

Review Article

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PHYSIOLOGY, MECHANISM, MONITORING AND MANAGEMENT OF LABOUR DURING PREGNANCY

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Abstract

Pregnancy is a natural occurrence and the journey through childbirth is often described as the most challenging phase of female life. The discomfort and challenges experienced during labor surpass any imaginable pain. While labor typically progresses normally there is no issue, however when it possess complications, then its duration, stages and mechanism should be taken in consideration for safe delivery of child. This approach not only prevents life-threatening risks but also ensures a smoother birthing process. The concept of *Prasava* in Ayurvedic science, remains unfamiliar thus detailed explanations of *Prasava* is necessary. The *Prakrit Prasava* is considered normal while complications of *Prasava* should be handled carefully. This article presented Ayurveda view, mechanism and management of *Prasava* (labour) during pregnancy.

Key-Words: *Ayurveda, Prasava, Labour, Pregnancy*

Introduction

Prasava is the process of expelling or releasing the fetus, considered crucial for childbirth and encompasses various stages and factors. The concept of *Prasava* is described as *Garbha Mochana*, which translates to liberation of fetus from the womb. This process gives birth to new born and as resultant of this fetus come out from its intrauterine environment. The desire for a safe and uncomplicated labor is universal need; Ayurveda described normal labour as *Sukha prasava*, which emphasizes a smooth and comfortable delivery without adverse effects. *Sukha Prasava* is defined by following criteria [1-5]:

- **Swabhavika:** Labor starts spontaneously.
- **Upasthitha kala:** Labor begins at the completion of the full term of pregnancy.
- **Avakshira:** The baby presents in the cephalic (head-down) position.
- **Swabhavika kala:** Labor progresses without undue prolongation.
- **Upadravarahita:** Labor proceeds without any complications.

The *Garbha* naturally separates from its *Naadi Nibhandha* and initiates labor due to its *Swabhava*. *Sushruta's* emphasis on *Kaala*, *Swabhava* and *Naadi nibhandha* to underscores the process of detachment of fetus. *Harita* adds *Vairaagya* as a cause, indicating a natural aversion leading to birth. *Bhela* notes that *Prasava* proceeds only after achieving "*Sampurna Gatravta*". These factors collectively constitute the *Prasava Karana* or causes of labor.

Kala Prakarsha plays a crucial role, marking a specific period of gestation where physiological changes prepare the body for labor. Estrogen released, becomes free, sensitizing the myometrium to respond to pitocin, facilitating myometrial stimulation and contractions, essential for the labor process. *Acharya Kashyapa* outlines labor into two stages in the *Shaareera sthana jatisutriya adhyaya*: the first stage and *Garbha Parivartan*. On the other hand, *Acharya Sushruta* describes four stages as depicted in **Figure 1**. *Prajayini* described as prelabor, *Prajanayishyamana* means early first stage, *Upasthitha Prasava* means late first stage and *Apara patana* means third stage. *Ashtanga Hridaya* similarly categorizes labor into *Aasanna prasava*, *Parivartita garbha* and *Apara patina*. *Bhela Samhita* recognizes *Aasanna prasava* as late first stage and *Apara Patana* as third stage of labor [5-7].

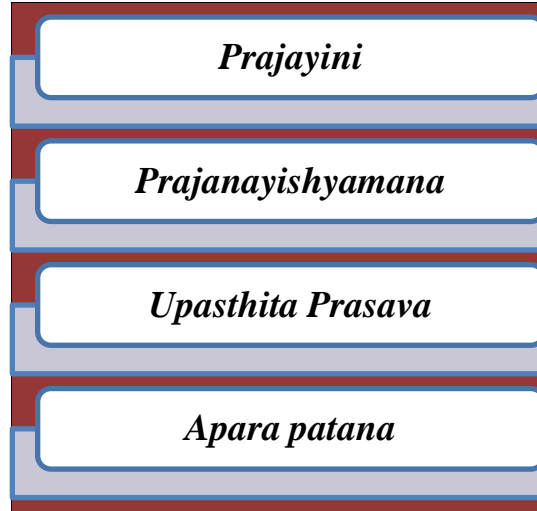


Figure 1: Stages of Labor

The clinical features of *Prasava Avastha* includes following symptoms:

- *Aksano shaithilya*
- *Glanirnansya*
- *Klam gatranam*
- *Vimukt bandhanam*
- *Adho gurutvam*
- *Vakshasah Kukshiravasramsanam*

Prasava Kala:

Acharya Charaka defines the normal *Prasava kala* as starting from the 1st day of the 9th month to the 10th month. Acharya Sushruta and Vagbhata extend this period from the 1st day of the 9th month to the 12th month. Chakrapani narrows it down to the 9th and 10th months.

