



Review Article

PRASAVA (LABOUR) IN AYURVEDA- A LESS KNOWN CONCEPT

Shreyes. S^{1,2*}, Asokan V³, Yogitha Bali M.R^{4,5}

*^{1,2}PhD Scholar, Department of PhD Studies in Prasooti Tantra & Stree roga, Parul Institute of Ayurveda, Vadodara, Gujarat.

²Associate Professor, Department of P.G Studies in Prasooti Tantra & Stree roga, Rajiv Gandhi Educaion Society's Ayurvedic Medical College, Ron.

³Professor & HOD, Department of PhD Studies in Prasooti Tantra & Stree roga, Parul Institute of Ayurveda, Vadodara, Gujarat.

⁴Professor, Dept of Shalya Tantra, Sushrutha Ayurvedic Medical College, Bangalore, Karnataka, India.

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ABSTRACT

Childbirth is a physiologic and natural process has been undertaken by women over the years with professional assistance in which most of the women experience labour pain and childbirth as most severe and agonising event of a woman's existence. Labour is linked with a painful experience, though there are no underlying pathological processes, a lot of women are worried about labour pain and how they can be relieved of pain. Pharmacological agents such as pethidine (Meperidine) and other analgesics are used to effectively control labour pain. Both pharmacological and non-pharmacological approaches are necessary to relief labour pain effectively. Some women employ other non-pharmacological pain relief measures during labour such as breathing exercises, taking showers, and assuming specific positions and moving about to control their pain. In addition, the use of herbal medicine has been reported to relieve labour pain. Description of labour in Ayurvedic science, though found since 5000yrs ago is a very less known concept to many people as they are not much in practice. Currently the labour is managed only by the conventional medicine with some interventions with addition of *Yoga* and Ayurveda in the Antenatal care. By evaluating the complete knowledge of *Prasava* or the labour explained in Ayurvedic science, the same may be incorporated as an add-on in the future studies to make it evidence based and also to corroborate the authenticity of the science through research.

*Address for correspondence

Dr. Shreyes. S

Assistant Professor
Dept of Prasooti Tantra &
Stree roga
Government Ayurvedic
Medical College, Bangalore,
Karnataka, India.
Email: shrss02@gmail.com

INTRODUCTION

The majority of women experience pain during labour and childbirth. For many women it is the most significant pain they will experience in their life. However, despite it being associated with the same fundamental physiological process, not all women experience labour pain in the same way. Women's evaluations of labour pain can range from excruciating to pleasurable in different individuals or on different occasions.^[1, 2]

Several factors affect a woman's perception of labour making each experience unique. However as a consistent finding, labour pain is ranked high

on the pain rating scale when compared to other painful life experiences.^[3] Some women manage the pain well, requiring minimal assistance and reporting positive experiences, whilst others do not cope well and request intervention in order to avoid or alleviate the pain^[4]. As a result of the emerging complexity of the phenomenon, the current methods of supporting women through this experience may not be adequate.^[5]

While a range of pain management strategies are available, pharmacological interventions are frequently used. While epidural

analgesics are recognised to be effective in managing pain, paradoxically they are not associated with more positive labour experiences in women^[6,7] and can contribute to reducing the rates of normal birth.^[8,9,10,11]

Ayurvedic science has vast description of *Prasava* or the labour. According to Amarasingh, *Prasava* is *Garbha Mochana*. *Mochana* means *Moksha* so *Prasava* means, *Garbhamoksha* i.e., *Moksha* from *Garbhavaasa*.^[12] In *Shabdhasaagara*, *Prasava* is defined as bringing forth, bearing production etc.^[13] Charaka has narrated that, due to the action of *Prasuti maruta* at proper *Janma kaala*, head of the fetus gets turned, comes forward and travels through the *yoni* to be expelled out.^[14] Everyone expects that pregnancy should end with a safe labor without much complication. The same idea is described by Acharyas in the term of *Sukha prasava*, where *Sukha* stands for *Anukula vedana* i.e. easily acceptable work without adverse effect. In modern, the term "Labor" is a Latin word, meaning toil, trouble, suffering, bodily exertion especially when painful and thus implicated in the process of child birth.^[15] This study aimed at evaluating the role of Ayurveda system of medicine in the *Prasava* or the management of labour pain and focuses on giving an elaborate description of *Prasava* on the basis of which, the future studies can be conducted.

