

A Case Report on the Management of Oligohydramnios at term with *Shatavari Ksheerapana* and *Balataila Matrabasti*

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ABSTRACT

Background: A primigravida female patient of 21 years of age came to *Prasutitantra* outpatient door (OPD) of National Institute of Ayurveda, Jaipur on date 25th November 2020 with chief complaint of Amenorrhea since 9 months and decreased fetal movement since night with no history of labor pain, leaking and bleeding per vaginal.

Methodology: The patient first visited OPD on 15th September 2020 for routine Antenatal check up with 6th months of gestation. Her ultrasonography was done as a part of Routine Antenatal investigations in which no any fault was seen and adequate amniotic fluid volume was found. Thereafter she was irregularly visiting NIA OPD for her routine checkup, even though she was advised for proper fluid intake, iron and calcium rich diet and advised to look out daily fetal movement. But due to some faulty dietary habits and negligence, during her 38th week of gestation patient perceives decreased fetal movement since the night of 24th November 2020 then she consulted in an allopathic hospital where an ultrasonography was performed in which severe oligohydramnios and decreased fetal heart rate was found. She was advised for emergency Caesarean section as soon as possible but she refused and again visited *Prasutitantra* department of NIA for the same. Then she was advised for *Balataila Matrabasti* on alternate days and *Shatavari Ksheerapana* orally twice in a day.

Results: There was a significant improvement found in amniotic fluid volume and also reduced incidence of operative interference. The patient delivered normally with a healthy baby without any pre induction and augmentation. No any sign of fetal distress was found.

Key Words: *Oligohydramnios, Garbhakshya, Garbhashosha, Shatavari Ksheerapana, Balataila Matrabasti*

INTRODUCTION

Amniotic fluid index (AFI) of less than 5cm is considered as oligohydramnios. It is associated with an increased risk of umbilical cord occlusion, fetal distress, meconium stained liquor, operative deliveries, and stillbirth at term. The symptoms of oligohydramnios like decreased fetal movement,

easy palpable but difficult to ballot fetal parts per abdominally relates with *Manda Spandana* or *Asapandana*, *Anunatakukshita* or *Maturkukshi na purayanti* like symptoms of *Garbhashosha* and *Gabhakshya* by Acharya Sushruta. An effective therapy is very necessary for the fetus to grow without any distress at term and to deliver

naturally. In modern medicine administration of L-arginine has been suggested to improve amniotic fluid index (AFI) in oligohydramnios as it is a precursor of nitric oxide and may play a role in local vasodilatation thus increases the volume and viscosity of blood in the fetomaternal circulation¹. But arginine also has some side effects when administered intravenously like nausea, vomiting, diarrhoea, dizziness, headache, flushing, sweating, abdominal pain, muscle and joints pain, mental or mood changes, unusual bruising, irregular heartbeat, trouble breathing etc. In Ayurveda, to manage oligohydramnios at term line of treatment of *Garbhakshya* and *Garbhashosha* plays an effective role with no adverse effect and give quick result. Use of *medhya* and *brimhaniyaahara* plays an important role in reduced amniotic fluid. Acharya Charaka's ninth month regimen for *Garbhini* i.e. *madhura aushadha sidha taila matrabasti* reduces the incidence of cesarean section prescribed for severe oligohydramnios condition and helps in achieving the goal of *Sukhaprasava* without any maternal and fetal complications.

Rationality of selection of trial drug

Acharya Sushruta mentioned the use of *Medhyaanna* in the treatment of *Garbhakshya*² and *Brimhaniyapaya* (milk) in the treatment of *Garbhashosha*³. *Shatavari* (*Asparagus racemosus*) *kand* (tuberous root) is said to be *Mehdaagnibalvardhini*⁴. It is *madhura rasa*, *madhuravipaka*, *sheetavirya*, *guru* and *snigdha guna*⁵. *Shatavari* is *Rasayana*, *Garbhaposhaka*, *Balya* and *Pushtidayaka*⁶. Acharyas have mentioned

milk in almost every month of pregnancy as it is well known for its *Jeevaniya*, *Rasayana*, *Medhya*, *Balya* and *Brimhaniya* properties⁷.

Acharya Charaka mentioned *Madhura Aushadha Sidha Taila Matrabasti* at ninth month for achieving *Sukhaprasava*⁸. For the formulation of oil *Bala* (*Sidacordifolia*) used as *madhura dravya* and *Tila* (*Sesamum indicum*) *Taila* used as base oil. *Bala* having *Prajasthapana*, *Brimhaniya*, and *Rasayana* properties⁹. *Bala* has *madhura rasa*, *madhura vipaka* and *snigdha guna*. It is also *Balya* and *Ojovardhaka* that's why helps in normal functioning of *Apanavayu* lead to normal vaginal delivery¹⁰. *Tila* has got *madhura rasa*, *madhura vipaka*, *snigdha guna*, *sukshma* and *vyavayi* in property¹¹.

