



Case Study

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ROLE OF TILATAILA (*SESAMUM INDICUM* LINN.) MATRABASTI AND YONIPICHU IN NORMAL VAGINAL DELIVERY: A CASE STUDY

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ABSTRACT

Pregnancy and delivery of the baby are normal physiological processes; they have also been considered emergency conditions because, at any time, they can terminate into a severe hazard. To prevent emergencies, Ayurveda mentioned month-wise management, i.e., Garbhini Paricharya; this was also incorporated with the management of pregnant women until delivery. The ninth-month regimen especially focuses on facilitating the way of delivery. Acharya Charaka prescribed Anuvasana Basti and Yonipichu with Madhura oushadha Siddha taila during the ninth-month regimen for achieving at last goal of Sukhaprasava. In the present study, a 31-year-old primigravida patient was selected, she was given Matrabasti and Yonipichu with Tila taila after 35th weeks of gestation till delivery, and she was assessed during labour to document the duration of different stages of labour through Partogram and Bishop's score. The patient delivered a live healthy female child at the gestation age of 40 weeks four days. The condition of the newborn was assessed by APGAR score and birth weight. Tila taila was used for the study as Tila (sesame) is considered under madhura drugs as it has madhura rasa and madhura vipaka; it is readily available and extensively consumed. Hence, the current study established its effect on the labour process.

Keyword: Sukhaprasava, Garbhini Paricharya, Matrabasti, Yonipichu, Prasuti Maruta, Garbhashana, Grabhamarga, *Sesamum indicum* Linn.

INTRODUCTION

Ayurveda is one of the oldest medical systems in which the way of living and pregnant women is explained scientifically. In the nine-month regimen, it has been told to adopt Anuvasana Basti and Yonipichu for the pregnant woman. Pregnant women can have perfect progeny in this world without trouble following the rules. In the nine-month Paricharya, the pregnant woman has been instructed to apply Yonipichu and Anuvasana Basti with Madhura Aushadha Siddha Taila in the last month to attribute lubrication to Garbhashana (uterus) and Grabhamarga (cervicovaginal canal)¹. So that the pregnant woman can efficiently deliver her progeny and attains the goal of Sukhaprasava. Anuvasana basti promotes the Anulomana² of Prasuti Maruta, which is essential for the act of labour. Yonipichu promotes the strengthening of perineal muscles by providing snigdhta through the vaginal route, which also helps in normal vaginal childbirth.

Day by day, due to the modern lifestyle, operative interventions during labour shots may be due to foetal distress, non-progress of labour (NPOL) or cervical dystocia. The rate of Caesarean section deliveries also rises³. Even for normal vaginal deliveries, oxytocic drugs to augment labour become very common, which may abnormalize the normal physiological process of childbirth. The extensive uses of oxytocic drugs and operative interference during delivery have many adverse effects on the parturient and her baby. Sometimes they may lead to a reduced APGAR score in a baby just after birth which is a sign of depression in a newborn that can affect its whole life. Operative interventions can

also lead to foetal injuries, which may be fatal or even cause intrauterine foetal death (IUFD). These may also have a negative impact on parturient women, like injuries during caesarean section, postpartum haemorrhage, uterine hyperstimulation or even uterine rupture. These all may also raise the emergency obstetric hysterectomy (EOH) rate, which causes mental depression, and hormonal imbalance in young women and makes the women permanently sterile. So, it is essential to follow some regimen during pregnancy which can negotiate all these disastrous outcomes and promotes Sukhaprasava.

Rationality of selection of medication

Taila is considered Yonivishodhanam⁴ and Garbhashaya shodhaka⁵. These properties of oil signify that oil works on the uterus and vagina, so its use as Matrabasti and Yonipichu before labour might be helpful in easy expulsion of product of conception. Tila taila (*Sesamum indicum* Linn.) is mentioned as the best oil in Ayurveda⁶, and it also has madhura rasa, madhura vipaka, snigdha and ushna guna⁷, which negotiates the rukshata, sheetata and laghuta of Vata and devotes Prasuti Maruta towards the right direction during labour. Tila taila also has sukshama and vyavayi guna, which promotes its fast and easy penetration. Tila also strengthens the uterus's perineal muscle and smooth muscle fibres by its Balya, Brimhana and Rasayana property, so they are actively involved in the act of labour and promote Sukhaprasava. Balya, Brimhana⁸ and Rasayana properties of Tila also improve the general condition and health of the new-born.

METHODOLOGY

The subject for the study was selected from the OPD of the National Institute of Ayurveda, Jaipur, Rajasthan. The Basti Chikitsa and Sthanika Chikitsa were administered to the patient to establish their effectiveness. Tila taila Matrabasti and Yonipichu applied once a week after 35 weeks of gestation and twice a week after 38 weeks until delivery.

