



# Intra Uterine Growth Restriction (IUGR) Ayurvedic management: case report

Dr.Bhalgat Madhuri Sanjay.<sup>1\*</sup> Dr.Bodhale Priya Ajay.<sup>2</sup>

\*1 HOD and professor of Dept of Prasutitantra and Stiroga. SVNHT Ayurved college, Rahuri Factory, Ahmadnagar, Maharashtra.

2 PG scholar. Dept of Prasutitantra and Stiroga. SVNHT Ayurved college, Rahuri Factory, Ahmadnagar, Maharashtra.

## Abstract-

Intrauterine Growth Restriction is a major problem affecting pregnant women and results in significant perinatal mortality and morbidity. In the present case a 19-year-old Primi gravida who was under regular ante natal check-up was detected with Intrauterine Growth Restriction at 29 weeks of gestation. The abdominal circumference of the foetus was found to be less than 2.3 percentile and there was oligo hydramnios on further evaluation. She was given allopathic management initially, but the condition was deteriorating. She was referred for Ayurveda management and was treated with Ayurvedic medicines considering it as a case of Garbhasosha (foetal emaciation). She was administered Shatavari ghrita internally along with dietary advises. She delivered a healthy female baby of weight 2.97kg at term normally. The scope of modern medicine in improving the baby weight is limited in Intrauterine Growth Restriction. In the present case adequate weight gain of the foetus was achieved in a short span of time thereby preventing the need for early delivery and the pregnancy was continued till 39 weeks of gestation. Being a term delivery the need for neonatal intensive care also did not arise. The current approach indicates that Ayurveda is highly effective in intra uterine growth restriction. This case opens the scope for further research in the area of Intrauterine Growth Restriction with Ayurvedic medicines.

## INTRODUCTION

Intrauterine Growth Restriction (IUGR) has been defined as the rate of fetal growth that is below normal in light of the growth potential of a specific infant as per the race and gender of the fetus.<sup>1</sup> The causes of IUGR can be maternal, fetal, placental and unknown causes.<sup>2</sup> In most causes of IUGR blood flow to the fetus is compromised either through vasoconstriction or loss of blood<sup>3</sup>. There is no cure for the condition, and management is based on structured ante partum fetal surveillance program with proper timing of the delivery<sup>4</sup>. In Ayurveda IUGR is considered as Garbha sosha as per Acharya Susruta<sup>5</sup>. Even though drugs for Garbhasosha are mentioned in Ayurveda, since it is not readily available, shatavari Ghrita was selected for internal administration. In Garbhasosha, Vata is the predominant Dosha involved and Brimhana (nourishing therapy) is the line of treatment adopted for pacification of Vata<sup>7</sup>. In IGUR if the delivery is preterm there can be delayed fetal lung maturity and hence steroids are administered to mother before planning delivery. shatavari may help in the lung maturity of the fetus as well through Utero placental circulation. In this study shatavari ghrita was given along with dietary advises for duration of 16 days before delivery which was found to be effective as the baby was delivered at term with normal birth weight.

## Case Report

A 19 year old primi gravida who was under regular antenatal checkup SVNHT'S Ayurveda College Hospital, In prasuti tantra and streereroga department. Bharti Pathare, Desvande, Ahmadnagar was detected to have reduced fundal height of growth corresponding to 26 weeks when she came for antenatal checkup at 29 weeks. On further investigations she was detected with reduced liquor volume of 12cm and reduced abdominal circumference of the fetus. She was managed with allopathy initially and was advised to take high protein diet. But her condition deteriorated and her AFI reduced to 8-10 cm after 4 weeks. She was referred for Ayurvedic treatment since she was not responding to allopathic medicines. After starting Shatavari Ghrita along with diet modifications her Amniotic Fluid index improved and the pregnancy continued till term. She delivered normally at 39 weeks, delivered a healthy female baby of birth weight 2.97kg with APGAR Score of 9 at 1minute. She had mild elevation in BP three days prior to her delivery and was started on allopathic anti-hypertensive which was stopped immediately after delivery.