Shatavari contains steroidal saponins, known as *shatvarins*, amino acid - asparagine, isoflavones, racemosol, flavanoids, sterols, trace minerals, etc¹². Milk contains omega-3 essential fats, calcium, selenium, phosphorus, potassium, B-complex vitamins, amino acids like lysine, histidine, leucine, valine, tryptophan and more¹³. *Bala* contains saponins, palmitic acid, stearic acid, ephedrine, beta-sitosterol, sterculic, malvalic, coronaric acid, betaphenethylamine etc¹⁴. *Tila* mainly contains fatty oils (palmitic acid, stearic acid, oleic acid, linoleic acid), sesamin, sesamol, vitamin E, B-complex, phytosterols, amino acids like lysine, leucine, glutamic acid, arginine and aspartic acid, sucrose, saccharides, etc¹⁵.

AIM

To study the effect of *Balataila Matrabasti* and *Shatavari Ksheerapaka* in treating oligohyramnios at term.

OBJECTIVES

To reduce the incidence of cesarean section due to oligohydramnios at term.

CASE STUDY

Chief complaint

Amenorrhea since 9 month

Reduced fetal movement since night of 24th November 2020 with no history of labor pain, leaking and bleeding per vaginal

History of Present Illness

A 21 year old primi gravid patient came to *Prasutitantra* outpatient door of National Institute of Ayurveda, Jaipur on 25th November 2020 with the chief complaint of amenorrhea since 9 month and reduced fetal movement since night of 24th November 2020. The patient first visited on OPD on 15th September 2020 with 6 month of amenorrhea with ultrasonography containing single live intrauterine pregnancy with all parameters normal. Patient was advised to visit regularly for routine follow up and to take appropriate diet rich in fluids, iron, calcium etc. also advised ultrasonography as a routine antenatal work up. Amniotic fluid volume was found adequate and all other parameters were also found normal. But due to faulty dietary habits, negligence, and irregular antenatal visit by the

patient she develops decreased fetal movement from the night of 24th November 2020. According to patient, she had developed diarrhoea prior few days due to faulty diet and she also reduced fluid intake from past few days. At night on 24th November 2020 patient visited an allopathic hospital for diminished fetal motility in uterus and ultrasonography was done there in which Amniotic fluid index was found <4cm, one loop of cord around fetal neck and diminished fetal heart rate. There she was advised for emergency caesarean section but patient refused she wants to give birth naturally. So on the same day she again visited *Prasutitantra* outpatient door of NIA for the same. She was examined properly for maternal and fetal condition and written consent signed by patient and her attended for Ayurvedic management for severe oligohydramnios.

Personal history

Appetite- Normal

Sleep- Disturbed

Bowel- Satisfactory

Micturition- Clear

Addiction- No any

Allergic history- No any

Diet- Mixed

Past Medical / Surgical / Family History

Not significant

Menstrual History

Last menstrual period – 1/3/2020

Expected date of delivery – 6/12/2020

Period of gestation – 38 weeks + 3 days (on 25/11/2020)

Obstetric History

O/H- G1 P0 L0 A0 (G1- Present pregnancy)

Married life: 1.5years

On General Examination:

General Condition: fair

Blood Pressure: 110/60 mm of Hg

Pulse Rate: 82/ min

Temperature: 97.8°F

Height: 5'2"

Weight: 74 kg

Pallor: Absent

Pedal Edema: Absent

On Systemic Examination: Digestive System, Cardiovascular System, Respiratory System, Central Nervous System appears normal.

Per Abdominal Examination: On palpation fundal height was found less than the period of gestation, lie was longitudinal with cephalic presentation. Fetal parts were easily felt but failure to ballot into the uterus. On auscultation fetus heart sound was present but with diminished

frequency of 120 beat per minute. No contractions were found.

Per Vaginal Examination: Pelvis was found adequate with no dilatation and effacement. No leaking and bleeding per vagina seen.

Antenatal investigations: All blood and urine investigations found normal.

MANAGEMENT PROTOCOL

From 25th November 2020 onwards patient was advised to take *Shatavari Ksheerapana* twice daily, 5gms of *Shatavari* root powder boiled in 300ml of milk.

Balataila Matrabasti was given on alternate days. Patient was instructed to come after a light diet (neither too *snighdha* nor too *ruksha*, and not more than three fourth of their usual diet) then 60ml *Balataila Matrabasti* was applied per anal in knee elbow position.

