

AYURVEDA AND MODERN VIEW ON INTRA UTERINE GROWTH RESTRICTION
(IUGR): A REVIEW

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ABSTRACT

The traditional as well as modern medical science has paid huge attention to the concept of fetal well-being, in this regards ayurveda described many dietary and daily regimens along with herbal medication which support health of fetus. There are many pathological conditions which can affect success of birth of healthy child and Intra Uterine Growth Restriction (IUGR) is one of them. Ayurveda also mentioned certain diseases related to fetus i.e. Upvistaka, Garbhsosa, Nagodara and Leena Garbha. Sarangdhara described Nagodara, Gudhagarbha and Upvistaka under category of Astagarbhvyapata while some literatures considered Nagodara, Upvistaka and Leenagarbha as causes of intrauterine fetal deaths. Ayurveda mentioned therapeutic utility of drugs such as; Shatavari, Yashtimadhu, Ashwagandha along with Phalagruta in the management of intrauterine fetal health issues. The Kshirbasti of drugs along with good conduction of daily regimen during pregnancy period can helps to prevent fatal consequences of Nagodara, Upvistaka and Leenagarbha. Present article exploring Ayurveda and modern view on intra uterine growth restriction and related ayurveda terminologies.

KEYWORDS: Intrauterine Growth Retardation, Upvistaka, Nagodara, Leenagarbha.

INTRODUCTION

Ayurveda not only paid attention to the health of mother during her pregnancy period but it also described several theories and principles related to the health of fetus and new born baby. Ayurveda in this regards described term *Garbhashosh* as fetal abnormalities which also considered as *Vatabhipanna garbha*, this is the condition of improper development of the fetus in uterus.

Vatadosha mainly described as involved *Dosha* in *Garbhavyapada* like *Nagodar*, *Upavishtak* and *Leenagarbha*.

The related terminologies of IUGR; *Garbhashosha*, *Upavishtak* and *Nagodar* described in Ayurveda in classical texts in the form of *Shlokas* which are as follows:

वाताभिपन्न एव शुष्यति गर्भः । स मातुः कुक्षिं न पूरयति मन्दं स्पन्दते च

Garbhashosha

यस्याः पुनर्महति जातसारे गर्भे बन्धानामवर्जनात्पुष्पदर्शनं स्यादन्यद्वा योनिम्रवणम् । ततो नाड्यां दोषैः
कुल्यायामिव तृणपत्रादिभिः प्रतिच्छन्नायां रसस्यासम्पत्त्वाद्गर्भो बुद्धिपनाज्वन्नपविशत्युपशुष्यति वा ॥

Upavishtak

शोकोपवासरूक्षाद्यैरथवा योन्यतिस्रवात् ॥ १५ ॥
वाते कुब्धे कुशः कुष्येद्गर्भो 'नागोदरं' तु तम् ॥
उदरं बुद्धमप्यत्र हीयते स्फुरणं चिरात् ॥ १६ ॥

Nagodar

Ayurveda mentioned significance of *Kshirbasti* in such types of conditions, *Shatavari kshirbasti*, *Yashtimadhu sidha kshirbasti*, *Ashwagandha phalagruta kshirbasti* and *Bruhaniya gana sidha kshirbasti*, etc. can be

employed successfully for the management of *Garbhavyapada*.^[1-4]

The major symptoms of IUGR are improper development of size of mother abdomen during pregnancy, small size of fetus, *Manda spandana* and absence of 'Oja' in *Garbha*, etc. The risk factors which can trigger IUGR are low maternal weight, iron deficiency, lungs or cardiac diseases associated with mother, vascular disease, diabetes mellitus and genetic factors.

Estimation of inadequate weight gain, serial fundal height estimation, ponderal index, biophysical profile and ultrasound, etc. are approaches which help to diagnose abnormalities of fetus development.^[3-7]

Antenatal Complications

- ❖ Low birth Weight
- ❖ Oligohydramnios
- ❖ Reduced Fetal Movements

Intrapartum Complications

- ❖ Increased rate of IUD
- ❖ Operative delivery/cesarean

Post Natal Complications

- ❖ Learning disabilities
- ❖ Speech defects
- ❖ Under developed child

The major causative factors of *Upavistaka garbhavyapada* are as follows

- *Mithyaahar-vihar* during pregnancy (*Ushna* and *Tikshna Ahara*)
- Over exertion (*Atishram*)
- Stress
- Malnutrition
- Effects of other diseases during pregnancy like; anemia, digestive ailments and hormonal disturbances, etc.
- *Divaswap* (day sleep)
- *Pushpadarshan* (bleeding)
- *Yonigatastrav* & *Udarshoola* also affects growth of fetus.

