

## Ayurvedic review on Garbha-strava (Vyavasthita/Sthiti Yoga Garbha) w.s.r Threatened Abortion

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### Abstract

*Garbha-strava* exhibits deteriorating effects on physical, mental and spirituality of women. The expulsion of fetus upto fourth month of pregnancy is termed as *Garbha-strava*. *Vyavasthita/Sthitiyogyagarbha* is an early stage of *Garbha-strava* as the fetus is present in *asanjatasara* and *amawastha* during second and third month. According to sign and symptoms of *Vyavasthita Garbha-strava*, it can be correlated with Threatened Abortion.

Ayurveda projects revitalizing approach to prevent *Garbha-strava*. The present work is an extensive review of published literature concerning vast potential of *Garbha-strava*. Several treatment modalities are mentioned in ayurvedic text to prevent *Garbha-strava* due to its *Tridosha Shamaka*, properties. Use of *Jivaniyagana* drugs or its *pratinidhi* drugs is beneficial in this sector due to its various chemical properties and biological actions. These drugs prevent *Garbha-strava* and promote *Garbhini* perpetual beauty.

**Keywords:** Threatened abortion, *Vyavasthita Garbha-strava*, *Asanjatasara*, *Amawastha*, *Jivaniyagana*, *Pratinidhi*.

### Introduction

Women go through many stages in the journey of her life among which pregnancy is the most glorious and vulnerable of all. But, research proposals remain untouched. Ayurveda enlighten vast knowledge regarding *Garbhastrava*.

The expulsion of fetus upto fourth month of pregnancy is termed as *Garbha-strava* because the products of conception are liquid, thereafter in fifth and sixth month it is termed as *Garbha-pata*, because by this period the fetal parts have attained some stability<sup>[1]</sup>. Bhoja opines that the period of *Garbha-strava* is upto three months<sup>[2]</sup>.

Abortion is the expulsion of embryo or fetus at less than 20 weeks (four months), or weighing 500 grams or less when it is not capable of independent survival i.e before the period of fetal viability<sup>[3]</sup>. According to WHO, RCOG (Royal college of obstetrician and gynaecologists) and in India, period of fetal viability are -22 weeks, 24 weeks, 28 weeks respectively.

**Incidence:** The world Health Organization (WHO) estimates that worldwide 210 million women become pregnant each year and that about a third of them or approximately 80 million end in miscarriage, stillbirth or induced abortion. More than 40% of women will have miscarriage sometime in their reproductive life. Approximately 20% of all pregnancies end up in spontaneous abortion and about 80% of these occurs in the first trimester, within 2-3 months of gestation<sup>[4]</sup>.

### Aims and Objectives

- To study *Garbha-strava (Vyavasthita/ Sthitiyogyaga)* in the light of Ayurveda with special reference to Abortion (Threatened Abortion).
- To prevent the development *Garbha-strava* in *Garbhini*.
- To treat the signs and symptoms of *Garbha-strava* in *Garbhini*.
- To explore Ayurvedic drugs and their effectiveness in *Garbha-strava*.

## Material and Methods

This proposed article draw the quintessential data from different Ayurvedic texts, research papers as mentioned in reference block. Google Scholar, Pubmed search engine were used for searching the relevant articles. The last search was done on 15 June 2020. Keywords that were used are ‘Threatened abortion, *Vyavasthita Garbha-strava*, *Asanjatsara*, *Amawastha*, *Jivaniya-gana*, *Pratinidhi*’.

## Discussion

In the emerging scenario the health policies in India and across the globe have been emphasizing on reproductive and child health care and also exploring the flasibility of introducing traditional systems of medicine such as Ayurveda, to achieve better health care. Drudging efforts are made to gather the knowlegde of threatned abortion from contemporary science to equate it with *Garbhastrava* in *Ayurveda* and thoroughly excel in it.

