



ROLE OF YOGBASTI AND YONIPICHU IN FACILITATING ENGAGEMENT OF FETAL HEAD FOR PRASAV (NORMAL DELIVERY) – A CASE SERIES

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ABSTRACT

Prasav means is a challenging process in a woman's life. Although the relationship between fetal head engagement and normal vaginal delivery remains debated, several studies suggest that nulliparous women with an unengaged fetal head at term are more likely to require a caesarean section. Since engagement is the first step in the labour process, it is clear that labour cannot progress without the fetal head passing through this phase.

The ancient Acharyas of Ayurveda advocated about regimen for normal labour and to ease the process. Basti and Yoni Pichu are Ayurvedic procedures where indicated drug are instilled through anus and vaginal orifices respectively to establish the normal labour.

Aim - To study yogbasti & Bala tail Yonipichu in facilitating engagement of fetal head for Prasav in Primigravidae women.

Material and Methodology - A prospective case study was conducted with four primigravidae women who presented at 34 weeks of gestation or later, with a floating fetal vertex where 4/5 to 5/5 of the fetal head was palpable above the pelvic brim, and who met the inclusion criteria. The recent ultrasound confirmed the cephalic presentation, while the engagement of the fetal head was evaluated clinically through abdominal palpation of the fifths. Yogbasti & Bala tail Yonipichu is administered to four enrolled women after 35 weeks of gestation, according to the study protocol.

Result - All four women exhibited foetal head engagement after an average gestational age of 37 weeks. Each participant had a successful and uncomplicated vaginal delivery, with no intrapartum or postpartum complications for either the mother or the baby.

Conclusion - This study indicates that Yogabasti and Yonipichu might help facilitate the engagement of the foetal vertex in primigravidae women, contributing to positive outcomes for vaginal delivery.

KEYWORDS – Yogabasti, Yonipichu, Sukhaprasav, Normal labour, Garbhini paricharya.

INTRODUCTION

Childbirth is a momentous milestone in the lives of parents, bringing immense joy and fulfilment. Childbirth process i. e. 'Labour' is the series of events take place in the genital organ in an effort to expel the viable product of conception out of the womb through the vagina.[1] Ayurveda describes the process of a normal labour as 'Sukha Prasava', where the baby is expelled through the vaginal route due to the influence of Prasuta-maruta (Apan vayu).[2] Normal vaginal delivery is considered not only safer for the mother but also for the child. However, there has been a notable decline in the rates of vaginal delivery, often due to the fear of labour pain, life style changes and the demanding work schedules of women.

The engagement of the fetal head is a crucial cardinal movement in the mechanism of labour. Classically, it is said to occur when the biparietal diameter, which is the largest transverse diameter of the fetal skull, passes the plane of the pelvic inlet. This engagement may occur during the last few weeks of pregnancy or not until the initiation of labour. It is observed that nulliparous women with an unengaged fetal head at term are more likely to undergo delivery via caesarean section (CS) [3]. Many standard obstetric textbooks state that spontaneous engagement of the fetal head in primigravidae should typically occur by the 37th week of pregnancy. They

suggest that failure to achieve this may indicate cephalopelvic disproportion and warrant further investigations. Primigravidae and nulliparae, particularly those who are very young or elderly, are considered high-risk obstetric groups that require close monitoring during pregnancy and childbirth. Primigravidae are at a higher risk of experiencing labour complications compared to multiparous women, as more uterine effort is needed to overcome resistance in the birth canal. One of the main predictors of successful vaginal delivery is the engagement of the fetal vertex. If the fetal head is not engaged, it can prevent proper contact between the head and the cervix, which has been linked to an increased risk of dystocia in nulliparous women. Several studies have shown that when the vertex is engaged at the start of active labour, the likelihood of a vaginal birth is higher and the chances of requiring a caesarean section are lower. On the other hand, if the vertex is unengaged during labour, the risk of needing a caesarean section increases. However, some studies have not found such a relationship. These findings have led to further investigation into potential interventions to help facilitate vertex engagement in primigravidae.

In ancient Ayurveda Acharya describe a proper Garbhini Paricharya, which helps to bring a Sukhaprasava (Normal delivery) and reduces postpartum complications. In this

paricharya one of important karma among panchakarmas that is Basti mentioned by acharyas. Even though Panchakarmas are contraindicated in pregnancy; few basti can be given during pregnancy.[4] Asthapana basti clears the retained feces and Anuvasana basti of tila tail and Yoni pichu (Vaginal tampon) of the Bala tail for lubrication of garbhasthana and garbhamarga.

