MANTECH Publications

Amruta: A Journal on Prasuti Tantra, Bal and Stree Rog

Volume 1, Issue 1, January-June, 2022

Ayurvedic Approaches to the Treatment of Intrauterine Growth Restriction

Dr. Abhimanyu Varshney[1], Vijay Charan Tripathy[2], Amit Sehgal[3]

Associate Professor[1], Students[2, 3]

Department of Stree Rog

Dayanand Ayurvedic Medical College Siwan Bihar

Corresponding Author's Email: -*vijaycharantripathy78@gmail.com[2]*

Abstract

Antenatal care is essential for the mother's and growing foetus's health during pregnancy. Proper weight increase is a sign of a good pregnancy since it has a direct impact on the weight of the baby, i.e. neonatal birth weight. Pregnancy problems include both excessive and insufficient weight gain. There is a risk of foetal development limitation with minimal weight gain, thus focus on serious issues. Serial fundal height measurement, USG, biophysical profile, ponderal index, and other methods are used to identify IUGR weight growth and accompanying symptoms. During pregnancy, women require more nourishment or supplements to ensure the normal development of the growing baby. Obstetricians nowadays recommend iron-calcium-folic acid supplements. This ailment was defined as "Upvistaka Garbhavyapad" in Ayurveda thousands of years ago, and its treatment is clearly recorded. To avoid this strange condition, pregnant women should follow the Ayurvedic regimen.

Keywords: *Upavistaka garbhavyapada, IUGR, Antenatal care, Pregnancy*

INTRODUCTION

Aim: To avoid intrauterine growth restriction, which is the second leading cause of perinatal illness and death. Many variables influence foetal weight, including the mother's ability to provide the quality and quantity of substrates essential for foetal growth. The placenta's capacity to transfer these nutritional substrates to the foetus is equally critical.

The most common antepartum consequences of an IUGR foetus are oligohydramnios, antepartum foetal distress, and stillbirth. Fetal hypoxia, acidosis, and a high rate of caesarean birth are examples of intrapartum problems. Hypoglycemia, hyperbilirubinemia, meconium aspiration, and prolonged foetal circulation are all examples of neonatal problems.

Amniotic fluid is made up of foetal urine and respiratory fluid. Shunting of blood from the splanchnic circulation results in decreased renal blood flow, decreased glomerular filtration rate, and hence less liquid in FGR. The vertical depth of cord free amniotic fluid pools in each of the four uterine quadrants is added to calculate the amniotic fluid index. A total depth of 5 cm or greater is considered typical. A single vertical pocket of amniotic fluid measuring larger than 2 cm is also deemed typical.

These symptoms are referred to as "Upavistaka garbhavyapada" in Ayurveda. Women have a variety of issues during pregnancy as a result of Mithyaahar-vihar (faulty eating habits and lifestyle), overexertion, stress, and malnutrition. These are Yonigatastrav, Udarshoola, and the foetal development is slowed3, among other things.

Discussion

Normal weight gain:

Weeks of Pregnancy	Weight gain of Mother (in Kg)	Weight gain of foetus (in Kg)
8	1.5	Not measurable
12	1.8	0.25
16	3.0	0.25
20	4.0	0.50
24	5.5	0.75
28	8.0	1.25
32	10.0	2.00
36	13.0	2.25
40	15.0	3.00

Incidence

Prematurity is the major cause of perinatal morbidity and death, with foetal growth restriction coming in second. The prevalence of IUGR in the general obstetric population is believed to be around 5%. Newborns weighing less than 2500gms at term have a perinatal death risk that is 5-30 times higher than infants whose birth weight is in the 50th percentile of normal weight. Infants weighing less than 1500gms have a mortality rate that is 70-100 times greater.

Risk factor associated with IUGR6
a) Malnutrition – low maternal weight, nutritional deficiency, iron deficiency b) Lungs disease – Asthma,COPD c) Vascular disease – Pre-eclampsia, PIH, gestational diabetes mellitus. d) Cardiac disease

In Ayurveda, growth retardation illnesses are known as Upavishtak Garbhavyapad (corresponding stoppage of foetal growth). Upavishtak Garbhavyapad is related with foetal feeding, which is entirely dependent on the mother. Upavishtak is associated with IUGR, which occurs when the foetal weight is less than 10% of the average for the gestational age. One of the great advances in modern obstetrics is the timely detection and therapy of IUGR.