Prasava Nirukti

A series of events taking place in the genital organs in an effort to expel the viable products of conception out of the womb through the vagina into the outer world is Labor.^[16] Ayurveda defines *Prasava* or labor as to be normal with the following criteria: spontaneous in onset and at term (*Swabhava*), with vertex presentation (*Avaakshira*), without undue prolongation (*Swabhaavika Kaala*), natural termination with minimal aids (*Prakritaavastha*) and without having any complications affecting the health of the mother & the baby (*Upadravarahita*).^[17]

Prasava Karana

Acharya Sushruta has quoted a simile regarding the onset of labour, i.e. as a fruit gets detached from its stalk after attaining *Paaka* (maturity) in a right time comes down naturally. In the same way *Garbha* after attaining maturity in an appropriate time gets detached from its *Naadi Nibhandha* and proceeds for labor due to its *Swabhava*. From the above, it is clear that Acharya Sushruta has emphasized more on *Kaala*,

Swabhaava & *Naadi nibhandha*. Combined effect of all these three leads to the detachment of *Garbha* or the fruit.^[17] Harita quoted *Vairaagya* as one of the cause i.e., *Vairagaya* from *Garbhavaasa*. Here *Vairaagya* means aversion and the fetus gets born in the 10th month.^[18] According to *Bhela*, after attaining "*Sampurna Gatravta*" then only *Prasava* proceeds.^[19]

These are some of the following factors that are explained as a *Prasava karana*.

Kala Prakarsha

After a specific period of gestation changes necessary for the process of *Prasava* occurs in body, such as estrogen inactivated due to conjugation becomes free and sensitizes myometrium for the action of pitocin, thus helps in myometrial stimulation.

Mukta Naadi Nibhandha

The word *Mukta* means "to get free". *Nadi* means tubular organ or stalk and it can be said as detachment of *Naadi* from the *Nibhandha*, is the one of the cause for initiation for labor.

Swabhava

Where, *Swa* means self, *Bhava* means nature. It means nature (innate character).

Garbha Vaasa Vairaagya

Vairaagya means dislike or aversion. The fetus attaining complete maturity and there is aversion for its intra uterine stay. When the fetus is adequately mature it activates endocrine cascade that involves hypothalamus pituitary adrenals. Fetal pituitary is stimulated. Prior to onset of labor due to this there is increased release of ACTH which in turn stimulates fetal adrenals increased cortisol secretion accelerated production of oestrogen and prostaglandin from the placenta.

Gatra Sampurnata (Stretching of Uterus)

Stretching of the uterus by the mature fetus plays a role in the feto-maternal endocrine cascades. Uterine dissension due to the stretching effect on the myometrium by the growing size of the fetus can help for the onset of labour. Mechanical stretching of myometrium due to *Gatra Sampurnata* (mature fetus) can promote the prostaglandin synthesis there by initiate's labor (myometrium site rich in prostaglandin) this is called the optimal distension theory.^[17]

Prasava Kaala (Time of the labour in Month)

All the Acharyas of Ayurveda have opined about the time of labour with respect to the month

Table 1: Opinions of Various Acharyas Regarding Month of Labour

Achaarya Charaka	9 and 10 month
Achaarya Sushruta	9 10,11 and 12 month
Ashtanga Sangrahakaara	9-12 month
Ashtanga Hridayakaara	9-12 month
Achaarya Kashyapa	9 month onwards
Achaarya Harita	10 and 11 month
Achaarya Chakrapani	9 and 10 month
Achaarya Bhavamishra	9-12 month
Achaarya Yogaratnakara	9-12 month
Western medicine: From the date of LMP	280 Days
From the date of conception	267 Days

Prasava Lakshanas (Labour symptoms)

