

Herbal medicine used during pregnancy: Challenges, effectiveness and safety profile

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Review Article

Abstract:

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Worldwide, the use of herbal medications is becoming more common, particularly among women who are pregnant. According to research done up until December 2012, the prevalence of using herbal medicines during pregnancy ranged from 22.3% to 82.3%, suggesting a growing trend in this regard. The herbs peppermint, ginger, thyme, chamomile, sage, anise, fenugreek, and green tea were most frequently utilized. The most popular uses were for treating symptoms of the flu and gastrointestinal ailments. An overview of the field of herbal medicine is given in this review, along with information on its rules, difficulties, and general safety.

Key Words: Herbal Medicine; Pregnancy; Safety; Regulations.

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INTRODUCTION

Globally, natural medicine is becoming more and more well-liked. Herbal medicine practices, in contrast to conventional licensed medications, are typically not backed by efficacy, safety, or effectiveness studies. This raises questions about potential risks associated with their use, especially in high-risk patients like pregnant women where teratogenicity is a concern. Despite the absence of scientific proof, herbal remedies are frequently used to treat pregnancy-related problems because of the widespread belief that, being "natural," they have no harmful effects or unfavorable responses. The fact that most nations do not regulate the marketing of herbal treatments further contributes to the lack of awareness about their use during pregnancy [1-4]. Plant-based medicines have been used by traditional medicine since the dawn of human history to manage complications and difficulties associated with pregnancy and labor. Modern medicine is increasingly using traditional medications, which are preferred over synthetic medications in some regions of the world due to personal preference or financial necessity [5-7].

Massive physiological changes that occur during pregnancy can lead to a variety of pregnancy-related issues, such as nausea, vomiting, constipation, and heartburn [8]. Pregnant women who experience these symptoms typically turn to over-the-counter (OTC) pharmaceuticals, prescription drugs, or herbal remedies as a form of self-medication [9]. Because it is thought that herbal products are safer for the fetus than contemporary treatment, herbal goods are chosen over pharmaceutical drugs. Impatient moms are using herbal items more often even though there is little data to support their usage during pregnancy [10, 11]. The usage of herbal medicines during pregnancy varies greatly based on a person's financial class, ethnicity, cultural traditions, and geographic region [12]. The prevalence of herbal medicine use in pregnancy has also been reported in various other countries, including Iran (49.2%), Egypt (27.3%), Bangladesh (70.0%), Iraq (53.7%), Palestine (40.0%), and Taiwan (33.6%) [13, 14].

When using medications, herbal remedies, or supplements while pregnant, use extra caution since they may have harmful effects on both the mother and the unborn. For healthcare professionals, using herbal remedies during pregnancy presents a significant difficulty because most are unaware of their usage [15, 16]. If herbs are used carelessly or in combination with prescription drugs, it may have unidentified effects on the fetus or result in major difficulties [17]. Unlike contemporary drugs, the use of herbal remedies is not subject to the same stringent restrictions. However, given the

increasing trend in their usage, it is concerning to use these products, especially during pregnancy. The amount of research on the use of herbs and herbal products during pregnancy in the Middle East, as well as the perspectives of expectant mothers toward herbal remedies, was examined in this instance. The review's findings will support medical professionals in educating and counseling patients on the use of herbal medicine.

Possible health hazards of using plant remedies while pregnant:

