

MOTHERISK UPDATE

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Can herbal products be used safely during pregnancy?

Focus on echinacea

abstract

QUESTION Many of my patients are now using herbal medicines; some even use them during pregnancy. As we enter the "cold and flu" season, many are inquiring about use of the herb echinacea to prevent these ailments. Is there any evidence to suggest that use of echinacea during pregnancy is safe?

ANSWER Although herbal products have been used in the past during pregnancy and delivery, there is little evidence showing they are safe. Many authoritative reviews of echinacea report that its safety for use during pregnancy has not been established. A recent Motherisk study showed that use of echinacea during the first trimester of pregnancy was not associated with increased risk of major malformations.

résumé

QUESTION Bon nombre de mes patientes ont maintenant recours aux herbes médicinales et certaines, même durant la grossesse. À l'approche de la saison « du rhume et de la grippe », plusieurs me posent des questions concernant l'utilisation de l'échinacée en guise de prévention. Existe-t-il des données probantes qui étayent l'innocuité de l'échinacée durant la grossesse?

RÉPONSE Même si on a utilisé par le passé des herbes médicinales durant la grossesse et l'accouchement, rares sont les données probantes qui démontrent leur innocuité. Dans plusieurs études documentées sur l'échinacée, il n'a pas été établi que son utilisation durant la grossesse était sans risque. Une récente étude de Motherisk faisait valoir que l'utilisation de l'échinacée durant le premier trimestre de la grossesse n'était pas associée à un risque accru de malformations majeures.

Use of herbal medicine, or phyto-medicine, has increased in popularity. Statistics Canada reported that at least 3.3 million Canadians spent more than \$1 billion in 1995 on some form of complementary or alternative medicine not covered by a health plan.¹ In particular, women have been documented as frequent users of complementary or alternative therapies.^{2,3} In 1996, nearly 60% of Canadian women believed that herbal remedies were helpful in preventing and treating illness.⁴ These herbal products are often used during pregnancy with the assumption that "natural" is synonymous with "safe."

In two separate studies, more than 50% of general practitioners in Canada were shown to have referred their patients for complementary or alternative therapies.^{5,6} A Motherisk study showed that 98% of surveyed physicians reported that their patients routinely discussed complementary or alternative medicine

with them even though 74% of the physicians were unsure about the safety of herbal products during pregnancy.⁷ Although MEDLINE citations on "alternative medicine" are growing at twice the annual rate of the overall medical literature,⁸ few of these articles describe controlled studies, and even fewer address the safety of these medicinals during pregnancy. Health care providers are normally left with the difficult task of evaluating the safety and risk of herbs without benefit of clinical or evidence-based information.

The popularity of these products and the limited information available has

Do you have questions about the safety of drugs, chemicals, radiation, or infections in women who are pregnant or breastfeeding? We invite you to submit them to the Motherisk Program by fax at (416) 813-7562; they will be addressed in future Motherisk Updates. Published Motherisk Updates are available on the College of Family Physicians of Canada website (www.cfpc.ca). Some articles are published in *The Motherisk Newsletter* and on the Motherisk website (www.motherisk.org) also.

Motherisk questions are prepared by the **Motherisk Team** at the Hospital for Sick Children in Toronto. **Mr Gallo** was a member and **Dr Koren** is Director of the Motherisk Program.

meant that the Motherisk Program has experienced an increased number of women and health care providers inquiring about the safety and risks of herbal remedies during pregnancy. To address these concerns, Motherisk has systematically reviewed the available literature and formed a database of frequently discussed herbs. The most common of these appear in *Maternal-Fetal Toxicology: A Clinician's Guide*, 3rd edition.⁹ Herbs are identified by species and family names, and their primary constituents and pharmacologic actions discussed. At standardized doses, adverse effects, cautions, contraindications, and drug interactions are outlined. Reported clinical cases and theoretical concerns are noted (Table 1⁹).

Two of the most common herbal preparations discussed over the counseling line and by patients in general are echinacea and St John's wort.⁵ The Motherisk Program is currently conducting a prospective controlled study on St John's wort during pregnancy and following up mothers who use the herb during lactation.

The first prospective controlled study addressing the safety of herbs during pregnancy was completed using the herb echinacea.¹⁰ A total of 206 women who used echinacea products during pregnancy were enrolled into the study (112 used it during the first trimester). This cohort was disease-matched (upper respiratory tract ailments) to women exposed to nonteratogenic agents by maternal age and alcohol and cigarette use. Results of this study suggest that use of echinacea during organogenesis is not associated with increased risk for major malformations.

As use of herbal medicine continues to grow, patients will call upon their physicians to answer questions about the safety of these products.

Table 1. Echinacea: *E angustifolia* DC, *E purpurea* (L) Moench, *E pallida* (Nutt) Nutt, Asteraceae

Primary constituents: carbohydrates (polysaccharides), glycoproteins, amides (alkamides); caffeic acid derivatives (echinacoside, cichoric acid, cynarin). Although the three species are often considered interchangeable, their chemical constituents do differ

Primary pharmacologic actions: Immunostimulatory, anti-inflammatory, antibacterial, antiviral, antineoplastic

Common uses: Upper respiratory tract (common cold and flu) and lower respiratory tract infections

Dose

- Dried herb: 1 g three times daily
- Liquid extract: 0.25-1.0 mL three times daily
- Tincture: 1-2 mL three times daily

Adverse effects/toxicology: No reported toxicity

Cautions/contraindications: Should be avoided by people with known allergy to sunflower (*Asteraceae*) family. Use with caution for patients with progressive systemic diseases (tuberculosis, multiple sclerosis) and autoimmune conditions (diabetes mellitus, lupus, rheumatoid arthritis)

Drug interactions: Immunostimulatory action suggests caution with immunosuppressant agents

Implications for pregnancy and lactation: A prospective controlled study completed by the Motherisk Program and analysis of first-trimester cases (N = 112) suggests that the difference in the rate of major malformations between the study group and the disease-matched control group is not statistically significant. Safety during lactation has not been established

Adapted with permission from Gallo et al.⁹

Aside from our recent study on use of echinacea, no other studies addressing safety during pregnancy have been completed. Women and their health care providers should discuss openly the potential for reproductive or adverse effects when herbs are used during pregnancy.

References

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