Table 1 Ultrasonography findings before management

Date	Ultrasonography findings
12/8/2020	Single live intrauterine pregnancy of approximate 23 weeks 4 days Fetal Heart Rate – 138/min Amniotic fluid – adequate (A.F.I. – 12.1cm)
7/10/2020	Single live intrauterine pregnancy of approximate 32 weeks 5 days Fetal Heart Rate – 146/min Amniotic fluid – adequate (A.F.I. – 11cm) One loop of cord around neck
24/11/2020	Single live intrauterine pregnancy of approximate 37 weeks 5 days Fetal Heart Rate – 117/min Amniotic fluid – less (A.F.I. - <4cm) One loop of cord around neck

Table 2 Schedule of *Balataila Matrabasti*

Date	Period of Gestation	PratyagamanaKaala
25/11/2020	38 weeks 3 days	3 hours
27/11/2020	38 weeks 5 days	1.5 hours
29/11/2020	39 weeks	2 hours
01/12/2020	39 weeks 2 days	2 hours

OBSERVATIONS AND RESULTS

Full term pregnant patient came to NIA *Prasutitantra* OPD with decreased fetal
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movement and amniotic fluid index < 4cm with no contraction and no leaking and bleeding per vagina with 38 weeks 3 days of gestation. After applying *Balataila Matrabasti* on alternate days and *Shatavari Ksheerapana* twice daily, patient perceived improvement in fetal movement in uterus day by day.

On per abdomen examination with each visit fundal height was improving and after 3rd *Matrabasti* it was corresponding to the period of amenorrhea i.e. nearly term size, fetal parts were not palpable so easily and ballotment was found positive. Ultrasonography report was done on 2nd December 2020 which mentioned that there was single live fetus of 37-38 weeks of gestation with Amniotic fluid index 8 cm, Fetal Heart Rate 140/min, normal fetal movement present and one loop of cord around neck present.

On 3rd November at 3:30am with gestational age of 39 weeks 4 days patient felt mild leaking per vagina without labor pain. Patient was advised for rest and she was kept under observation in hospital. Then at 10:00am contractions and active labor started. With reduced duration of first and second stage of labor patient delivered normally at 12:15pm.

The final outcome was full term normal vaginal delivery with vertex presentation with right medio-lateral episiotomy, and lady delivered a live healthy female child of weight 2.84kg on 3rd December at 12:15pm. There was no any sign of fetal distress seen at the time of labor. At the time of birth baby was found active and cried well. APGAR score was found normal. Third stage of

labor also completed in 10 min without any complications.

DISCUSSION

Oligohydramnios is a condition arises due to the *kshaya* of *Jaliya Mahabhuta*. *Shatavari* and milk having *madhura rasa, maduravipaka, sheeta* and *guru guna* can increase *Jaliyatatva*. With the consumption of *Shatavari Ksheerapana* twice daily amount of liquor increases so fetal can freely move in uterus without any restriction. So patient perceived proper fetal movement and ultrasonographical evaluation also proved marked increment in amniotic fluid index from < 4cm to 8cm. Previous signs of fetal distress were also reduced due to *Rasayana, Garbhaposhaka, Balya, Pushtidayaka, Jeevaniya, Brmhaniya* properties of *Shatavari Ksheerapaka*.

Balataila Matrabasti helps in proper functioning of *Prasruti Maruta (Apanavayu)* so that labor process starts at *Upasthita Kaala* (39 weeks 4 days of Gestation) patient delivered a baby with *Avakashira* (vertex presentation) through *Apathyapatha* (vagina) without having any complications to mother and fetus. This outcome fulfills all the conditions of *Sukhaprasava*¹⁶.

Saponin¹⁷ components and fatty acid (precursor of Prostaglandins¹⁸) present in *Bala* and *Tila* leads to influx of calcium and neutrophils into cell which is essential for proper uterine contraction and cervical ripening.

Probably amino acids, flavanoids present in the trial medicines neutralize the free radicals which causes damage to fetus, helps in growth and

nutrition of fetus and also play role in maintenance of normal amniotic fluid volume.

CONCLUSION

In present days oligohydramnios develops very frequently at term and increases the incidence of operative intervention. If Ayurvedic regimen for *garbhini* is well followed it reduces its risk. *Shatavari Ksheerapana* and *Balataila Matrabasti* are found effective in managing oligohydramnios at term by increasing amniotic fluid, well nourishment of fetus and reducing the risk of operative deliveries. Thus prevents maternal and fetal morbidity and mortality rate.

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