Etiology

- Ushna and Tikshna aahar (hot & pungent),
- Atishram (over exertion),
- Divaswap (day sleep), Pushpadarshan (bleeding per vaginum),
- Yonigataraktastrav, Yonigatastrav, Garbhopghatkarbhavas.

Pathophysiology

If bleeding per vaginum or other forms of vaginal discharges occur for an extended period of time after four months of pregnancy, the foetus does not grow normally. Upavishtaka is the medical word for this ailment. Vata, worsened by the bleeding and withholding Pitta and Shleshma, compresses the foetal Rasavahanadi. The foetus does not develop properly and becomes Upavishtaka as a result of this obstruction to Rasavahanadi causing improper flow of rasa, just as paddy does not grow properly if water does not reach the field due to obstruction with leaves and grass etc. to its flow in the supply channels, i.e. improper placental supply of nutrients.

Author	Aetiology	Clinical Features	Period of Delivery	Principles of treatment
Charaka	Use of hot, pungent articles, Bleeding or other vaginal discharges during Sanjatasaragarbha (APH),	Absence of fetal growth, prolonged intra-uterine stay.	After considerable delay	Jivaniya, Brihaniyadrugs, eggs, riding, etc
Vagbhata I	Due to use of contraindicated articles in Sanjatasara-garbha, Continuous but less bleeding per vagina causing aggravation of Vata and obstruction to Rasavahanadi.	Absence of abdominal growth, quickening of fetus without decrease in its size, clinical features of other doshas.	After Years	Just like Charaka lateron induction of abortion
Vagbhata II	Bleeding in developed feotus	Just like Vagbhata I	-	Just like Charaka

Investigation

1. Inadequate weight growth (less than 4.3 kg) before to 24 weeks of pregnancy is an independent predictor of low birth weight or SGA.
2. **USG**
3. **Serial Fundal Height Estimation**
4. **Ponderal Index:** Two forms of FGR are described using the Ponderal index:

a) **Symmetric FGR:** These newborns have a normal Ponderal index, which means that their weight and length are restricted, and they have a modest head circumference. It is assumed that growth limitation begins early.

b) **Asymmetric FGR:** These newborns have a low Ponderal index, which means that weight is more restricted than length. There is late-onset growth limitation here.

5. **Biophysical Profile:** The BPP is a combination of the observation of the fetal behaviour with ultrasound (fetal breathing movements, fetal movements, fetal tone and amniotic fluid volume) and FHR monitoring and is a sensitive test to determine exhaustion of fetal reserve.

Management

1. **Bed rest in hospital or at home**
2. **Maternal Dietary Supplementation**

The effect of maternal nutritional supplementation through balanced caloric intake rather than specialised protein supplementation on foetal development is inconsistent. Though the impact is minor, foetal weights have been reported to increase by 100-300 g.

- the usage of Shali rice
- Vriddhi and Poshan of Garbha should be given Dugdha (milk) and Aamgarbha (egg).
- Rice gruel with ghrita produced from goat's milk, Jivaniya group medication and goat's milk
- Saptadhatuvardhak ahara: Improving Garbhini's Ahara-vihara will increase Garbha's Ahara-rasa Utpatti and nutrition.

3. Drug indication

a) Jeevaniya, Madhura, and Vataharadravyas are used with Ghrita,

b) Vacha ghrita, Maha paishachika ghrita.

c) Shatavari, Ashwagandha, Gambhari, Yastimadhu, Guduchi etc.

Formulation of Shatavari – powder (3-6 gm), Granules, Kshirpak.

Formulation of Ashwagandha – powder (3-6gm), Kshirpak.

Formulation of Guduchi – powder, ghanvati, Satva etc. Formulation of Gambhari – Decoction of root

4. *Anuvasan* Basti by medicated ghrita with drug of Darvyadi group.