CAUSES OF PRASAVA:

✓ ***Nadi Nibandha Mukti:***

+This refers to the natural detachment of the fetus from its umbilical cord.

✓ ***Swabhava:***

Prasava occurs naturally, and its exact cause is often unknown.

✓ ***Garbha Vasa Vairagya:***

When the umbilical cord detaches, it leads to a change in hormone levels, which triggers labor.

✓ ***Garbha Sampurnata:***

When the fetus reaches full maturity, it signals the initiation of labor.

MECHANISM OF PRASAVA

Vata's function is *Garbha-nishkramana* which involves the expulsion of the fetus. *Apana Vayu*, plays a significant role in *Prasava* and is termed "*Prasutamaruta*". This *Prasutamaruta* aids in intrauterine movements of the fetus and helps in expulsion through the labor. During *Sukha Prasava*, the *Apana Vayu* works in conjunction with *Vyana Vayu*. *Vyana Vayu* is responsible for internal rotation of the fetus. *Vyana Vata* also facilitates the descent of the fetus through various movements ensuring proper positioning for delivery. *Vyana Vata's* contractions and expansion contribute to the contractility and dilation of uterine muscles during labor, aiding in the progression of childbirth. Disruptions or variations in *Apana Vayu* can lead to difficulties in fetal descent and obstruction during childbirth leading to the *Mudha garbha* [6-8].

MANAGEMENT OF LABOUR (PRASAVA):

The *Prasava Paricharya* or the care and practices related to childbirth in Ayurveda, holds significant importance in ensuring a smooth and healthy delivery process. Various exercises and practices mentioned in Ayurvedic texts play crucial roles in facilitating a comfortable and complication-free labor experience. Exercises like walking and sneezing aid in the descent of the fetus, promoting *Sukha Prasava*. Additionally, practices such as *Dhupana* and *Lepan* have antibacterial and antifungal properties, reducing the risk of infections and related complications. The drugs used in these procedures also have specific properties that help in cervical dilation and uterine contractions, easing the delivery process.

Furthermore, measures like *Niruha basti*, *Uttarbasti* and *Anuvasana basti* assist in the expulsion of the placenta, preventing delays or complications in the third stage of labor. The systematic approach outlined in *Prasava Paricharya* not only promotes a comfortable delivery but also aids in preventing potential complications.

The comprehensive understanding of *Prasava Prakriya* as described in Ayurvedic texts equips healthcare providers with the knowledge and techniques necessary for effective management during childbirth. This knowledge not only helps in preventing complications but also contributes to reducing maternal mortality. The integration of Ayurvedic principles with modern medical practices can lead to a holistic approach in managing childbirth, ensuring both maternal and infant health [8-10].

***Prasava Paricharya* suggested following measures for healthy delivery of new born:**

- ✚ With the onset of labor, the woman should be made to sit or lie down on the ground or bed, providing a comfortable and stable position.
- ✚ Surrounding the woman with friendly and experienced females who can offer counsel and support during labor.
- ✚ *Vagbhata* recommends inhaling powdered herbs like *Ela*, *Vacha*, *Langli* and *Chitraka*, etc.
- ✚ When a woman experiences good uterine contractions but does not deliver at the right time management includes activities like holding heavy pestles, walking and inhaling specific powdered herbs.
- ✚ It's essential for the woman to respond to natural urges like yawning, sneezing, passing flatus and urine, etc.
- ✚ After the fetus is expelled, attention shifts to the placenta. If it doesn't follow the fetus naturally, measures such as pressing the suprapubic region and stimulating the throat and palate may be necessary to facilitate placental expulsion.

Conclusion

The knowledge gleaned from Ayurveda can assist physician in adopting a holistic approach to managing labor. *Prasava Paricharya* have a positive impact on the well-being of both the mother and the child, contributing to the prevention of maternal mortality and improving overall maternal and infant health outcomes.

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