**TABLE I: DIFFERENT FORMS OF GARBHA-STRAVA AND ITS MODERN CORELATION**

GARBHA-STRAVA	MODERN CLINICAL ENTITY
<i>Vyavasthita/ sthitiyogyagarbha</i>	Threatened abortion
<i>Prasramshamanagarbha</i>	Inevitable abortion
<i>Garbhasesha</i>	Incomplete abortion
<i>Apraja/Putraghni yoni/ Jataharini</i>	Habitual abortion
<i>Anavaseshagarbha</i>	Complete abortion
<i>Garbhapatana</i>	Induced abortion

**TABLE II- ETIO-PATHOGENESIS OF ABORTIONIN MODERN SCIENCE <sup>141</sup>-**

I. FETAL FACTORS	II. MATERNAL FACTORS	
	General Factors	Local Factors
<ul style="list-style-type: none"> <li>• <b>Chromosomal anomalies</b> Autosomal trisomy, triploidy, mosaics, deletion &amp; balanced translocation.</li> <li>• <b>Blighted ovum</b></li> <li>• <b>Hydatidiform mole</b></li> <li>• <b>Multiple congenital defects</b></li> <li>• <b>Multifetal pregnancy</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Maternal Infections-</b> Malaria, Hepatitis.</li> <li>• <b>Maternal Diseases-</b> HTN, DM, Thyroid disorders.</li> <li>• <b>Drugs-</b> Anticonvulsants, Radiation therapy.</li> <li>• <b>Surgery &amp; Trauma</b></li> <li>• <b>Luteal Phase Defects</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Uterine Development Anomalies-</b> Bicornuate, Arcuate, Subseptate.</li> <li>• <b>Retroversion</b></li> <li>• <b>Fibromyoma</b></li> <li>• <b>Cervical Insufficiency</b></li> <li>• <b>Surgery-</b>For Appendicitis, Ovarian cyst, Myomectomy.</li> </ul>

III. **IDIOPATHIC FACTORS-** No cause could be found for miscarriage, after investigations in significant number of occasions.

**Pathogenesis:** Threatened abortion is a clinical entity where choriodecidualhaemorrhage has begun but not progress to the stage of irreversibility. The chain of events once the process of miscarriage is initiated includes uterine spasm that may be associated with spotting per vaginum without endangering the intrauterine gestational sac. This means the cervix is not open and the products of conception are not displaced yet<sup>[4]</sup>.

**TABLE III- NIDANA OF GARBHA-STRAVA ACCORDING TO AYURVEDIC SAGES:**

CHARAKA <sup>[5], [6]</sup>	SUSHRUTA <sup>[1]</sup>	VAGBHATA <sup>[7]</sup>
<ul style="list-style-type: none"> <li>Abnormalities in fetal growth factors.</li> <li><b>ManasVikara-</b> Anger, grief, discontent, envy, fear, terror, irritation.</li> <li>Suppression of natural urges, excessive coitus- excercises-standing, sitting, sleeping</li> </ul>	<ul style="list-style-type: none"> <li>Suppression of natural urges, excessive coitus- excercises-standing, sitting, sleeping.</li> <li>Consumption of excessive dry, hot, pungent diet, alkalies, emetics, purgatives.</li> <li>Krimi, Vata, Abhighata</li> </ul>	<ul style="list-style-type: none"> <li>Excessive accumulation of doshas</li> <li>Non avoidance of contraindicated articles.</li> <li>Diseases</li> <li>Influence of deeds of previous life of fetus/ mother.</li> </ul>

**Samprapthi:** Ayurvedic authorities revealed that the *vimargagamana* of *apanavattaia* the most important culprit responsible for *Garbhastrava*. The fetus getting detached from its bonds, exceeding normal limits within the uterus, descending downwards from the hollow space between *yakrita*, *pleeha* and *antra* produces irritation in the *kostha*. The *apanavatta* getting aggravated due to this irritation causes *shula*, *aanaha*, *mutrasangain parsha*(flanks), *Kukshi* (lower abdomen), *basti-sirsha* (bladder neck), *udara*(abdomen) *andyoni*(vagina) and troubles the young fetus with bleeding<sup>[1]</sup>.