## Personal history

Appetite	Good
Diet	Non vegetarian
Bowel	Hard stools
Micturition	Increased frequency
Sleep	Disturbed
Allergy	Not known
Addiction	No addiction
Occupation	Student

## Menstrual history

Menarche	13 years
Interval	28-30 days
Duration	4-5 days
Amount of bleeding	2-3 pads per day, 1 pad per night
Clots	Occasional
Associated complaints	mild dysmenorrhea

Obstetric history	G1P0A0L0 Last menstrual period(LMP)-16 -08-2021 EDD-23.05.2022
Marital history	Married since 25-04-2021, No dyspareunia, No contraceptives used

**Obstetric Examination-**

Date	WOG	Weight	BP	Fundal height	Presentation	FHS	FM
16/03/2022	29weeks	74 kg	130/70	26weeks		+	+
13/04/2022	34weeks	77 kg	120/80	28weeks	vertex	+	+
27/04/2022	36weeks	78 kg	110/80	32weeks		+	+
01/05/2022	36weeks	86kg	120/90	32weeks	vertex	+	+

**Ultrasound scan findings-**

Date	Findings	Estimated <sup>11</sup>
11/11/2021	SLIU Foetus of 11weeks 3 days, NT-1.2mm. NB Seen.	
11/01/2022	SLIU pregnancy of 20 weeks 2 days.foetal structures grossly appear normal.	330+/-gms
18/03/2022	SLIU gestation of 30 weeks 2 days, AFI-12cm, abdominal circumference is 247mm correspondings to 29 weeks.	1498+/- gms
11/04/2022	SLIU foetus in oblique lie with vertex presentation corresponding tp 33 weeks. Abdominal circumference less than 2.3 percentile.	1940+/- 283gms
27/04/2022	SLIU Pregnancy correspondings to 35 weeks 5 days of gestation. AFI 10 cm. Doppler study is within normal limits.	2698+/-394 gms
11/05/2022	SLIU Gestation corresponding to 37 weeks 4 days AFI 10cm.	3168+/-478gms
14/05/2022	SLIU Foetus corresponding to 37 weeks 6 days in cephalic presentation liquar is 8 cm borderline less. Doppler study is within nrmal limits.	3215+/-496 /gms

**AYURVEDIC MANAGEMENT**

Date	Medicine	Dose	Anupana	Duration
1/5/2021	Shatavari ghrita	10gm-0-10gm	Sugar	16 days

**DISCUSSION**

IUGR was correlated with Garbha sosha mentioned in Susruta samhita where Vata vitiation is considered as the Nidana (aetiology). The treatment line for Vata vitiation is Brimhana (nourishing therapy). Shatavari ghrita was selected since the drug are having the properties of Madura rasa and Madura Vipaka which pacifies Vata<sup>8</sup>. Garbhini Karshya (emaciation in pregnant lady) is mentioned in the sixth month of pregnancy and in seventh month loss of strength and complexion is mentioned<sup>9</sup>. The changes seen in mother reflect the fetal growth and developmental aspects. In the

management of the above conditions in fifth month Ksheera sarpis (Ghee prepared from butter extracted from milk) is mentioned and in seventh month Madhurousdh siddha ksheera ghrita (ghee processed with drugs of sweet taste) is mentioned<sup>10</sup>. The placenta transfer nutrients and waste products between the mother and the fetus<sup>11</sup>. If a drug is lipophilic it can cross through the phospholipid bilayer of placenta by passive diffusion<sup>12</sup>. So it is proposed that lipid based substances cross the placental barrier to reach the fetoplacental circulation there by correcting the growth restriction. Sugar was advised as adjuvant since there is reference of Sita Madhuka Kasmaryadi Yoga in Garbhasosha<sup>13</sup>. The other drugs are not easily available and so the readily available formulation of shatavari Ghrita was selected. Egg white was advised since it is rich in amino acids like alanine, arginine, glutamine, lysine, histidine, proline, serine, valine, tryptophan etc which are present in amniotic fluid too. Based on the treatment principle of "Vridhi samana is arvesham" (Use of substances with similar qualities bring about the increase of body humors with similar properties)<sup>14</sup>, we advised the patient to take egg white and tender coconut water with cardamom powder. Tender coconut water is the liquid endosperm present in the cavity of the coconut fruit and contains amino acids, Vitamin B Complex, Vitamin C, 95.5% water, 4% sugars, 0.1% fat, 0.02% calcium, 0.01% phosphorous, 0.5% iron etc.<sup>15</sup>. Ela (Cardamom) is indicated in Kshaya (weakness), it is also Hridya (cardio tonic) and Deepana (increases digestive fire)<sup>16</sup>. Tender coconut water was advised since it is highly nutritious and cardamom was added to it as Anupana (adjuvant) as it helps in better digestion and absorption.

## CONCLUSION

- Ayurveda treatment with Shatavari Ghrita was found to be effective in correcting Intrauterine Growth Restriction and Oligohydramnios in a short span of time.
- This case can be used for further studies based on the drugs mentioned for Garhini Paricharya (Ante-natal Care) and in other contexts considering the Dosa (body humor) as lipophilic substances can pass through placenta to reach the foetus and there by correcting the growth restriction.
- Further studies on the effects of Shatavari Ghrita in utero can be conducted in animal models to understand the molecular basis of action.
- Ayurveda medicines provide a promising future in research related to IUGR

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