

IUGR - AN AYURVEDIC REVIEW

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ABSTRACT:-

The ultimate aim of obstetrics is healthy mother and fetus .Delivery of normal neonate depends upon various factors. Infant's birth weight is one of the most important factor affecting neonatal morbidity and mortality. Apart from prematurity, Intrauterine growth restriction is a cause of LBW babies. IUGR causes many anti-partam, intra-partam and post-partam complications in fetus such as oligohydraminos, acidosis, RDS, hyperviscosity syndrome etc. IUGR also causes long term complications like learning disabilities, speech defects etc.

In developing countries like India with deficient resources for salvage of LBW babies , conservative management especially in milder forms of IUGR may still prove to have better survival advantage for the baby.

In *Ayurvedic* text, various disorders of fetus are described as *Garbhavyapada* which include *Upavishtaka* , *Nagodara* , *Garbhakshaya* , *Garbhashosha* etc. along with their treatment.

In *Ayurvedic* texts basically two management principles are described i.e. first *brihaniya* for *garbhavridhhi* and second *tikshna chikitsa* for *garbhapatana*.

KEYWORDS:- *Upavishtaka* , *Nagodara* , *Garbhashaya* , *Garbhashosha* , *IUGR*.

INTRODUCTION:-

The ultimate aim of obstetrics is healthy mother and fetus. Concept of fetal well being has gained important in conventional science in recent times but this concept of 'Suprajajana' is prime concern of *Ayurveda* since long. In fact most of the care of pregnant women is attributed toward the well being of fetus.

Various factors contribute towards the birth of healthy neonate. Infant birth weight is one such factor playing vital role in neonatal mortality and morbidity. Along with prematurity IUGR is another important factor causing LBW babies.

The incidence of IUGR among hospital born live birth infants is 9.65% as reported by National neonatal prenatal database of India.(1)

These newborns are unique because of their peculiar and increased risk of immediate and long term complication, which include oligohydromnios, acidosis, increased risk for RDS, MAS, IVH, neonatal encephalopathy, hypoglycemia, hyper - viscosity syndrome .etc

Long term sequel include neurological deficit in the form of minimal brain dysfunction, decreased attention span, learning disabilities, speech defects etc. Apart from these various epidemiological studies (Barker's Hypothesis – Fetal origin of Adult Diseases) suggest that IUGR is significant risk factor for chronic hypertension, IHD, Diabetes Mellitus and obstructive lung diseases.

In developing countries like India with deficient resources for salvage of LBW

babies' conservative management especially in mild form of IUGR may still prove to have better survival advantage for a baby. But no conservative treatment is gaining incontrovertible solution to this pertinent problem. And to find solution for this problem in *Ayurveda*, to treat effectively we must have to understand it properly. Hence to elaborate the concept of IUGR according to *Ayurveda* this topic has been selected.

Intra uterine Growth Restriction:-

Intrauterine growth restriction is said to be present in those babies whose birth weight is below 10th percentile of the average for the gestational age.

Fetal weight is determined by the genetic growth potential, the health of fetus, the capacity of mother to supply adequate quantity and quality of substrate required for growth and ability of placenta to transport that nutritional substrate to the fetus.

Etiological factors of IUGR includes fetal factors like chromosomal Abnormalities, congenital malformations, congenital infections, multiple pregnancies, uteroplacental insufficiency and maternal factors like nutritional deprivation, Various maternal diseases like PIH, chronic hypertension, sickle cell Anemia, etc,

Smoking, Alcohol, Narcotics and other drug abuse.

There are no effective conservative therapies of IUGR. Though bed rest, nutritional supplements hyperoxygenation, low dose aspirin are described as conservative management.

In *Ayurvedic* text, various aspect of embryology including preconceptional *Shuddhi* of *Shukra*, *Arthava*, *Garbhashaya*, *Yonimarga*, *Garbhotpatti*, *Garbhaposhan* etc are described in details. Various disorder affecting fetal health such as *Garbhastravapata*, *Upvistaka*, *Nagodara*, *Garbhashosha*, *garbhashaya*, *Lingarbha*, *Mritgarbha* are also described in depth along with their treatment. Among these *Upvishataka*, *Nagodara*, *Garbbashosha*, *Garbhakshaya* are the conditions which results due to *vikruti* in *Garbhaposhan* causing reduction in fetal growth.

Upvishtaka:-

While describing *Upavishtaka*, *Acharya Charaka* had stated that ,if bleeding per vaginum or other type of discharges occurs in pregnant female having *Sanjatsara garbha*, the fetus does not grow properly and stay in uterus for very long time(2).

Acharya Vagbhata further added presence of *spuarna* i.e fetal movement, no *kukshivardhana* as symptoms of *Upavishtaka*(3).

We can say that, this is the initial stage of IUGR where the fetus shows primary adaptive response to inadequate nutrition in the form of decrease in growth.

Garbhashosha:-

According to *Acharya Charaka* ,due to non-availability of proper nourishment to the fetus , the fetus suffers from ‘*Shosha*’ and attain its proper growth after years(4).

Acharya Sushruta further added ‘*Manda – spandana*’(reduced fetal movements) as a symptom(5).

In IUGR after decrease in fetal growth rate, if malnutrition continues ,then decrease in fetal movement occurs to conserve energy as described in *Garbhashosha* hence *Garbhashosha* can be stated as 2nd stage of IUGR.

Nagodara:-

While describing *Nagodava*, *Acharya Charaka* stated that the pregnant female often observes fasts, eats stale food and uses other *Vata* vitiating factors, her

fetus gets desiccated and does not grow. This fetus remains in the uterus for a very long time and does not show *Spandana* i.e fetal movement. (6)

Acharya Vagbhata described *parihyamana garbha* and '*chirat spandana*' as symptoms (7).

Same occurs in IGUR, when non-availability of nutrients continues, haemodynamical redistribution occurs to favour oxygenation of organ like brain and heart. This leads to reduce blood flow to fetal kidney which further leads to renal insufficiency and decrease in amniotic fluid volume. This may present as reduced fundal height i.e *parihyamana udarvridhi*.

In treatment *Acharyas* described *Brihaniya-Jeevaniya*, *Madhur aushadhi siddha ghritasevan*, *Ksheer Mansarasa*, *Amagarbha sevan*, *Ksheerbasti* and *Vatahar chikitsa*. *Acharyas* also mentioned use of *Tikshnavirechaniya dravya* or *Aparapataniya dravya* for *patana* and *Yanavahana*, *Dhanyakuttana*, *kshobhana*, *marjan*, etc.

It means if fetal growth does not occur with above measures, then termination of pregnancy should be done

with the help of *Tikshnavirechaniya* and *Aparapataniya dravya*.

And if no any intervention done at this stage, fetus shows s/o acidosis and further intra uterine death which is stated as '*linga -garbha*' and then '*antarnuritgarbha*'.

Conclusion:-

Upavishtaka, *Garbhashosha*, *Nagodara*, *Linagarbha* are different stages of IUGR according to severity of the disease.

Two different principles of treatment of *Upavishtaka*, *Nagodara* are described in Ayurvedic texts. Conservative management is advised in milder forms of IUGR followed by *Tikshnachikitsa* for termination of pregnancy in severe forms of IUGR.

This *Ayurvedic* conservative management can be beneficial in IUGR which is caused due to placental insufficiency, maternal nutritional deprivation.

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