#### **SamprapthiGhatakas-**

**Dosha:** Vatavrudhi, Pittavrudhi, Kaphakshaya

**Dushya:** Rasa, Rakta.

**Srotas:** ArtavavahaSrotas.

**Srotodusti:** Vimargagamana

**TABLE IV: SIGNS AND SYMPTOMS OF VYAVASTHITA (STHITI YOGYA GARBHA) VERSES THREATENED ABORTION**

Features	Threatened Abortion <sup>[4]</sup>	Vyavasthita/sthityogyagarbha
<b>Pain</b>	Painless, mild uterine cramps and backache.	<i>Garbhashyaya-kati- vanshana-vastishula</i> <sup>[8]</sup>
<b>Vaginal bleeding</b>	Present/ Absent, spotting	<i>Rakta-darshanam</i> <sup>[7]</sup>
<b>Pallor</b>	Absent	-
<b>Cervix</b>	Soft	-
<b>Cervical os</b>	Closed	<i>Yoni-mukha pusha-darshanam</i> <sup>[7]</sup>
<b>Uterine size</b>	Corresponds	-

<b>Fornices</b>	Normal	-
<b>Pregnancy test</b>	Positive	-

**Investigations<sup>[4]</sup>:**Ultrasound examination shows

- Increased size of uterus
- Gestational sac corresponding to the period of pregnancy
- Fetal echoes may be seen within gestational sac
- Fetal heart may also be visible
- Blood or clot may be seen around the gestational sac.

**Management of Threatened Abortion in Modern science-**

- Rest until bleeding settles down.
- Human chorionic gonadotrophin (hCG): 5000 IU intramuscularly immediately and followed by weekly or twice in a week.
- Micronized progesterone: 200-400 mg, oral or vaginally, in divided doses.
- 17-alpha- hydroxyprogesteronecaproate: 250-500 mg intramuscularly every week.

**Management of Garbha-strava in Ayurvedic classics-**

According to Ayurvedic scholars, fetus is in *asanjatasara* and *amawastha* in second and third month. So, treatment modalities should be planned considering the *virudha-chikitsaupkarma* in context to *garbha* and *ama*.

- Use of *ruksha* and *sheetadravyas* is beneficial.
- Decoction made with *duralabha*, *amrta*, *usira*, *parpatata*, *candana*, *ativisa*, *bala*, *katwanga* and *dhanyakash* should be prescribed.
- *Trnadhanya* and *sali/ swastika* rice gruel should be prescribed.
- *Mudgasoup* for digestion of *ama*. Once the state of *ama* get corrected, unctuous alongwith cold or only unctuous measures should be used<sup>[7], [9]</sup>.

**Medicines for Garbha-strava:**

**For external use-**

- A tampon soaked with paste of *madhuyasti* and *ghrita* (kept in extremely cold water) should be placed in vagina.
- Hundred or thousand times washed *ghrita/* properly cooled cow's milk/ *madhuyastidecoction* should be anointed over infraumbilical region.
- *Kankati* root knotted with thread should be tied in waist<sup>[6], [9]</sup>.

**For oral use-**

- Use of *jivaniyagana* drugs with milk is beneficial.
- Use of milk during abortion is beneficial.
- Use of liquid prepared with *bala*, *vrsatparni*, *salaparni*, *dadima* and unripe *bilva* fruit prevents abortion.
- White *aparajita* powder with honey taken with goat milk prevents abortion.
- Powder of *lajjalu*, *dhatakipushpa*, *utpala* and *lodhra* with honey prevents abortion.
- Powder of *vrddhi*, *vidari* and *jivanti* with milk should be given.
- Powdered *dhataki*, *gairika*, *sarjarasa* and *rasanjana* should be given with honey.
- *Srngataka*, *kaseru* and *puskarabija* should be prescribed for eating.
- Pestled saffron of *Padma*, *utpala* and *kumuda* should be given with honey/sugar/*ghrita*<sup>[9]</sup>.

