Autonomy

The safety and ethical practice of health care use of herbal medicine is well enhanced by improved communication between the health care provider and the patient. Patients are free to choose their management, and this includes the use of natural products such as herbal products. Yet, it remains limited if patients are not well-counseled on possible side effects and treatment benefits where herbal medicines are concerned, or if they conceal their use of the same to their clinicians (Drossman and Ruddy, 2020). It is therefore the moral responsibility of the healthcare providers to come out and be free to discuss the different effects of the use of herbal medicine to patients. This would imply enquiring from the patients about their use of the herbs, educating the patients, when necessary, on the possible usefulness or dangerous side effects of the herbs, and fully supporting the rights of the patients to choose what they want for their bodies. When healthcare administrators and clinicians prioritize, trust, and respect patients' self-determination, all patients will make satisfying decisions that are conducive to their ideologies (Ng et al., 2020).

HERBAL MEDICINE AS PRIMARY TREATMENT

Using herbal remedies as a first-line therapy is feasible and is highly recommended as compared to traditional treatments. Indeed, the risk-benefit ratio of herbal remedies is favorably comparable to conventional treatments. Herbal medicines are more preferred as a drug of choice due to having maximum efficacy with minimum side effects. Depending on the severity of the condition, a practitioner may be more willing to approve the use of herbal medicine as the primary course of therapy (Tan et al., 2023). However, as herbal medicine increasingly becomes a primary mode of treatment for some individuals, ethical considerations arise that healthcare providers and patients must address (Fig 2). These considerations include patient autonomy, informed consent, the balance between harm and benefit, efficacy and scientific evidence, and cultural sensitivity.

Patient Autonomy

Patient autonomy is a cornerstone in medicine that refers to the right of patients to make decisions about their healthcare. Healthcare providers have an ethical obligation to choose herbal medicine as a primary treatment for patients. The concern of autonomy also increases the acknowledgment of the personal and cultural views of patients towards herbal products (Gatta et al., 2024). The healthcare providers must intervene in patient autonomy if the patient selects an herbal remedy without knowing the risks or due to misinformation. The moral conundrum is striking a balance between the need to protect patients from damage and the respect for their autonomy and making sure that choices are made fully aware of the possible outcomes (Hertzberg et al., 2023).

Informed Consent

Informed consent is a crucial ethical percept that calls for patients to fully understand the advantages, risks, and availability of alternative treatment before agreeing to any recommendations (Di Fazio et al., 2024). To prevent the side effects, avoid drug interactions, and increase the likelihood that herbal remedies may not yield effective responses, providers must make sure patients who choose herbal medicine as their main course of therapy are informed about these risks. This is particularly crucial when a patient is taking herbal medicine to address potentially fatal or serious diseases for which conventional treatments may have a higher track record of success (Yadav et al., 2024).

Fig 2. Ethical considerations in the use of herbal medicine

Non-Maleficence and Beneficence

The ethical principle of non-maleficence is avoiding unnecessary harm and beneficence is the physician's responsibility to alleviate the patient's illness and provide the best treatment. These two components are central key points to medical practice (Baliga et al., 2024). These principles are put into consideration while using herbal remedies as a primary treatment. Herbal remedies may be associated with less effective or potentially harmful effects. So, healthcare providers must keep in mind these principles to avoid causing harm to patients. The non-maleficence in the context of herbal therapy is meant to warn patients about harmful effects and interactions of herbs with other medications (Harnett and Ung, 2023). On the other hand, beneficence emphasizes that healthcare professionals must act in the best interests of patients. When a patient wants herbal medication and the physician thinks a conventional treatment would be more beneficial, this can lead to conflict. Healthcare professionals need to use caution while handling these circumstances. The physician should assess the possible advantages and disadvantages of using herbal medicine and work together with the patient to make decisions (Maurya, 2024).