Case Description

31 years old primigravida female came to OPD on 1/12/2020 seeking antenatal care. According to the patient, she was asymptomatic before seven months; she missed her period, then did a Urine Pregnancy test and found positive results. Then she visited an allopathic PHC for her routine ANC workup. After that, in the seventh month of gestation, she visited NIA OPD for further follow-up. In NIA Prasuti tantra, the OPD patient was examined properly, with necessary investigations.

Personal history

The patient had a normal appetite, sound sleep and clear micturition but had unsatisfactory bowel. She had no addiction or allergic history. She has non-significant past medical, surgical, and family history.

Menstruation History

Her last date of menstruation (LMP) was on 10/5/2020; prior, she had a regular menstrual cycle of 4-5 days with 28-30 days intervals without any significant complaint. Her expected delivery date was 14/2/2021, and her gestation period on 1/12/2020 was 29 weeks two days.

Obstetric history

She was a primigravida patient conceived for the first time (G1 P0 L0 A0)

General Examination

She had a general fair condition with Blood Pressure 120/80 mmHg, Pulse Rate 80 per min, a temperature of 98.0 °F, and no sign of pallor, icterus, oedema, and lymphadenopathy found. Her height was 5'2", and her weight was 73 kg.

Schedule of therapy

Table 2: Schedule of therapy

| Date | POG | FHS | Matra Basti | Basti Pratiyagaman Kaal | Yoni Pichu | Remarks |
|-----------|--------------------|---------|-------------|-------------------------|------------|---|
| 13/1/2021 | 35 weeks 3 days | 144 bpm | ✓ | 2.5 hours | ✓ | Relief in the previous complaint of unsatisfactory bowel |
| 19/1/2021 | 36 weeks 2 days | 138 bpm | ✓ | 3 hours | ✓ | No complaint |
| 28/1/2021 | 37 weeks 4 days | 144 bpm | ✓ | 4 hours | ✓ | No complaint |
| 2/2/2021 | 38 weeks 2 days | 148 bpm | ✓ | 2.5 hours | ✓ | Lightening felt by the patient |
| 5/2/2021 | 38 week 5 days | 136 bpm | ✓ | 3.5 hour | ✓ | No fresh complaint |
| 8/2/2021 | 39 weeks 1 day | 142 bpm | ✓ | 2 hours | ✓ | False labour pain appeared |
| 13/2/2021 | 39 weeks 6 days | 140 bpm | ✓ | 4.5 hour | ✓ | Show present |
| 16/2/2021 | 40 weeks 2 days | 142 bpm | ✓ | 3 hours | ✓ | The cervix becomes ripened, and the tip of the finger can be admitted |

POG- Period of Gestation, FHS- foetal Heart Rate

Systemic Examination

All systems (CVS, RS, GI and CNS) appeared normal.

Obstetric Examination

She had positive breast changes during pregnancy. On per-abdominal examination, fundal height was found at 28-30 weeks of gestation, cephalic presentation, and foetal heart sound (FHS) heard clear and regular. On per-vaginal examination, vulva and vagina appear healthy and pelvis found adequate.

Investigations

All blood and urine investigations were normal, with haemoglobin 11.3 gm%. She had a USG report on 30/11/2020 that revealed that she had single live intra-uterine pregnancy of 29 weeks with a cephalic presentation, foetal heart rate regular and 161 beats/min, effective foetal weight of 1357 gm, Amniotic fluid index of 13 cm.

Antenatal advice

She has advised some Ayurvedic formulations like Shatavari Powder (3 gm BD with milk), Dadimashtaka powder (3 gm BD with water) and *Amla* powder (3 gm BD with honey). She was also instructed to perform daily routine work, have green leafy vegetables, juicy fruits, milk, coconut water etc. and avoid preserved, not easy digestible eatables. After that, with the patient's and her husband's written informed consent, she planned for Matrabasti and Yonipichu of Tila taila after the 35th week of gestation as per the ninth month Garbhini Paricharya advised by Acharya Charaka. She was examined on each visit for maternal and foetal well-being. All necessary investigations were also performed in the ninth month before the onset of labour.