**Ayurvedic properties of drugs and its uses**

Drugs of *Jivaniya Mahakashaya* like *Jivaka*, *Rishbhaka*, *Meda*, *Mahameda*, *Kakoli*, *Ksheerakaloki*, *Mudgaparni*, *Masaparni*, *Jeevanti* and *yastimadhu* are predominantly of *Madhura rasa*, *Madhuravipaka*, *Sheetavirya* and *Snigdha* guna, *Jivaniya*, *Garbhaposhaka* and *Garbhasthapana karma* of these drugs seems to due to *Dravyaguna Prabhava*<sup>[10]</sup>. It is difficult for a person to procure their genuine drugs from Himalayan

habitat. Now a day there are listed under endangered plant. Therefore the tradition of suitable substitutes had started<sup>[10]</sup>. Ashwagandha, Shatavari are the easily available pratinidhi drugs for jivaniyamahakashaya.

*Ashwagandha* has *tikta, katu, madhurarasa, laghu, snigdha*guna, *ushnavirya* and *madhuravipaka, kapha-vatashamaka* action. Though, its use is contraindicated in pregnancy due to its uterine stimulant action but it is used in the treatment of habitual abortion<sup>[11]</sup>.

*Shatavari* has *tikta, madhura rasa, laghu, snigdha*guna, *sheetavirya* and *madhuravipaka. Vata- pitta shamaka* action, *Garbhaposhaka* and *Garbhasthapanakarma*<sup>[12]</sup>.

**TABLE V: CHEMICAL CONSTITUENTS & BIOLOGICAL ACTIVITIES OF DRUG USED IN ABORTION**

Drug Name	Chemical constituents	Biological Activity
<i>Ashwagandha</i> ( <i>Withaniasomnifera</i> )	Isopelletierine, withanolides, withaferins, sitoindoside VII and VIII, withanolides	Anti-inflammatory, Anti-oxidant, Immuno-stimulant <sup>[13]</sup>
	Sitoindosides VII & VIII	Anti-stress <sup>[13]</sup>
	Alkaloid somniferine	Habitual Abortion. ( <i>Ashwagandha</i> should not be used during pregnancy as act as uterine stimulant) <sup>[11]</sup>
<i>Shatavari</i> ( <i>Asparagus racemosus</i> )	Polyhydroxylated steroidal saponogenin acids, Ethanolic extracts	Immuno-stimulant, Anti-bacterial
	Shatavarin I, IV, Saponin A4	Anti-abortifacient, Anti-oxytocic action, Estrogenic action
	Gamma linolenic acid	Antenatal tonic, increases fetal weight & decreases perinatal deaths, Vasodilator & used in Pregnancy Induced Hypertension Treatment <sup>[12]</sup>
<i>Jivanti</i> ( <i>Leptadenreticulata</i> )	Alpha-amyrin, β-amyrin, ferulic acid, luteolin, diosmetin, rutin, β-sitosterol, stigmaterol, hentricontanol, triterpene alcohol simiarenol, apigenin, reticulatin, deniculatin, and leptaculatin.	Anti-prostaglandin, Anti-abortifacient Effect (habitual/ Threatened), Anti-inflammatory, Anti-oxidant, Anti-microbial, Analgesic <sup>[14]</sup> .
<i>Yastimadhu</i> ( <i>Glycyrrhizaglabra</i> )	Glabridin, Glycorhizin, Isoliquiritin, Liquiritigenin, Glycyrrhizinic acid	Anti-inflammatory, Anti-allergic, Anti-emetic, Analgesic, Estrogenic, Hemostatic, Antiulcer property, Anti-inflammatory, Anti-microbial <sup>[15]</sup>

## Conclusion

- The disease *Garbha-strava* (*Vyavasthita/sthitiyogyagarbha*) described in Ayurveda classics can be considered as the clinical congruence of Threatened abortion.
- Ancient Ayurvedic Science projects several treatment modalities to prevent abortion. Use of Jivaniyagana drugs or its pratinidhi drugs play a crucial role in prevention and treatment of abortion.

- The drugs thus invented should also be made available at minimal prices and to every pregnant women for good maternal antenatal care.
- No adverse effect or complications is produced with the use of this treatment.

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