Efficacy and Scientific Evidence

Herbal medicines have been used for centuries but there is growing interest in conducting scientific research to examine the efficacy of herbal products. The efficacy of herbal products are major ethical concern as a primary treatment (Chaughule and Barve, 2024). Numerous herbal medicines lack strong evidence to support their efficacy, even though some have been clinically confirmed. Physicians are faced with an ethical conundrum because they are frequently required by professional standards to provide evidence-based therapies. Some herbal medicines have shown therapeutic potential which is supported by scientific evidence while others did not display evidence in clinical trials (Jamal, 2023). Before new medications are granted a marketing license, pre-market testing is required by international medicines regulatory bodies like the European Medicines Agency (EMA). For herbal medicines to be approved as herbal medicinal goods, there is a growing need to present this form of proof of the effectiveness of herbal products (Choudhury et al., 2023).

Cultural Sensitivity

Herbal products are frequently ingrained in rich cultural traditions. Many people consider herbal products more than the source of treatment. Physicians must provide ethical treatment by being aware of these cultural practices of people. Healthcare providers understand the choice of herbal medicine when a patient chooses it as a primary treatment (Che et al., 2024). Cultural sensitivity doesn't imply that a physician downplays the risks or skirts the drawbacks of herbal products.

The collaborative method is a better strategy where healthcare professionals and patients collaborate to incorporate evidence-based medicine into conventional practices. To ensure that patients receive the best care possible, this integration makes it possible to respectfully acknowledge cultural norms (Subbiah, 2023).

HERBAL MEDICINE AS ADJUNCT TREATMENT

Many natural herbal products are used as adjunct treatments to maximize the effectiveness of conventional medicine while reducing the side effects. It raises a distinct set of ethical implications (Salm et al., 2023). The healthcare provider may feel comfortable and at ease accepting herbal medicine when it is used as an adjunct therapy in case of less efficacious products. A few instances of adjunct therapy are the use of herbal remedies and corticosteroids for eczema in traditional Chinese medicine (TCM). Another example is the use of butterbur in conjunction with propranolol for migraine prophylaxis (Jin et al., 2024), and atorvastatin and plant sterols for elevated cholesterol (Barkas et al., 2023). Those suffering from attention-deficit hyperactivity disorder (ADHD) may utilize melatonin to aid in their sleep to reduce the amount of insomnia brought on by methylphenidate (Ipsiroglu et al., 2024; Mallya et al., 2023).

Historical Context of Herbal Medicine

Some of the conventional practices of healing such as Ayurveda and TCM were instrumental in developing the use of plants in the treatment of diseases. Herbal medicine has its origins in ancient history. These and other systems of indigenous medicine all over the globe have accumulated over many centuries elaborate repertoires of plant biochemical remedies. Many of the time such treatments form the basis of traditional medicine since they are inherited from one generation to the other. With this, the herbs were applied to solutions to common ailments together with the general health issues in the given historical approaches. Then healers, shamans, and other traditional knowledge holders most of the time documented the knowledge of herbal remedies and were significant in the health care systems of those communities. Surprisingly, even to date, conventional forms of treatment using natural herbs are still popular, especially in the developing world. Herbal medicine remains to this date a primary or secondary form of cure in many provinces, districts, or regions across the globe where access to formal medicine is a rarity (Qadir & Raja, 2021). While it is rather remarkable that medical practice in many parts of the world is today a far cry from what it was some decades ago, that which is herbal medicine is still being practiced even today, which should therefore, prove that though the world's dominant medical practice is ever evolving, herbal medicine is still most relevant and indeed therefore still carries a very rich and culture bearing importance in many societies (Ernst & Pittler, 2002).