The diverse array of biological activity include both beneficial and detrimental consequences on human health, including those that arise during pregnancy. Owing to the widespread belief that because they are "natural," plants and plant products have no harmful effects or unfavorable responses, they are frequently utilized carelessly when pregnant. A study conducted in Brazil revealed that sixty percent of respondents said they didn't think plant treatments were harmful [18]. These findings highlight the necessity of developing policies centered on the safe, responsible, and risk-free application of medicinal plants and herbal products. Pregnancy-related usage of herbal medicine has grown due to the widespread perception that it is safe to use, even in cases when patients are not motivated to learn about potential health risks beforehand. The absence of regulations pertaining to the marketing of herbal medicines further compounds the lack of concern around their use during pregnancy. Natural remedies are often marketed as over-the-counter medications in most nations, which makes them simple targets for self-medication. Customers hardly ever tell doctors that they use standard medications since they think they have no negative side effects [19]. Abortion and the stimulation of uterine contractions are common side effects of medical treatments during pregnancy that have been documented. Certain herbal remedies have been known to generate hormone imbalances that may lead to abortions or to trigger uterine contractions that end in pregnancy loss [20]. Numerous therapeutic herbs affect the human body's hormone levels, makeup, or functions, particularly during pregnancy. Changes in the hormone profile that are induced can impact the process of conception, trigger teratogenic activity that ends the pregnancy, or result in a congenital deformity, or birth defect. Plants with estrogenic-active constituents can directly regulate pituitary function by modulating follicle-stimulating and luteinizing hormones peripherally.

Challenges Associated with the Practice of Herbal Medicine:

Scientific assessment and regulation of herbal treatments are extremely difficult due to the wide range of applications and variations in their use among nations [21]. For a well-established use registration, the herbal medicine product must have been used safely and effectively for at least ten years inside the European Union. on the second category, producers of herbal medications must show that the traditional herbal product's efficacy and safety are founded on its lengthy history of medical use: thirty years globally, including a minimum of fifteen years spent within the European Union. In contrast, herbal products are classified as dietary supplements under the Dietary Supplement Health and Education Act of 1994 in the United States, where they are exempt from prior clearance requirements. As a result, the producer has the responsibility of guaranteeing the safety of a herbal product prior to its marketing, whereas the Food and Drug Administration can initiate regulatory measures only after a dangerous herbal product has been introduced into the market. Therefore, herbal medicines in the US are often promoted without the advantage of clinical trials to establish either efficacy or safety, in contrast to prescription and more recent over-the-counter drugs [22].

Absence of research supported by science:

The majority of conventional medications have little to no research, or at most scant, information on their safety and efficacy during pregnancy. *Zingiber officinale* is effective and safe for treating nausea and vomiting during pregnancy, according to a meta-analysis [23]. *Mentha piperita* L. and *M. chamomilla* L. were found to be hazardous in 6% of the research reviewed, while *Rubus idaeus* L. leaves and *Z. officinale* Rosc. were shown to be hazardous in 15% and 12% of the studies, respectively, in a study of traditional remedies used to treat morning sickness [24]. Natural remedies can be safe when used in accordance with scientific understanding, yet rare instances of potentially fatal side effects have been reported. However, using natural remedies carelessly or untested during pregnancy, or combining them with synthetic medications that may have negative side effects, can be dangerous for both the mother and the developing fetus [25].

Regulations:

In addition to the phytochemicals' biological effects, medical plants and plant-based remedies—whose manufacture is often unregulated—may include a variety of toxins that might be harmful to an unborn child or during pregnancy. For instance, it has been discovered that a number of conventional medications include significant concentrations of heavy metals, including lead, which may build up to lethal amounts in the body. In the official herbal industry, quality monitoring is required [26, 27].

CONCLUSION

The different types of herbal items utilized were indicative of the region's customs and geographical heterogeneity. What is concerning is that herbs with known negative effects on pregnancy and the fetus were also widely utilized. Natural remedies are commonly used by pregnant women worldwide, in both developing and wealthy nations, despite the paucity

of scientific data about the benefits of particular medicinal plants during pregnancy. There is very little, inadequate information available about the effects of most medicinal plants during pregnancy, and the bulk of traditional herbal remedies have not had their effects well studied. In order to produce evidence-based information about the beneficial and detrimental effects of medicinal plants and medicines taken during pregnancy, further study on these topics is required.

Competing interest: None

Data availability: Not applicable.

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