Pathogenesis

Pathologically the disease arises during early stage of pregnancy and one of the major triggering factors is bleeding or vaginal discharge for long time which aggravates *Vata* and bleeding with itself causes *Pitta* and *Shleshma* vitiation which ultimately obstruct *Rasavahanadi* of fetus leading to the improper flow of *Rasa* to the fetus and deprived nourishment causes underdeveloped fetus. The nutritional deficiency leads *Rasakshaya* which along with vitiated *Vata* causes *Dhatukshaya* and *Garbhavyapada*. The others pathological components involved in disease are depicted in **Figure 1**.



Figure 1: Samprapti ghatak of *Garbhavyapada*.

The pregnancy associated with IUGR likely to have following health or child birth related problems:

- Risk of being stillborn
- Difficulty to handle vaginal delivery
- Low blood sugar level during birth
- Fluctuation in body temperature of new born
- Lack of immunity so child may get suffer with disease just after birth
- Developmental issues and learning debility

Ayurveda management

Ayurveda described treatment of IUGR like *Brinhaniya Chikitsa* for *Garbhavridhi* and *Tikshna Chikitsa* for *Garbhapatana*. Thus *Garbhashosha* can be referred to as

IUGR; the major approaches of *Garbhashosha* are as follows:

1. *Bhrihaniya* (anabolic) drugs; milk & *Mansa Rasa*
2. Avoidance of *Ruksha Padarthas*
3. *Yashitimadhu Siddha Dugdha*

The others lines of treatments for IUGR are as follows:

- Bed rest suggested in complicated condition
- Avoidance of heavy weight lifting and physical exertion
- Stress should be avoided, ayurveda suggested stress relieving medications.
- Maternal dietary supplementation; *Shali*, *Dugdha* and *Aamgarbha* support *Poshan* of *Garbha*.

Saptadhatuvaradhak ahara improves *Ahara-rasa* thus provides nutrition to *Garbha*.

- Drugs possessing *Jeevaniya*, *Vataharadravyas* and *Madhura* effects can be used for the proper development of fetus.
- *Ghritas*; *Vacha ghrita* and *Maha paishachika ghrita* advised
- Ayurveda herbs/plant as drugs; *Ashwagandha*, *Gambhari*, *Yastimadhu*, *Shatavari* and *Guduchi*, etc. can be used to acquire health benefits during pregnancy.
- *Anuvasan Basti* by *Ghrita* with *Darvyadi* groups medicines.

Role of Ayurveda drugs in IUGR

Ayurveda drugs like *Ashwagandha* possess *Vatakaphaghna*, *Rasayan*, *Deepaniya*, *Brihaniya* and *Garbhasthapana* properties hence imparts nutritive value, and increase muscle tone of uterus and improves microcirculation. Relax placental circulation by virtue of their antispasmodic action thus prevent consequences of IUGR.

Shatavari has *Balya*, *Pushti* and *Rasayan* effects, it also possesses antioxidant effects thus prevent oxidative damage of tissue and treat *Agnimandya* hence improves nourishment of mother as well as fetus. *Shatavari* recommended for *Upavishtaka* caused by *Dhatukshaya* and *Shatavari* support cellular hypertrophy (growth function) due to the presence of steroidal saponins.

Yastimadhu offers *Balya*, *Garbhaposhak*, *Rasayan* and *Jeevaniya* action thus cure debility. The taste of *Yastimadhu* improves appetite and imparts feeling of well being thus resist mental irritation which seen commonly in pregnant women.

Gambhari is *Tridoshashamak*, *Bruhaniya*, *Rasayan*, *Balya* and *Deepaniya* drug; it helps to in condition of IUGR associated with *Dhatvagnimandya*. The *Tikta rasa* removes obstruction of fetus nourishment thus *Poshana* of fetus take places.

Ayurveda formulation; *Laghumalinivasanta Rasa* can also be used for IUGR due to its *Balya*, *Garbhavidhikar* and *Garbhaposhak* effects. The ingredients of formulation acts on *Rasadhatvagni* and *Rasavahini* hence affects *Rasutpadan Vikriti*. *Laghumalinivasanta Rasa* prevents *Agnimandya* therefore considered effective in case of *Upavishtak* associated with *Dhatukshaya*.^[7-11]

CONCLUSION

The Ayurveda gives importance to health of pregnant mother as well as fetus residing in her uterus. The healthy pregnancy and delivery of normal neonate depends upon many factors and Infant's birth weight or development of fetus is one such factor. The improper development of fetus sometimes leads neonatal

morbidity and mortality. Intra-uterine growth restriction (IUGR) is such cause of improper development or low weight of fetus. IUGR causes many complications in fetus. Ayurveda described various disorders of fetus under heading of *Garbhavyapada* including *Nagodara*, *Garbhakshaya*, *Upavishtaka* and *Garbhashosha*, etc. Ayurveda mentioned *Brihaniya* for *Garbhavriddhi* and *Tikshna chikitsa* for *Garbhapatana* as therapies for *Upavishtaka* (IUGR).

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