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/Sthitiyogya garbha 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-stravadue 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, Asanjatsara, Amawastha, Jivaniya-gana, 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 [1]. Bhoja opines that the period of Garbha-strava is upto three months [2].

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 [3]. 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 [4].

Aims and Objectives

- To study Garbha-strava (Vyavasthita/Sthitiyogya) 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 draws 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 feasibility of introducing traditional systems of medicine such as Ayurveda, to achieve better health care. Drudging efforts are made to gather the knowledge of threatened 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

<table>
<thead>
<tr>
<th>GARBHA-STRAVA</th>
<th>MODERN CLINICAL ENTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vyavasthita/ sthitiyogyagarbha</td>
<td>Threatened abortion</td>
</tr>
<tr>
<td>Prasramshamanagarbha</td>
<td>Inevitable abortion</td>
</tr>
<tr>
<td>Garbhasesha</td>
<td>Incomplete abortion</td>
</tr>
<tr>
<td>Apraja/Putraghni yoni/ Jataharini</td>
<td>Habitual abortion</td>
</tr>
<tr>
<td>Anavaseshagarbha</td>
<td>Complete abortion</td>
</tr>
<tr>
<td>Garbhapatana</td>
<td>Induced abortion</td>
</tr>
</tbody>
</table>

TABLE II- ETIO-PATHOGENESIS OF ABORTION IN MODERN SCIENCE [4]

I. FETAL FACTORS

- Chromosomal anomalies
  Autosomal trisomy, triploidy, mosaics, deletion & balanced translocation.
- Blighted ovum
- Hydatidiform mole
- Multiple congenital defects
- Multifetal pregnancy

II. MATERNAL FACTORS

<table>
<thead>
<tr>
<th>General Factors</th>
<th>Local Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal Infections- Malaria, Hepatitis.</td>
<td>Uterine Development</td>
</tr>
<tr>
<td>Drugs- Anticonvulsants, Radiation therapy.</td>
<td>Retroversion</td>
</tr>
<tr>
<td>Surgery &amp; Trauma</td>
<td>Fibromyoma</td>
</tr>
<tr>
<td>Luteal Phase Defects</td>
<td>Cervical Insufficiency</td>
</tr>
<tr>
<td></td>
<td>Surgery-For Appendicitis, Ovarian cyst, Myomectomy.</td>
</tr>
</tbody>
</table>

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 choriodecidual haemorrhage 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[4].

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

|----------------|-------------|-------------|
| • Abnormalities in fetal growth factors.  
• ManasVikara- Anger, grief, discontent, envy, fear, terror, irritation.  
• Suppression of natural urges, excessive coitus- exercises- standing, sitting, sleeping | • Suppression of natural urges, excessive coitus- exercises- standing, sitting, sleeping.  
• Consumption of excessive dry, hot, pungent diet, alkalies, emetics, purgatives.  
• Krimi, Vata, Abhihghata | • Excessive accumulation of doshas  
• Non avoidance of contraindicated articles.  
• Diseases  
• Influence of deeds of previous life of fetus/ mother. |

**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[1].

**SamprapthiGhatakas-**

**Dosha:** Vatavrudhi, Pittavrudhi, Kaphakshaya  
**Dushya:** Rasa, Rakta.  
**Srotas:** Artavavaha Srotas.  
**Srotodusti:** Vimargagamana

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pain</strong></td>
<td>Painless, mild uterine cramps and backache.</td>
<td>Garbhashyaya-kati- vanshana-vastishula[8]</td>
</tr>
<tr>
<td><strong>Vaginal bleeding</strong></td>
<td>Present/ Absent, spotting</td>
<td>Rakta-darshanam[7]</td>
</tr>
<tr>
<td><strong>Pallor</strong></td>
<td>Absent</td>
<td>-</td>
</tr>
<tr>
<td><strong>Cervix</strong></td>
<td>Soft</td>
<td>-</td>
</tr>
<tr>
<td><strong>Cervical os</strong></td>
<td>Closed</td>
<td>Yoni-mukha pusha-darshanam[7]</td>
</tr>
<tr>
<td><strong>Uterine size</strong></td>
<td>Corresponds</td>
<td>-</td>
</tr>
</tbody>
</table>
### Investigations\[^{[4]}\]: 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, parpatak, candana, ativisa, bala, katwanga and dhanyakashe 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\[^{[7],[9]}\].

**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 intraumbical region.
- Kankati root knotted with thread should be tied in waist\[^{[6],[9]}\].

**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 bilvafruit prevents abortion.
- White aparajita powder with honey taken with goat milk prevents abortion.
- Powder of lajjulu, dhatakpushpa, utpalaand lodhra with honey prevents abortion.
- Powder of vrdhhi, vidaritand jivanti with milk should be given.
- Powered dhataki, gairika, sarjarasa and rasanjana should be given with honey.
- Srngataka, kaseri and puskarabija should be prescribed for eating.
- Pestled saffron of Padma, utpala and kumudashould be given with honey/sugar/ghrita\[^{[9]}\].

### Ayurvedic properties of drugs and its uses

Drugs of JivaniyaMahakashaya like Jivaka, Rishbiaka, Meda, Mahameda, Kakoli, Ksheerakaloki, Mudgaparni, Masaparni, Jeevanti and yastimadhu are predominantly of Madhura rasa, Madhuravipaka, Sheetavritya and Sniddaguna, Jivaniya, Garbhaposhaka and Garbhasthapana karma of these drugs seems to due to DravyagunaPrabhava\[^{[10]}\]. 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\textsuperscript{[10]}. Ashwagandha, Shatavari are the easily available pratinidhi drugs for jivaniyamahakashaya.

Ashwagandha has tikta, katu, madhuraraasa, laghu, snigdhaguna, ushnnavirya and madhurvipaka, kapha-vatashamaka action. Though, it’s use is contraindicated in pregnancy due to its uterine stimulant action but it is used in the treatment of habitual abortion\textsuperscript{[11]}.

Shatavari has tikta, madhura rasa, laghu, snigdhaguna, sheetavirya and madhuravipaka. Vata-pitta shamaka action, Garbhaposhaka and Garbhasthapanakarma\textsuperscript{[12]}.  

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

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

Conclusion

- The disease Garbha-strava (Vyavasthita/sthitiyogya garbha) 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.

References