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ANTI-TERATOGENIC EFFECT OF SHUNTI

Soniya MP*1, Nataraj H R *2,Niranjana RN*3,Akarsha Krishna K *4

2*Associate Professor Department of Agada Tantra Sri Dharmasthala Manjunateshwara College of Ayurveda and Hospital Hassan

1,3,4 PG Scholars Department of Agada Tantra Sri Dharmasthala Manjunateshwara College of Ayurveda and Hospital Hassan

Abstract:

This study explores the risks posed by teratogenic agents during fetal development, encompassing infections, physical agents, maternal health factors, environmental chemicals, and drugs consumed in the critical first trimester. The introduction emphasizes the potential for structural defects resulting from exposure to these agents. *Shunti (Zingiber officinale*) takes center stage in the methods section, revealing its dual role as both *ahara*(food) and *aushada*(medicine) with a focus on its medicinal properties.The results highlight *Garbhinipariacharya*, a fundamental aspect of Ayurvedic antenatal care. This section presents comprehensive guidelines for *ahara* (diet), *aushada* (medicine), and vihara (lifestyle), categorized into*masanumasikapathya, ahar-vihara*, and*aushada*. Ayurveda's holistic approach to prenatal well-being is evident in these guidelines.Moving to the discussion, the study advocates for increased awareness, caution, and sustainable practices to counter the adverse effects of teratogenic agents in daily life. The integration of these measures into societal norms is proposed as a crucial step towards significantly reducing the risk of teratogenicity. The ultimate goal is to foster a healthier environment for fetal development. By promoting these measures, the study envisions a proactive approach to prenatal care that extends beyond individual well-being, contributing to a broader societal understanding and implementation of practices conducive to optimal fetal development.

Keywords : Pregnancy risks, Protective effects, Teratogenecity, *shunti*.

Introduction

- Teratogenicity is the ability to cause defects in a developing fetus.
- A teratogen is anything a person is exposed to or ingests during pregnancy that's known to cause fetal abnormalities[1].
- According to joint World Health Organization (WHO) and MOD meeting report, birth defects account for 7% of all neonatal mortality and 3.3 million under five deaths.
- In India birth defects prevalence varies from 61 to 69.9/1000 live births.[2]

- Teratogens include alcohol, cigarettes, drugs(Medications, OTC, Recreational), chemicals (Mercury, Lead) and toxic substances, Infections (TORCH), Maternal health conditions like Diabetes[3]

Agent	Example	Structural anomaly
Drugs	Alcohol	Microcephaly, heart defect
	Cocaine	Vascular disruption
	Valproate	mandibular/ear abnormalities
	Vitamin A	Spina bifida
Infection	Rubella	Microcephaly, heart defect
	Toxoplasma	Hydrocephalus
	Varicella	Limb defects
Maternal factors	Diabetes	Heart defects, neural tube defects
	Phenylketonuria	Microcephaly, heart defect

Aims and Objectives

- To review the anti- teratogenic effect of *Shunti*

Shunti

- Ayurveda consider food to be the best source of nourishment as well as medication for the pregnant women.

- *Shunti* is mentioned as *Mahaushadi* in *Ayurveda* classics.
- *Shunthi (Zingiber officinale Rosc.)* is medicinal plant widely used in *Ayurvedic* formulations for various diseases. Also, it has been using in Indian foods as a spice since ages thus it acquires both nutritional and medicinal importance, termed to be a nutraceutical plant.
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Rasa	*Katu*
Guna	*Laghu, snigdha*
Virya	*Ushna*
Vipaka	*Madhura*
Doshaghnatha	*Vatakaphahara*

Materials and Methods

Collected from online journals, Ayurvedic literature, Research articles and journals.

Results and Observation

- *Shunti (Zingiber Officinale*) emerges as a notable component in this regimen, showcasing anti-teratogenic effects. Its resistance to the effects of pesticides during cultivation adds to its appeal as a safe option for pregnant women
- It has chemical constituents like camphene, zingiberene, cineol, borneol, gingerol, gingerin.
- It is having antioxidants, and anti inflammatory properties[4].
- A case study was conducted on effectiveness of *Shuntibilwa Kwatha* with *Yavasaktu* in the management of *Garbhini Chardi*, with the use of this drug no adverse effect were noted. Besides *Chardi* the oral administration of *Shuntibilwa Kwatha* with *Yavasaktu* also reduced symptoms like nausea, epigastric burning, diarrhoea and headache. [5]
- *Sowbhagya Shunti* is an effective *Ayurvedic* medicine used in post natal *Ayurveda* care. It is prepared in herbal jam / granular form. *Shunti* refers to ginger. Ginger is the main ingredient of this medicine. It is used in the treatment of complications that arise during post natal care of the mother. It improves digestion power. It is also effective in the treatment of sprue, diarrhea.(Bhaishajya ratnavali streerogadikara, 25-28)

  Study was conducted on effect of ginger supplementation on developmental toxicity induced by fenitrothion insecticide in albino rats showed that genetic hazards urging awareness in pregnant women, while ginger showed mild reduction in toxicity, more studies these are needed for lower exposure risks and to understand gingers efficacy.

Discussion

- *Shunti*, a versatile herb, proves beneficial in traditional medicine for pregnancy-related symptoms like nausea.
- In post-natal care, *Sowbhagya Shunti*, containing ginger, aids digestion and addresses complications.
- Research indicates ginger's potential in reducing developmental toxicity, encouraging further exploration for pregnant women's well-being and understanding lower exposure risks.
- The studies collectively underscore ginger's diverse applications, urging continued research to unveil its comprehensive impact on various health aspects, balancing optimism with the need for cautious exploration
- The significance of *Shunti* in mitigating teratogenic risks adds depth to the discussion. Its multifaceted pharmacological actions, coupled with its resilience to pesticides, position *Shunti* as a natural and safe option for addressing pregnancy-related issues like nausea.

Conclusion

- The studies collectively underscore ginger's diverse applications, urging continued research to unveil its comprehensive impact on various health aspects, balancing optimism with the need for cautious exploration
- The significance of *Shunti* in mitigating teratogenic risks adds depth to the discussion. Its multifaceted pharmacological actions, coupled with its resilience to pesticides, position *Shunti* as a natural and safe option for addressing pregnancy-related issues like nausea.

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