



AYURVEDIC MANAGEMENT FOR BORDERLINE

OLIGOHYDRAMINOS AND INCREASED SYSTOLIC TO DIASTOLIC
(S/D) RATIO OF UMBILICAL ARTERIES- A CASE REPORT

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Abstract:

Oligohydraminos is an extremely rare condition where the liquor amnii is deficient in amount to the extent of less than 200 mL at term. The present case is a 30-year-old Primigravida who was under regular antenatal check-up was detected with moderate oligohydraminos at 34 weeks and increased S/D ratio in umbilical arteries. The case was treated with Ayurvedic medicines, considering it as Upavishtaka (reduced foetal growth). She was administered with Jeevaneeyagana Ksheerapaka and Dadimadi Ghrtha internally along with dietary advice. The sonological parameters improved to normal liquor level and normal Doppler indices after 1 week and the pregnancy was carried further. She delivered a healthy female baby of weight 2.2 kg through vaginal delivery without any maternal or fetal complications.

Keywords: Upavishtaka, oligohydraminos, S/D ratio, Jeevaneeyagana, Dadimadighrtha.

Introduction:

Oligohydraminos is an extremely rare condition where the liquor amnii is deficient in amount to the extent of less than 200 mL at term. Sonographically, it is defined when the maximum vertical pocket of liquor is less than <2 cm or when amniotic fluid index (AFI) is less than 5 cm (less than 5 percentile). With AFI less than 5 cm (below 5th percentile)

or more than 24 cm (above 95th percentile) was considered abnormal at gestational age, from 28 to 40 weeks. AFI between 5 and 8 is termed as borderline AFI or borderline Oligohydramnios.¹ Occurrence of oligohydraminos will lead to many Complications during the late pregnancy. These include the following:

- Fetal distress, IUGR.
- Fetal pulmonary hypoplasia.

- Cord compression, resulting in fetal hypoxia and asphyxia.
- Prolonged ROM.
- Post maturity syndrome.
- Birth defects (compression of fetal organs, resulting in lung and limb defects).
- Premature birth, stillbirth.
- Prolonged labor due to uterine inertia.
- Increased risk of meconium aspiration syndrome.
- Increased requirement for operative delivery.²

Isolated oligohydramnios in the third trimester with a normal fetus is managed conservatively.³ one of the main causes that lead to this clinical condition is placental vascular resistance. Doppler study in the third trimester is one of the primary investigations that is used to assess the same. Arterial Doppler waveforms are helpful to assess the downstream vascular S/D ratio, pulsatility index (PI) or resistance index (RI) calculations. In a normal pregnancy the S /D ratio, PI and RI decreases as the gestational age advances. Higher values indicate reduced diastolic velocities and increased placental vascular resistance⁴. These features are at increased risk for adverse pregnancy outcome. These are

associated with FGR and intrauterine fetal hypoxia⁵. Hence the coexistence of increased S/D ratio of umbilical artery and oligohydramnios can be co related to *Upavishtaka Garbhavyapath*. Hence a case with similar features was managed using the treatment principle of *Upavishtaka*.

Case Report:

A 30 years old Primigravida consulted OPD of *Prasutithantra* and *Striroga*, Ashtamgam Ayurveda Vidyapeedhom, Palakkad, Kerala with complaints of moderately reduced amniotic fluid and increased S/D ratio in umbilical artery as evidenced in her sonographical report at 36 weeks of gestation. The patient was advised for a review after one week by the consulting gynaecologist and subsequent induction of labour if the fluid level and S/D ratios not improving in that span. So the patient came to address this to prevent further complications and continuation of pregnancy till term.

Obstetric History:

Patient is primigravida

Last menstrual period (L.M.P): 12/09/2020

Expected date of delivery (E.D.D.): 12/07/2021

Table 1: Investigations prior to management

BP on	110/70 mm Hg
Obstetric scan on 02/06/2021	Single Live Intrauterine Fetus (SLIUF) in cephalic presentation at an approximate gestational period of 34 weeks 2 days with oligohydraminos. AFI: 8cm
Foetal Doppler study 02/06/2021	Increased S/D ratio in umbilical artery. S/D ratio 3.66(Normal value:<3)

Course of Treatment:

1. *Jeevaneeyagana Ksheerapakam* 90 mL was given consecutively for 7 days twice a day after food.

2. *Dadimadighrtha* 5ml once a day on empty stomach.
3. Special Diet: Ladies finger soup once a day

Follow up: Done after 7 days

Table 2: Investigations after management

BP on 09/06/2021	110/70 mm Hg
Repeat Obstetric scan on 09/06/2021	SLIUF of 35 to 36 weeks of gestation. Liquor normal,AFI=11 cm
Foetal Doppler study 09/06/2021	Normal Doppler study with normal Doppler indices. S/D Ratio:2.77(Normal)

Outcome:

- Amniotic fluid level and umbilical artery Doppler indices were normalised as evidenced in USG.
- Patient had a fall on 11.06.2021 at 7.30 AM following which rupture of membranes occurred and by 12.30 pm on the same day she delivered per vaginally a full term female child weighing 2.2 kg with normal APGARScore without any maternal and foetal complications.