Bala tail is the supreme remedy for the functions of Balya (strengthening) and Vatahara (pacifying Vata). It operates as a uterine tonic with radical scavenging and antioxidant properties that contribute to the normalcy of pregnancy.[5]

Aim

The aim of this study is to evaluate the effect of Yogbasti and Yonipichu on engagement of foetal head for Prasav. (Normal delivery)

MATERIALS AND METHODS

Study Site

The study site is outpatient department (OPD) and inpatient department, of Seth R. V. Ayurvedic hospital of APM's Ayurved Mahavidyalaya Sion.

Study Type

A prospective case series study was conducted with four primigravidae women who presented to PTSR OPD at Ayurved mahavidyalaya, Sion, at a gestational age of 34 weeks or more with a floating fetal vertex, and who fulfilled the inclusion criteria during the period from October 31, 2024 to December 14, 2021.

Informed Consent

Patient was informed for the details and written consent taken.

Limitation of study

Present study was undertaken and it should be done in large sample

Diagnostic Assessment

The cephalic presentation was confirmed through recent ultrasound findings. Assessment was performed using per-abdominal in fifths of the foetal head and foetal vertex with 5/5th to 4/5th part palpable above the pelvic brim considered as floating, whereas 0/5th, 1/5th, and 2/5th of the part palpable above the pelvic brim was considered as an engaged vertex.[7]

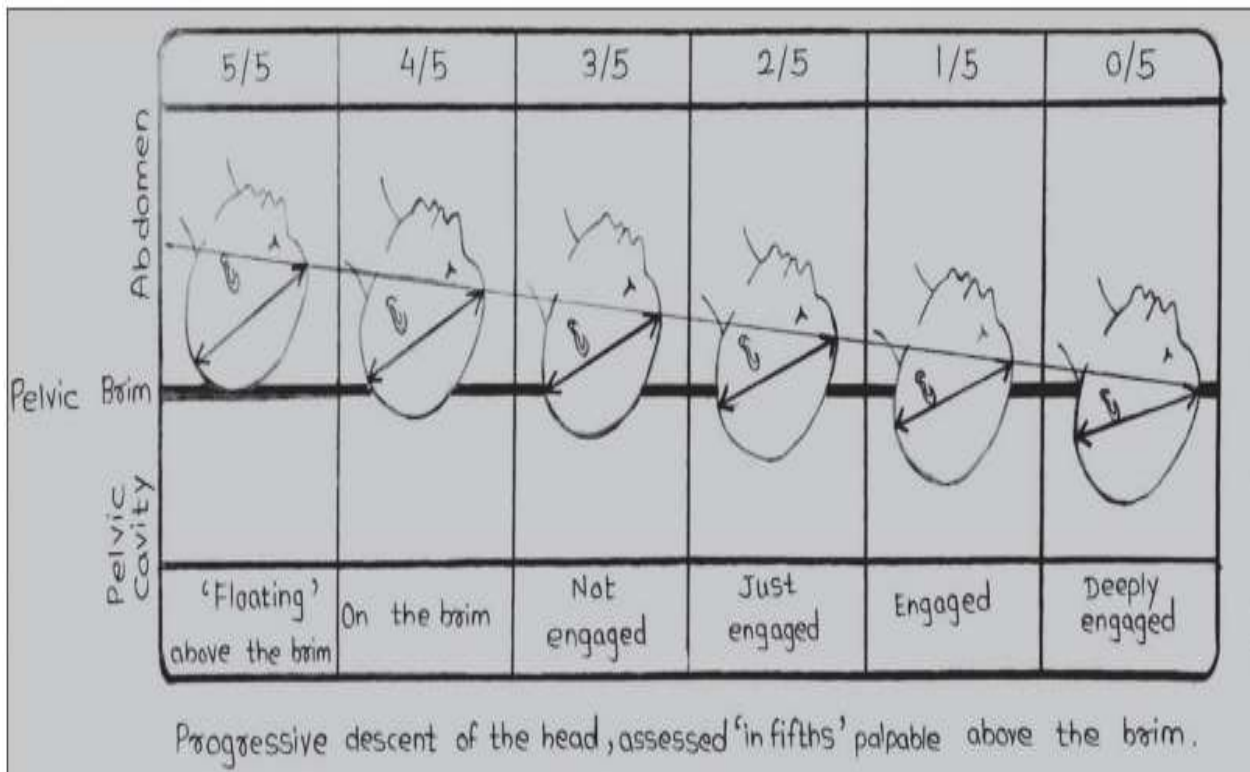


Figure no. 1: Progressive descent of the head, assessed 'in fifths' palpable above the brim