Plan of therapy

Table 1: Plan of therapy

| | |
|--|--|
| Matrabasti (60ml Tila taila) | Administered through the anal route, once a week after the 35 th week of gestation till the 38 th week and after the 38 th week, twice a week till the onset of labour. |
| Yonipichu (Diameter 2-4 cm, soaked in 15 ml of Tila taila) | Applied in the vaginal canal, once a week after 35 th week of gestation till 38 th week and after 38 th week, twice a week till the onset of labour and removed after two hours of application. |

OBSERVATION AND RESULT

The patient got true labour on 18/2/2021 at 40 weeks and four days of gestation. Then she was admitted for regular monitoring

of vitals, contractions and FHS. An assessment of the effect of therapy was done through Bishop's score, Partogram, APGAR score and birth weight of a new-born.

Modified Bishop's Pre-Induction Cervical Score

Table 3: Bishop's score findings

| Clinical Features | Time | | | |
|--------------------|----------|-----------|-----------|-----------|
| | 6:00 pm | 8:30 pm | 10:00 pm | 10:45 pm |
| Dilatation | 3 cm | 4 cm | 7 cm | 10 cm |
| Effacement | 2 cm | 2 cm | 1 cm | <1 cm |
| Station | -2 | 0 | +1 | +2 |
| Consistency | Soft | Soft | Soft | Soft |
| Position | Midline | Anterior | Anterior | Anterior |
| Total score | 7 | 10 | 12 | 13 |

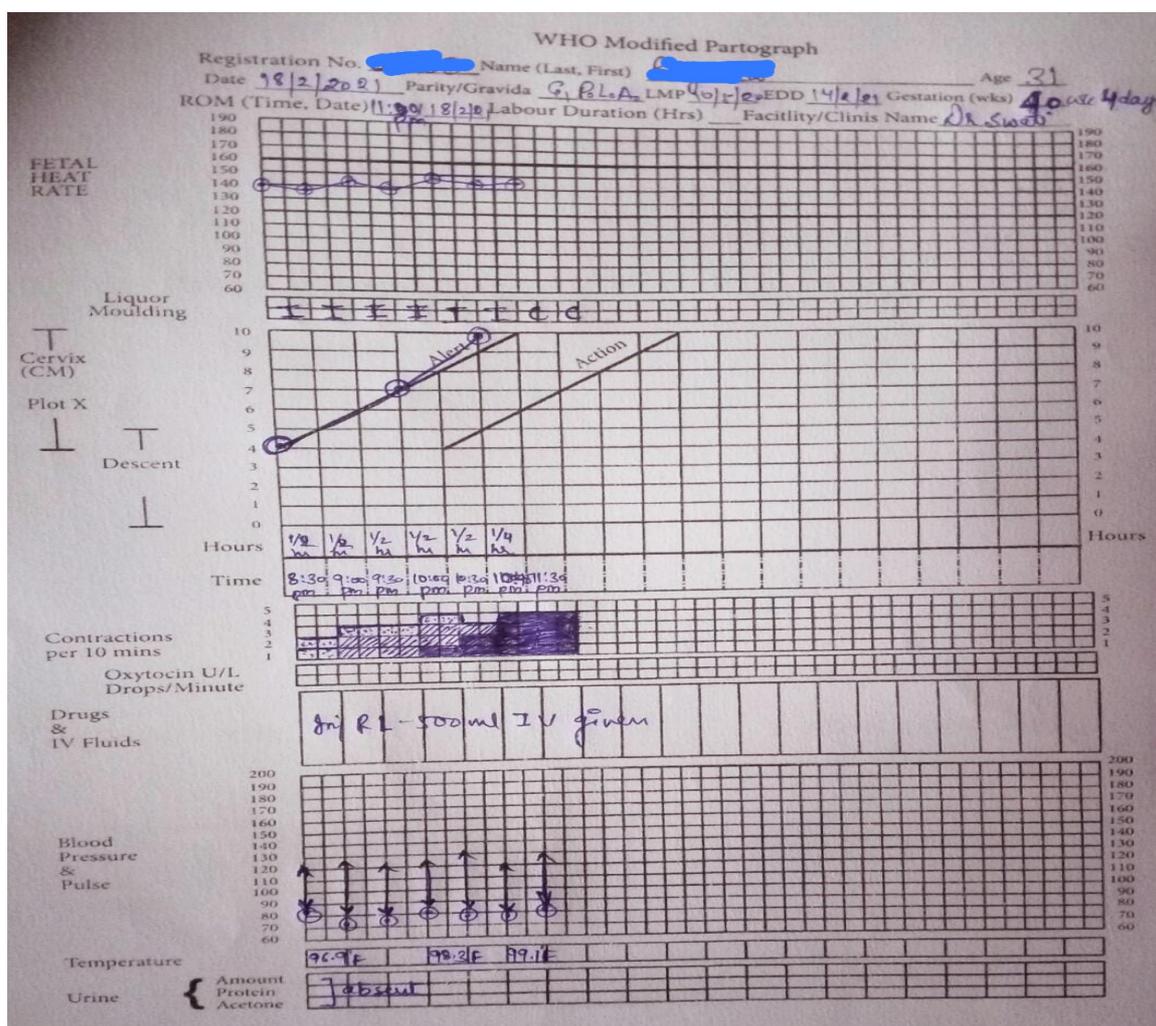


Figure 1: Partogram findings

Bishop's score was more than 6 in the latent phase of labour; hence, the cervix was favourable, and scores progressively increased with the duration.