Discussion:**A. Rationale for comparison with *upavishtakagarbhavyapath*:**

While describing *Upavishtaka* it is mentioned that the disease condition happens when the *Garbha* is *Sanjathasara* - (occurs after the pregnancy is stabilised), the symptoms include *UdaraAvardhanam* (-no further enlargement of abdomen) and *Sasphuratha* of foetus (less perceived fetal movements)⁶. Lack of increase in abdominal girth and reduced movements of the foetus can happen due to the

reduced amniotic fluid volume. Since the present case has the same features it can be correlated to *Upavishtaka*. In ArunaDatta's *Tika* on AshtangaSangraha the pathology is described as the vitiated *Vatadosha* which withholds the *Pitta* and *Kapha* and constricts the vessels nourishing the foetus as if the accumulated debris obstructs the irrigatory channels leaving the fields to be dried up. If we consider the present case where the S/D ratio of umbilical artery is increased, it is indicating that the placental resistance has increased which will reduce the ease of foeto - placental circulation as mentioned above. Since the etiology and symptoms of the present case are comparable with that of *Upavishtaka*, such a comparison is made in this case report.

B. Rationale for choice of drug:

a) **Jeevaneeyagana Ksheerapaka:** Treatment principle of *Upavishtaka* mentions the use of drugs and therapies having *Snigdha*, *Madhura* and *VataAnulomana Guna*⁷. *Jeevaneeyaganam* in the form of *Ksheerakashayam* has *snigdha*, *madhura*, *sthira*, *mrudu*, *tarpana*, *vatahara* qualities along with the very basic *jeevaneeyaGuna* as its name points. Emphasis of *Ksheera* in *Garbhini* has been made as it is *Jeevaniya*, *Rasayana*, *Medhya*, *Balya* and *Brimhana*⁸. Hence use of *Jeevaneeyagana* as

Ksheerapaka is best suited for the present case scenario.

b) **Dadimadi Ghritam:** It is indicated in *apaanavayuvikruti* where the normal movement has been affected with *kaphaavarodha*. *Moodhavata anuloma*⁹ is being included as an indication of the yoga as it helps to clear *Srothorodha* due to the presence of drugs like *Chitraka*. Specific inclinations of the *yogam* in preventing and treating prenatal complications are been documented and are widely prescribed. Also it is mentioned as ideal for *DukhaPrasavini* and *vandhya* which emphasize its importance in the current case. The *samprapthi* of *upavishtaka* clearly mentions *GarbhaNabhinadiUparodha* by *Kapha* and *Pitta* which leads to *Srothorodha* and thereby reduced nourishment to the foetus in utero. This would have helped here in clearing the *Srotas* and making the *KsheeraKashaya* reach the target.

c) **Ladies finger/OchropossessSeeta, Pichila** as evidenced by *PratyakshaPramana* to improve the quantity and consistency of amniotic fluid and thus is in common practice as a dietary option in many of the traditional antenatal care practices.

Conclusion:

- Oligohydraminos is a condition which can cause serious maternal

and fetal complications. The conventional system has only limited options in managing this.

- In comparison, Ayurveda have multiple effective management options to oligohydraminos with medicines and diet which has the potential to correct the condition with in a very small time period
- Further research studies have to be done in this regard in a larger population and effective practices have to be sorted out and practised meritoriously.

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Annexure

Fig 1: Prior to management

1. USG report

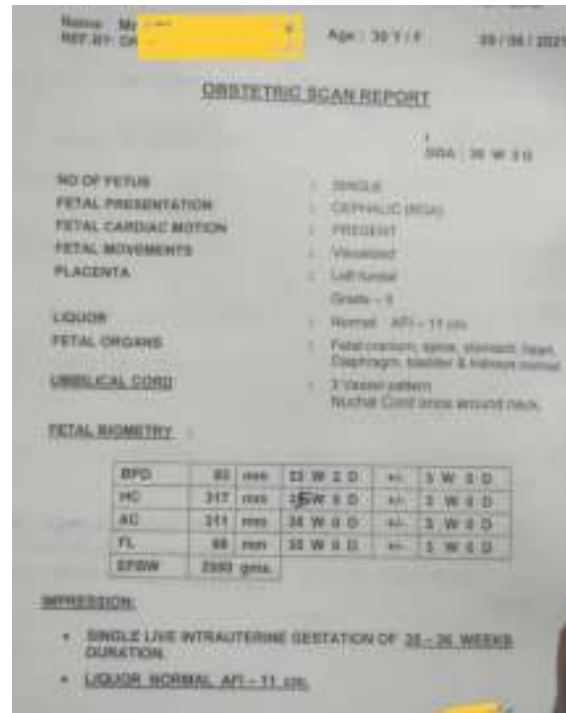
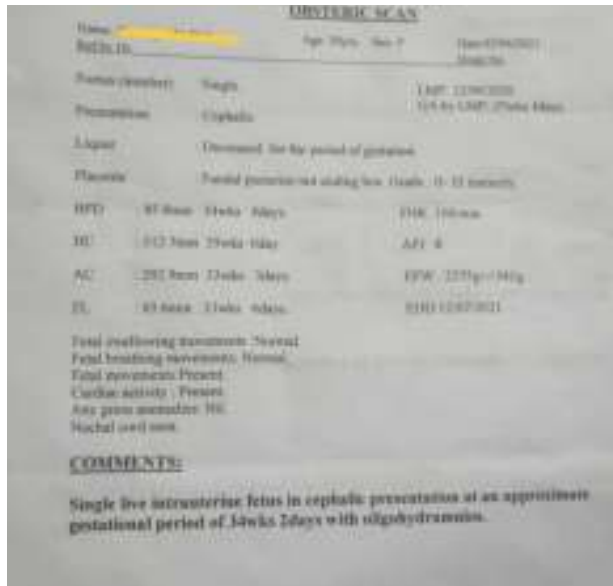


Fig:2 After management

2. Foetal Doppler study