Table no. 1: In Fifth's Assessment

5/5 th	Whole of the fetal head is palpable above the pelvic brim	Floating head
4/5 th	Four-fifths of the fetal head is palpable above the brim of the pelvis; one-fifths is therefore below the pelvic brim	At brim
3/5 th	Three-fifths is palpable above the brim of the pelvis and two-fifths below	Not engaged, not floating
2/5 th	Two-fifths palpable above the brim of the pelvis and three-fifths below	Just engaged
1/5 th	One-fifth of the fetal head is palpable above the pelvic brim and four-fifths are Below	Engaged
0/5 th	No fetal head is palpable above pelvic brim, that is, whole of the head is below the pelvic brim	Engaged



Therapeutic Intervention

Asthapana basti of dashamool kwath and Anuvasan basti of tila tail and Yonipichu of Bala tail was administered to the four enrolled cases after the completion of 35 weeks of gestation.

Inclusion Criteria

1. Primigravida.
2. Per abdominal palpation of fetal head showing four fifth to five-fifths status.
3. Height between 147 and 170 cm/4'9"-5'7".
4. Negative abdominal method of Muller–Munro Kerr maneuver.
5. Willing to give voluntary written informed consent for participation in the study.

Exclusion Criteria

1. Primigravida with engaged head
2. Positive abdominal method of Mueller–Munro Kerr maneuver.
3. Primigravida in preterm labour, pregnancy-associated with pregnancy-induced hypertension (HTN), chronic HTN, gestational diabetes, pregnancy-associated with big baby, intrauterine growth restriction (IUGR), multiple pregnancies, pregnancy-associated with pathologies like soft tissue tumors, benign/malignant tumors, ovarian cysts, and uterine or cervical fibroids.
4. Woman with systemic illnesses like bronchial asthma, HTN, tuberculosis, and cardiac disorder.
5. Not willing to participate in the study.

Withdrawal Criteria

1. Preterm labour.
2. Premature rupture of the membrane.
3. Development of IUGR, incompetent os of cervix, HTN, diabetes mellitus, preeclampsia and eclampsia.
4. If any serious complication develops during the course of the trial that requires emergency intervention.
5. If patient wants to withdraw from the study.
6. Non-compliance of the patient.

Assessment of Engagement

Assessment of engagement was conducted based on the in-fifths palpation [7] of the fetal head above the pelvic brim, as described in the abdominal method of Mueller Munro Kerr maneuver. In this study, fetal head engagement is defined as two-fifths or less palpable per abdomen. Information regarding each patient's age, marital status, gestational age at booking, height, fetal head engagement, mode of delivery, birth weight, and APGAR scores of the baby were recorded in the data sheet.

Intervals of Assessment

1. At the time of enrollment.
2. Every 2 days after beginning of yogbasti and yonipichu

Follow-up details

Follow-up of the patients was taken until delivery to note the mode of delivery, birth weight of the baby, and any intrapartum complications.

Case Presentations

Case 1

A 25-year-old married Hindu primigravida, standing at 162 cm tall, in her 36.4 week of pregnancy, visited PTSR OPD of Seth R. V. Ayurvedic hospital of APM's Ayurved Mahavidyalaya Sion (PTSR) OPD, for her antenatal checkup (ANC). She had been married for 18 months with no significant past history. Her last menstrual period (LMP) was February 18, 2024, and her estimated date of delivery (EDD) was November 24, 2024. During her ANC checkup, her vitals were found to be normal, and foetal heart sound were recorded at 148 bpm. Her fundal height revealed a uterus of term size, and upon abdominal examination, the fetal head was found to be floating, with five-fifths palpable above the brim.