PROBABLE ACTION OF DRUGS

Ashwagandha (Withania somnifera)

Vatakaphaghna, Brihaniya, Rasayan, Deepaniya, Vrishya, and Garbhasthapana are its Gunas. As a result, it has a high nutritional content and can assist raise uterine muscle tone while also acting on microcirculation. Antioxidant properties destroy free radicals, reducing oxidative damage; antispasmodic and relaxant properties increase placental circulation, which is one of the primary causes of IUGR.

Yashtimadhu (Glycorrhiza glbra)

It contains antioxidants and may be used as a Rasayan, Balya, Garbhaposhak, and Jeevaniya. It also aids in the treatment of debility.

Laghumalinivasanta Rasa

It is a Vasantkalpa, along with Madhur, Balya, Garbhaposhak, and Garbhvridhikar. Shudha Kharpar, Marich with butter is ingredients in the medication Laghumalinivasant. Kharpar, which mostly affects Rasavahini, Rasadhatvagni, and Rasutpadan Vikriti. It also works on Agnimandya, making it particularly useful in the treatment of Upavishtak, which is caused by severe Dhatukshay.

Gambhari

Tridoshashamak, Balya, Bruhaniya, Rasayan, Deepaniya, and Pachaniya are herbs that aid with IUGR induced by Dhatvagnimandya. Its Tikta rasa helps to eliminate blockage, allowing the foetus to get maximal Poshan and preventing LBW complications.

Shatavari

Rasayan, Balya, Pushti, and Snigdha Gunatmak are there. It has antioxidant properties. It also has an impact on Agnimandya, making it particularly useful in the treatment of Upavishtaka, which is caused by severe Dhatukshaya. Shatavari contains steroidal saponins, which aid in cellular hypertrophy (growth).

CONCLUSION

Upavishtaka (IUGR) is a prevalent obstetric condition with an increasing risk of perinatal death and morbidity. It is critical to identify IUGR. One of the benchmark successes in modern obstetrics is the timely detection and therapy of IUGR. Perinatal mortality can be decreased if the growth-restricted foetus is recognised and proper care is implemented. Proper appraisal and management can lead to a positive outcome. Ayurveda provides good therapies that are safe, naturally accessible, and revitalising; thus, Ayurvedic management should be encouraged so that a safe alternative approach is available.

REFERENCES

1. Gogate S (2001), Int. J. Dia. Dev. C, Fetal medicine clinic, vol.21, P.N. 51-55.

2. Tewari PV (1999), Ayurvediya Prasuti Tantra & Striroga, Garbhavyapad- Upavishtaka, Chaukhambha Oriantallia Varanasi, reprint 2003, P.No. 361

3. Tewari PV (1999), Ayurvediya Prasuti Tantra & Striroga, Garbhavyapad- Upavishtaka,

Chaukhambha Oriantallia Varanasi, reprint 2003, P.No. 361

4. suntmamica.ro/sarcina/tine-sub-control-cresterea-in- greutate-3070.

5. Jha CB (2006), Ayurvediya Rasashastra, Maharasauprasa-Kharpar, Chaukhambha Sanskrita Pratishthan Delhi, reprint, P.N.2238-241.

6. Ingle PV et. al (2012), IJPP, Socioculture healthy nutrition eating…, Vol.3, issue.5, July-Sep.2012,

7. Krishna U et.al (2011), J Obstet Gynecol India, Placental Insufficiency and Fetal Growth Restriction, Oct; 61(5): 505–511

8. Krishna U et.al (2011), J Obstet Gynecol India, Placental Insufficiency and Fetal Growth Restriction, Oct; 61(5): 505–511

9. Dutta DC (2006), Text book of Obstetrics, Low birth weight baby, New Central Book Agency Culcutta, 6th ed., P.N.464-465

10. Sharma PV(2006), Dravyaguna vigyan, Vrishyadi varga-Rasayana-, Chaukhambha Vishwabharti Varanasi, reprint, P.N. 225, 253, 562, 673.