

Analytical study on herbal medicinal plants and its impact on usage during pregnancy

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Abstract

Herbal plants are the plants which have a wide medicinal usage. In this paper, various herbal medicines which are used during pregnancy are discussed. It also shows the impact of herbal medicines on pregnancy. Women's common ailments during pregnancy and treatment are described in this paper. The attitude of women towards herbal medicines is mentioned here thoroughly.

Keywords: herbal plants, herbal medicines, pregnancy

Introduction

Since the beginning of human civilization, medicinal plants have been used by mankind for its therapeutic value. The herbal medicinal plants have been widely used for thousands of years in many parts of the world for herbal drugs formation. Herbal medicinal plants constitute a source of raw material for both traditional and modern systems of medicine. In the recent decades, herbal medicinal plants have played a significant role in healthcare industries and have grown these industries to new heights reason being herbal medicinal plant are an integral part of Ayurveda drug formulation. Every country has its own guidelines set to assure quality control of the herbal medicines. The set of guidelines depends on the system adapted by healthcare industries to prepare medicines from herbal plants. Quality control assurance and standardization of these drugs concern to acceptability of these drugs globally in this modern era of medicinal formulations.

Medicinal plants contain active chemical constituents in any of their parts like root, stem, leaves, bark, fruit and seeds. These compounds either act on different systems of animals including man and act through interfering in the metabolism of microbes infecting them. In either way the bioactive compounds from medicinal plants play a determining role in regulating host microbe interaction in favors of the host. The medicinal properties of plants could be based on the antioxidant, antibacterial and antifungal effects of the photochemical in them.

70% of the world population uses medicinal plants to cure diseases through their traditional practitioners as shown in a report of world health organization. There are several traditional medical systems in India likewise Ayurveda and Unani, having survival for more than 3000 years, mainly used for herbal drugs. Indian subcontinents are already using herbal plant drugs from a very long time. A survey conducted by WHO shows that the population in villages is getting health care by traditional practitioners (Hakims) who prescribe herbal plant drugs. 65% patients in Sri Lanka, 60% in Indonesia, 75% in Nepal, 85% in Myanmar, 60% in Pakistan, and 90% in Bangladesh and 80% of Indian population is getting health care by traditional practitioners (Hakims). Modern strategies for drug discovery emphasize on

availability of some simple and inexpensive biological essays to evaluate medicinal potential of plant species. So in our present study various plants used by traditional healers were analyzed for their medicinal value.

Data on medicinal plants for women's reproductive health is in general limited and a traditionally ignored subject. A few studies have been published on women's use of medicinal plants during pregnancy. However, the botanical data of the majority of these studies as well as information about women's perceptions and knowledge about these medicinal plants are limited. Even though a study on women during pregnancy identified 75 plant species for the use during to ensure good development of the fetus, facilitate labor, prevent or cure malaria, and prevent miscarriages.

Crude Extract of the leaves and stems

Crude extract of the leaves and stems have antimicrobial efficacy against pathogenic microbial strains *Bacillus subtilis*, *E.coli*, *Bacillus amyloliquefaciens*, *Staphylococcus aureus*, and *Staphylococcus epidermidis* and *Streptococcus mutans* assayed. Phytochemical investigation of the crude extract of the leaves and stems of plants showed the presence of tannin, alkaloids, glycoside, terpenoids, flavonoid, steroids and saponin. The presence of these secondary metabolites indicates the pharmacological property of the plant leaves and stem.

Materials and Methods

Collection of plant materials

The fresh stems and leaves of *Amaranthus spinosus*, *Capparis deciduas* (kair), *Chenopodium album* (bathua) and *Salvadora persica* (meswak/jal).

Collection of Microbial cultures

The pathogenic organisms were procured from the Institute of Microbial Technology (IMTECH); Chandigarh, India. The antimicrobial activity of the extracts was tested individually on bacterial and fungal strains.

Impact of herbal Drugs usage during pregnancy

Studies that have been published on women's use of medicinal

plants during pregnancy from other African countries, such as from Ivory Coast, Nigeria, Zambia, Uganda, South-Africa, Tanzania, Bénin and Gabon indicate a widespread use. In the western Uganda study almost 500 women, including traditional birth attendants were interviewed and identified 75 plant species for the use during labor to ensure good development of the fetus, facilitate labor, prevent or cure malaria, and prevent miscarriages. From these species they cited 10 species as frequently used for treatment of common pregnancy-related ailments, such as edema, indigestion, constipation, infection, high blood pressure and post-partum healing. The 46 Beninese informants mentioned a total of 248 species for women's reproductive health, while the 41 Gabon informants mentioned a total of 189 species for women's health. Typically, the same plant was mentioned used for several types of ailments.