Case 2

A Hindu primigravida women, 20-year-old, 5.3 feet tall, visited PTSR OPD of Seth R. V. Ayurvedic hospital of APM's Ayurved Mahavidyalaya Sion, Mumbai for her regular checkup at 36 weeks of gestation. Her LMP was on 17/3/2024, and her EDD was 22/12/2025. She had no significant past medical or surgical history. Her vitals were found to be normal, and the size of her uterus corresponded to the period of gestation. Upon examination, four-fifths of the fetal head was palpable over the brim.

Case 3

A Hindu female 19-year-old, 5.1 feet, with an obstetric history of G1P0, visited the PTSR OPD of Seth R. V. Ayurvedic hospital of APM's Ayurved Mahavidyalaya Sion, at 37.2 weeks of gestational age. Her LMP was on March 28, 2024, and her EDD was January 2, 2024. During her per abdominal examination, her fundal height corresponded to the period of gestation. Upon fifth's evaluation, it was found that four-fifths of the fetal head palpable over the brim.

Case 4

A 21-year-old Muslim woman, standing at a height of 5.3 feet, married for 1 year back with no significant past history, completed 36.3 weeks of gestation and visited the Prasuti OPD of Seth R. V. Ayurvedic hospital of APM's Ayurved Mahavidyalaya Sion, for her routine antenatal checkup. During her per abdominal examination, the fetal head was found to be freely floating with five fifths of the foetal head palpable over the pelvic brim. Her LMP was on March 3, 2024, while her EDD was January 9, 2024. She was a primigravida with no previous history of abortions. Her vitals were normal, and the fundal height corresponded to the period of amenorrhea.

Management

Principle of Management

After confirming the unengaged vertex with in-fifth's palpation and ruling out cephalopelvic disproportion with the abdominal method of Muller–Munro Kerr maneuver, Yogbasti (Asthapana basti with Dashamool kwath and Anuvasana basti with Tila tail alternately for 8 days) was administered after completion of 35 weeks of gestation.

Preparation of Basti

Asthapana basti

Asthapana basti is prepared by mixing following drugs –



Makshika – 10gms Saindhav lavana – 5gms
 Sneha dravya – 60 ml Kwath – Dashamool Kwath – 400 ml

Anuvasana basti
 Tila tail – 120 ml Saindhav lavana – 2-3gms

Administration of Yogbasti

Yogbasti includes 3 Asthapana basti and 5 Anuvasana basti. In Yogbasti, 1 Anuvasana basti are given for first day followed by alternative administration of Anuvasana and then Asthapana basti. The prepared warm Asthapana basti dravya or Anuvasana basti dravya was administered using sterile plastic syringes of 100 mL and rubber catheter no. 8.

Dose of administration - 480 ml of Asthapana basti, 120 ml of Anuvasana basti

Timing of administration – Asthapana basti – empty stomach. Anuvasana basti - after food.

Duration of administration - after 35 weeks, for 8 days.

Administration of Yonipichu

Pichu application is a type of Sthanik Chikitsa (local application) or a type of Snehan therapy. Pichu is made of

cotton. It is the application of sterile swab wrapped with gauze piece soaked in Bala tail and put into the vagina.

Time of administration – After nirvapan of basti and in Amutra veg avastha.

Duration of Yonipichu – Yonipichu should be kept inside vaginal for 4-5 hrs for 8 days and should be removed after that under guidance of expert.

OBSERVATION AND RESULT

Cases 1, 3 and 4 showed remarkable improvement in the fifth assessment for engagement of the fetal head following 8, 4 and 8 days of basti respectively, whereas Case 2 showed improvement in the engagement status of the foetal head with 6 days of basti respectively. Considering data from four cases, engagement is observed to have occurred following the administration 6 days of basti. The periods of gestation in weeks at which engagement of the head had taken place were 37.4, 36.5, 37 and 37.3 weeks, respectively, in cases 1– 4. Therefore, the average gestational age at which engagement occurred following the administration of Yogbasti and Yonipichu is 37.05 ≈ 37 weeks.

