U.S. National Library of Medicine
National Center for Biotechnology Information

NLM Citation: Drugs and Lactation Database (LactMed®) [Internet]. Bethesda (MD): National Institute of Child Health and Human Development; 2006-. Vaccaria. [Updated 2024 Apr 15].
Bookshelf URL: https://www.ncbi.nlm.nih.gov/books/

Vaccaria

Revised: April 15, 2024.

Drug Levels and Effects

Summary of Use during Lactation

Vaccaria segetalis (cowherb seed) is a dry mature seed of *Vaccaria hispanica* seeds. The seeds are used in Chinese medicine (Wang Bu Liu Xing) to increase milk supply orally as a decoction.[1-4] The seeds contain vaccarin, which has a prolactin-like effect on the mammary epithelial cells and increase the number of prolactin receptors in animal studies, as well as quercetin and oleic acid.[4,5] *Vaccaria* seeds may also have mild estrogenic activity.[5] No well-performed clinical trials have been reported in English on the galactogogue effect of *Vaccaria* seeds taken orally in humans. It has reportedly been used frequently with *Liquidambar formosana* (Lu Lu Tong) as a galactogogue combination known as Wang Bu Liu Xing and Lu Lu Tong herb pair (WLHP).[4]

Vaccaria seeds are also topically applied with pressure to the earlobes in auricular therapy. Auricular therapy uses stimulation of acupoints on the ear corresponding to various anatomical sites and functions of the body for the diagnosis, treatment, and prevention of disease. Many studies applied *Vaccaria* seeds to press on ear acupoints. Two systematic reviews on auricular therapy to increase milk supply have come to differing conclusions. One review found a positive effect on milk production, onset of lactation, serum prolactin, breast fullness, neonate states, and frequency of newborn urination and defecation.[6] A more recent review found varying efficacy between studies and poor methodology that did not allow for a definitive conclusion on efficacy as a galactogogue.[7] No adverse effects were reported in any studies.

Drug Levels

Maternal Levels. Relevant published information was not found as of the revision date.

Infant Levels. Relevant published information was not found as of the revision date.

Effects in Breastfed Infants

Relevant published information was not found as of the revision date.

Effects on Lactation and Breastmilk

In a randomized, nonblinded study of mothers who delivered a healthy infant at 37 weeks or beyond and expressed a desire to breastfeed, the Chinese herbal mixture Zengru Gao (n = 294) was compared to blank placebo (n = 294). Zengru Gao is composed of 8 herbs: *Vaccaria* seed, *Medulla Tetrapanacis*, *Rehmanniae* root, *Angelica sinensis* root, *Paeoniae alba* root, *Ligusticum chuanxiong*, Herba *Leonuri* (Motherwort Herb), and *Trichosanthis* root. The dose of Zengru Gao was 30 grams three times daily. On days 3 and 7, the group receiving Zengru Gao had more full and partial breastfeeding than those in the placebo group. In Zengru Gao group, 4 newborns had diarrhea, 3 newborns of allergies, 4 women of cough, 2 case of upper respiratory tract infections, 1 case of dry pharynx, and 1 case of neonatal hyperbilirubinemia. No complications were seen in the control group.[8]

A nonrandomized, nonblinded study of women who had undergone cesarean section compared those who received acupoint stimulation, breast massage and *Vaccaria* seed decoction twice daily for 7 days (n = 74) to those who received routine western medicine nursing intervention (instructing mothers to breastfeed, letting the baby contact and suck early after delivery, dietary guidance and psychological intervention, and instructing mothers to get more exercise). Serum prolactin was greater at 3 days postpartum in the acupoint group than the prenatal prolactin and at 1 day postpartum and in the control group. The acupoint group had a higher exclusive breastfeeding rate, higher milk yield at 48 hours postpartum, and milder breast tenderness than the control group. At 42 days postpartum the acupoint group had a greater infant weight than the control group.[9]

References

1. Zheng T, Chen W, Hu H, et al. The prevalence, perceptions and behaviors associated with traditional/complementary medicine use by breastfeeding women living in Macau: A cross-sectional survey study. BMC Complement Med Ther 2020;20:122. doi:10.1186/s12906-020-02921-8 PubMed PMID: 32316951.
2. Chao J, Ko CY, Lin CY, et al. Ethnobotanical survey of natural galactagogues prescribed in traditional Chinese medicine pharmacies in Taiwan. Front Pharmacol 2021;11:625869. PubMed PMID: 33679390.
3. Sibeko L, Johns T. Global survey of medicinal plants during lactation and postpartum recovery: Evolutionary perspectives and contemporary health implications. J Ethnopharmacol 2021;270:113812. PubMed PMID: 33450288.
4. Liao CC, Chien CH, Hsu TJ, Li JM. Advancing breastfeeding promotion: Leveraging integrative natural galactagogues and unveiling their potential roles-Insights from a 19-year Taiwan nationwide registry to address lactation insufficiency in postpartum women. Front Nutr 2024;11:1293735. PubMed PMID: 38371501.
5. Tian M, Huang Y, Wang X, et al. *Vaccaria segetalis:* A review of ethnomedicinal, phytochemical, pharmacological, and toxicological findings. Front Chem 2021;9:666280. PubMed PMID: 33996757.
6. Chen ML, Tan JY, Suen LK. Auricular therapy for lactation: A systematic review. Complement Ther Clin Pract 2017;29:169-84. PubMed PMID: 29122257.
7. Lee B, Kwon CY, Lee SH. Effectiveness and safety of auriculotherapy for breastfeeding: A systematic review. J Tradit Chin Med 2020;40:721-37. PubMed PMID: 33000573.
8. Wang S, Zhang C, Li C, et al. Efficacy of Chinese herbal medicine Zengru Gao to promote breastfeeding: A multicenter randomized controlled trial. BMC Complement Altern Med 2018;18:53. PubMed PMID: 29409494.
9. Zhan J, Huang N, Meng N, et al. Lactation prescription plus acupoint stimulation improves breastfeeding quality and alleviates breast tenderness in parturients undergoing cesarean section. Am J Transl Res 2023;15:539-47. PubMed PMID: 36777860.

Substance Identification

Substance Name

Vaccaria

Scientific Name

Vaccaria segetalis

Drug Class

Breast Feeding

Lactation

Milk, Human

Complementary Therapies

Galactogogues

Phytotherapy

Plants, Medicinal