In developed countries reasons for preference of herbal medicine has been associated with different socio-demographic characteristics. Most commonly the women self-medicated with herbal medicine to treat pregnancy-related health ailments. In Australia, women who self-prescribed herbal medicine during pregnancy were more likely to live in a rural environment

The most commonly used plants

Of all the incidents of medicinal plant use, *Lippia chevalieri* and *Combretum micranthum* were, by far, the most commonly used medicinal plants. The leaves from *Lippia* spp have traditionally been used to make aromatic teas. In rural areas in West Africa, the tea is typically drunk after a long working day to relax and to improve sleep, while in the urban areas the tea is often taken in the morning to relieve stress for the coming day. Leaves from *Combretum micranthum* are used in West Africa as a general remedy for the treatment of different kinds of diseases.

Medicinal plants used against malaria

Symptoms of malaria were frequently cited by the women to be treated with medicinal plants. *C. micranthum* was the plant most commonly mentioned. Several other plants were also reported used for this indication; *Stylosanthes erecta*, *Mitragyna inermis*, *Opilia amentacea*, *Vepris heterophylla*, *Trichilia emetica*, *Combretum glutinosum* and *Parkia biglobosa*. Decoction of roots or leaves of *Combretum micranthum* is widely used in Africa as an antipyretic, which may explain its use against symptoms of malaria.

Women's common ailments during pregnancy and treatment

On average, five ailments to each woman have been reported. The conditions were treated in different ways and to a variable extent. Urinary tract infections were the conditions most commonly treated, followed by headache, nausea, fever. The highest proportion of women using medicinal plants for treatment of these common ailments was found for the treatment of urinary tract infection.

Women's sources of advice for the treatment of ailments during pregnancy

Use of medicinal plants was most commonly initiated after recommendations from friends and family or on the woman's own initiative. Many women explained that their main reason for trusting such advice was that they knew the person well. Only few women had been recommended the use of herbal medicine by a TP. When asked about preferred sources of information about treatments in pregnancy, women preferred to seek advice from family or friends first.

Women's attitudes

In total, a very few women preferred herbal medicine to conventional medicine. They found herbal medicine to be more efficient. Almost one third were of the opinion that both traditional and conventional medicines were equally effective, while it is found that herbal medicine was less effective than conventional medicine. Many women did not have any opinion about the use of herbal medicine during pregnancy, and few women were of the opinion that herbal medicine should not be used. Those women who were positive to the use of herbal medicine explained that medicinal plants are effective in the treatment of diseases and have less adverse effects than conventional drugs.

Result and Conclusion

Medicinal Plants are basic resource for formation of Herbal Medicines. Medicinal herbs as potential source of therapeutics aids has attained a significant role in health system all over the world for both humans and animals not only in the diseased condition but also as potential material for maintaining proper health. Results for antibacterial activity and antifungal activity illustrated that leaf and stem extract of medicinal plants have significant high activity against all the bacterial and fungal strains tested but cow urine used for plant extract preparation did not give any activity against any of bacterial strains.

Results from in vitro studies on antimalarial activities are conflicting, and there are no studies that elucidate any potential effects on a pregnancy. It is of concern that medicinal plants are used by some pregnant women as the only treatment against malaria. No doctor had recommended such use. Malaria during pregnancy often contributes to maternal anemia, premature delivery, and low birth weight, thereby leading to increased child mortality. Ideally, conventional malaria medicines should be used according to the WHO-guidelines.

This study showed an extensive use and knowledge of herbal medicine during pregnancy among women visiting health care centers. However, the medicinal plants were used largely unsupervised and many women did not recognize that medicinal plants could potentially have adverse effects on her pregnancy. The use of medicinal plants only, as treatment of diseases like malaria and urinary tract infections, may pose a health risk for the mother and her unborn child. A wider collaboration with the local communities, TPs, and health care centers regarding the safe use of medicinal plants, could promote safer pregnancies and better health care for pregnant

women and their unborn infants.

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