Table no. 2: Details of enrollment, Basti administration and assessment

	Case 1	Case 2	Case 3	Case 4
Date of enrollment	31 st October 2024	24 th November 2024	9 th December 2024	14 th December 2024
Period of gestation at time of enrollment (weeks)	36.4	36	36.4	36.3
Status	Five-Fifths	Four Fifths	Four Fifths	Five-Fifths
Date of Basti Administration	31 st October 2024	24 th November 2024	9 th December 2024	14 th December 2024
Date of Assessment	7 th November 2024	29 th November 2024	12 th December 2024	21 st December 2024
Total no. of days of basti Administration	8	6	4	8
In fifths evaluation	One-Fifths	Two-Fifths	One-Fifths	One-Fifths
Gestational age at time of engagement (weeks)	37.4	36.5	37	37.3

Table no. 3: Mode of delivery and newborn outcomes

Case	Mode of delivery (date of delivery)	APGAR score	Fetal weight (kg)	Any intrapartum Complications
Case 1	Full term vaginal delivery (11 th November 2024)	1': 8/10 5': 9/10	2.65 kg	Not any
Case 2	Full term vaginal delivery (7 th December 2024)	1': 7/10 5': 9/10	2.8 kg	Not any
Case 3	Full term vaginal delivery (14 th December 2024)	1': 9/10 5': 10/10	2.7kg	Not any
Case 4	Full term vaginal delivery (24 th December 2024)	1': 7/10 5': 9/10	2.5 kg	Not any

DISCUSSION

The cases were enrolled in such a way that they exhibited unengaged vertex in 'fifths palpation' with patients are of gestational age 35 or more than 35 weeks. Engagement was observed in the cases following a minimum of 4 to a maximum of 8 days of Yogbasti at an average gestational age of 37 weeks.

The follow-up study revealed all cases were delivered vaginally without any impending intrapartum complications.

Engagement of the fetal head is considered the initial and crucial step in the mechanism of labour. Traditionally, it is believed that engagement may occur by 38 weeks of gestation



in nulliparous women and later, often intrapartum, in multiparous women.[9] Although controversies persist regarding the association between an engaged fetal head and normal labour, numerous studies have indicated that an engaged vertex at the onset of active labour is associated with a lower risk of caesarean delivery, whereas an unengaged vertex is with a higher risk of caesarean delivery and lower foetal APGAR score.[10] The follow-up study conducted in the current case series revealed that all four cases had a normal delivery, and the newborns had normal APGAR scores both 1 and 5 minutes, as well as birth weights exceeding 2.5 kg, indicating a healthy status of the newborns.

The administration of Basti offers multi-dimensional benefits that promote preparatory modifications in the birth tract, enabling Sukhaprasava. Apart from lubricating the umbilical, lumbar, and pelvic regions, it also eliminates morbid wastes located there and excretes faecal matter.[10] Basti, in conjunction with the rectum, facilitates easy urine outflow and bladder evacuation. This evacuation of the rectum and the bladder frees up space in the pelvic region and may support subsequent preparatory mechanisms for the initiation of labour, such as the engagement of the foetal head. Basti therapy by various of its medicaments greatly influences the normal bacterial flora of the colon. By doing so it modulates the rate of endogenous synthesis of vitamin B12. This vitamin B12 may have a role to play in the maintenance or regeneration of nerves. It was one of the possible mechanism through which Basti could help in Vatika or Neurologically. The widening of pubic bones to 5–10 mm, rotatory movement at the sacroiliac joint, and backward pushing of the coccyx during labour all are evidence of a physiological increase in pelvic dimensions at the time of delivery.[12] In Ayurveda, Asthi (bones and joints) are considered sites of Vata, and any type of movement is considered Vata function. Basti aids in the normal functioning of the Vata and lubricates the Vata Sthana (sites of Vata). Yonipichu help for lubrication of garbhassthana and garbhamarga which help in proper effacement and dilatation. During labour, cervix softens and becomes more distensible, a process called cervical ripening. The chemical and physical changes are required for cervical dilation, labour and delivery of a foetus. The rearrangement of the extracellular matrix of the uterine cervix during pregnancy and parturition occurs by the progression of a complex, finely regulated biochemical cascade.

CONCLUSION

This case series focuses the management of primigravidae with an unengaged vertex, identified through in-fifths palpation, by administering yogbasti after 35 weeks of gestation. The study indicates a promising potential for Yogbasti and Yonipichu in aiding the engagement of the unengaged vertex in primigravidae. However, due to the limited strength of the evidence from this case series, further studies with larger sample sizes are needed, using the same protocol, to validate these results.

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