Partogram

Partogram depicts that the active phase of labour took 2 hours 15 min, the second stage took 48 min, the membrane ruptured after full dilatation of the cervix and liquor was found clear. There was no sign of foetal distress during all stages of labour. Uterine

contractions were adequate with good frequency and intensity. After full dilatation of the cervix during the second stage, the parturient applies good bear-down efforts. And finally, the patient delivered a live healthy female child at 11:33 pm with the normal vaginal route with a small prophylactic episiotomy. Placenta delivered out within 12 minutes. No perineal tear and postpartum haemorrhage were found. The general condition of the patient was found stable.

APGAR score of the new-born

Table 4: APGAR score findings

| Signs | Time | | |
|-------------------------------|----------|----------|-----------|
| | 1 min | 5 min | 10 min |
| Activity (muscle tone) | 1 | 2 | 2 |
| Pulse | 2 | 2 | 2 |
| Grimace (reflex irritability) | 1 | 1 | 2 |
| Appearance (skin colour) | 2 | 2 | 2 |
| Respiration | 1 | 2 | 2 |
| Total score | 7 | 9 | 10 |

No sign of depression was found in the APGAR score at any stage, and the general condition of the new-born was found stable.

Birth weight of new-born: 2.98 kilogram

The birth weight of a new-born is nearly equal to the average birth weight (2.9 kg) for the country India⁹. No birth weight-related complications were found.

DISCUSSION

Basti has a wholesome effect on the body¹⁰ and a local impact. Oil will absorb through the rectal mucosa, and its stimulations reach the central nervous system¹¹, where it activates the posterior pituitary to secrete natural oxytocin, essential to initiate and maintain rhythmic uterine contraction to expel out product of conception. Through its local effect, it provides strength to the pelvis muscles to bear pressure during labour so that the chances of injury decline. Yonipichu induces Ferguson reflex over the cervix through pressure, stimulating oxytocin secretion to maintain uterine contraction. Tila taila contains polyunsaturated fatty acid that forms Arachidonic acid, the precursor of Prostaglandin¹², which induces calcium influx into muscle fibres of the myometrium to slide phosphorylated light chain of myosin over the actin chain to contract the whole muscle. Saponins in the Tila taila have a similar action by making pores between the cell membranes. The influx of calcium ions into the cervical tissue also leads to collagenolysis by increasing nitric oxide synthase and lysosomal activity. Saponins are hydrophilic compounds that induce water entry into the cervical, leading to cervical softening¹³, ultimately leading to cervical ripening.

The trial patient was 31 years of age and conceived for the first time; despite it, she didn't get any complications during the natural childbirth after proper following of ninth month Garbhini Paricharya. The antimicrobial property of oil prevents the rupture of membrane prematurely, and Yonipichu with the Tila taila also accelerate cervical ripening in primigravida patient and reduces the duration of the active phase of labour. Tila taila has Balya and Brimhaniya properties, while Basti has a wholesome effect on the body. Thus, Tila taila Matrabasti provides strength to the muscles of the parturient to increase the bearing down stamina during the second stage of labour which ultimately reduces its duration to 48 min, which is significantly less for a primigravida patient. Matrabasti and Yonipichu with Tila taila also regulate the vitiated Apanavayu on right passage for the good progress of labor¹⁴. The uterine muscles also retract soon after the fetus's delivery, so the placenta separates easily without any external effort and prevents postpartum haemorrhage.

Balya, Brimhaniya and Rasayana property of Tila also convey its effect on the full-term foetus as no sign of depression was found during the stressful stages of labour and confirmed the excellent APGAR score after delivery with proper birth weight.

CONCLUSION

Garbhini Paricharya effectively achieved normal vaginal delivery without complications in the ninth month. Matrabasti and Yonipichu help in the preparation of the maternal body for the process of labour. The role of Tila taila as Matrabasti and Yonipichu also has promising results on the outcome of a delivery and on the general condition and health of the mother and her new-born. So, every Garbhini should be treated with Matrabasti and Yonipichu during the ninth month of gestation for achieving Sukhprasava with the oil preferred Tila taila.

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