THE RISE OF HERBAL MEDICINE IN MODERN HEALTHCARE

Over the past few decades, the use of herbal medicine has increased as people have begun to pay more attention to natural and organic products. This trend is strongest in Western nations, where consumers are shifting away from synthetic goods and toward natural chemical goods. Treatments that are safer, more comprehensive, and structured in such a way that they are less likely to carry the side effects that are attributed to conventional medication are some of the things that consumers are interested in, which has made the market for natural remedies popular. The global market for herbal medicines has expanded rapidly because of this change. The market now includes a wide variety of herbal supplements, teas, tinctures, and other complementary and alternative medicines (Howes et al., 2020). It is claimed that these products can treat everything from acute conditions like the flu and gastrointestinal disorders to long-term conditions like arthritis, stress, and cancer. Inevitably, this has increased demand for herbal products, although there are no comparable perceptions of increased demand. Consequently, the popularity of herbal practices in Western countries has increased because of a growing number of studies comparing the safety and efficacy of various natural treatments. The efficacy of some traditional treatments that are now more commonly used in the medical field has been established thanks to this research. The proliferation of integrative medicine, in which both conventional and complementary medicines are used, is another factor that has increased the use of herbal medicine. Endorsing or recommending the use of natural herbs when treating patients or providing medical care is consistent with the idea of phytomedicine. However, complications arise in popular areas of the experience. Because many nations have been unable to establish efficient regulatory mechanisms, the expansion of the market has resulted in inquiries regarding the effectiveness, safety, and quality of herbal medicines. Natural product enthusiasts might not always be aware of the potential difficulties, such as drug-herb interactions or product quality variations (Tangkiatkumjai et al., 2020).

ETHICAL GUIDELINES AND BEST PRACTICES

As a result of the ethical questions that are linked to the use of herbal medicine, various recommendations and policies have been recommended. These include:

Informed Consent: Doctors should ensure that the use of herbs informs the patients about the prospects of side effects that may be incurred as well as the possibility of herb-drug interactions. It is here that this information should be imparted in simple language, to enable or assist the patient in the making of certain decisions about the ailments.

Regulation and Standardization: There are calls for a more upcoming higher legal and quality control on most of these herbal products. This entails drawing up standard procedures for growing, how to harvest, how to process, and labeling of these products among other issues to do with how clinical trials are done towards the determination of therapeutic value.

Education and Training: There is a need to implement educational programs in the identification of drug-herb interaction for healthcare providers who intend to use herbal medicine. This will enable them to give much-needed advice

to the patients and reduce the rates of complications (Ernst & Pittler, 2002).

Collaboration and Communication: It is therefore important that there be good communication between the health workers and patients to minimize the health risks related to the use of herbal medicine. Patients should be urged to report whether they are using herbal medicine, and the provider should actively ask about the possibility of the herb-drug interaction (Li et al., 2020).

CONCLUSION

There are strong points and there are weak points; it can be highly beneficial to introduce the usage of herbal medicine into today's leading health care systems as the main treatment method; it can be highly disadvantageous to introduce the usage of herbal medicine within health care systems of the contemporary world as supplementary to the currently popular types of health care treatment. This is particularly so because several patients prefer natural means of enhancing their health with many of the herbs used in the herbal remedies having been in use for many years. However, the increasing use of these treatments in contemporary medicine gives rise to the important questions of ethical concern if the safety and efficacy of the treatment are to be assured for patients. The ethical issue with drug-herb interaction is one of the most significant concerns and these include the following. These interactions may reduce the effectiveness of prescribed medications or produce ill effects that are detrimental to the patient's health. The factors that make the use of herbal products more complicated include the administration of herbal products and concerns about patient information. This is because many patients may not be aware, or simply think that supplements containing herbs are entirely safe, therefore, they may not report their use to their physicians. This leads to unanticipated interactions and a decreased efficacy of the treatments that otherwise would have worked well. There is also another major problem added to by the standardization and regulation of herbal products. Herbal remedies on the other hand unlike orthodox drugs do not undergo comprehensive trials or conform to production standards. Consequently, the strength and quality of these preparations may differ and their incorporation in the clinical setting becomes even more risky. Substantial differentiation of quality of products can be achieved due to the limited regulation that is provided by organizations which can jeopardize the safety of patients. The questions of ethical concern therefore need to be addressed but more so by the medical fraternity. For the use of herbal medicine to be safe for both the healthcare practitioners and the patients, there is the need for the pros and cons of taking them to be taken into consideration.

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