Prasava avastha and *Lakshanas* have been explained in Ayurvedic classics. Acharya Sushruta has explained *Lakshanas* of *Prajayini* as *Kukshi Shaithilya*, *Mukta hrudaya bandhana* and *Jaghana shula*.^[20] *Bhavaprakasha* has termed this stage as *Prasavotsuka* i.e., word meaning of *Prajayini* and *Prasavotsuka* is near or eager to deliver, these *Lakshanas* indicate the beginning of first stage of labor.^[21] In modern description, the premonitory stage begins 2-3 weeks before the onset of true labor. It is a slow process; the lower uterine segment expands and allows the fetal head to sink down and the woman feels relief from the discomfort as the fundus pressure is relieved from the chest, breathing is easier, and the heart and stomach can function more easily. In other words bonds of the *Hrudaya* are released, which is can be identified as lightning.^[22] *Mukta hrudaya Bandhana* is pressure relieved from chest and diaphragm, *Jagana Shoola* can be compared to stretching of the lower segment which irritates the nerve ganglion and causes pain.

The *Lakshanas* explained by Ayurveda Acharyas can be correlated to or are very much similar to premonitory or prelabor changes told in contemporary texts. The word meaning of *Asannaprasava* or *Upasthita prasava lakshanas* are very near to *Prasava*. The *Lakshanas* are *Klamogatravta*, *Akshi shaitilya* or weakness of eyes, *Kukshi avasransanam* or looseness of the pelvis, *Vimukta bandhatva* of *Vakshas* or release of the diaphragmatic pressure, *Adhogurutva* and *Gourava* in *Adhobhaga* due to the descent of the presenting part. *Vankshana shula*, *Shula* in *Jaghana pradesha* due to irritation of neighboring *ganglia*. *Yoniprasravana* i.e., muco-sanguinous discharge, *Anannabhilasha* followed by *Aavipradurbhava*. Acharya vagbhata corroborating Acharya Charaka adds *Praseka*, *Aruchi*, *Bheda*, *Ruja*, *Toda* in *Yoni*, *Yoni*

spuranam and *Srava*.^[23] *Kashyapa* also described the same features adding, *Yonioudaryam* (*Vistarana* of the *Yoni*).^[24]

As labor progress, uterine contractions progressively increase in frequency, intensity and in duration. This results in pulling of surrounding ligaments and ischemia of the muscle fibers, causing pain. As a result, woman becomes exhausted and this exhaustion leads to *Aruchi*, *Praseka* etc. All these *Lakshanas* are the premonitory signs of the commencement of first stage. As labor progress uterine contraction change their character, develop into more powerful, intermittent and associated with pain.

Vagbhata has further explained *Praseka*, *Aruchi*, *Bheda*, *Ruja*, *Toda* in *Yoni*. *Yoni spuranam* and *Srava*. *Kashyapa's Yoni audaryam*, *Audaryam*-meaning cervical dilatation, are also associated visualised. With the onset of true labor pains there is cervical dilatation. (Susruta and Bhavaprakasha explained that further, features of *Tikshana vedana* in *Kati* and *Prusta* with increased frequency of micturition and desire to defecate indicate further progress of labor. *Yoni Sleshma sraava* which is expulsion of cervical mucus plug mixed with blood is called as show.)^[17, 21]

Charaka, Vagbhata and Kashyapa mentioned the features of *Parivartita garbha* where due to repeated appearance of *Aavis*, *Garbha* leaves *Hrudaya* and enters down to the *Basti shiras*.^[14,23,24] *Kashyapa* added *Utpidana* and *Bhedana* type of pain in *Yoni*.^[24] In contemporary science, due to stretching of the tissues of vagina and perineum, stimulation of the 2nd 3rd and 4th sacral nerve roots occurs. These carry information to the spinal cord through the secondary fibres of pudendal nerve, causing severe pain explaining as

Yoni bhedana and *Utpidana*. These all features suggest the beginning of second stage labor.

Bearing down is encouraged when cervix is fully dilated and when the head reaches the *Basti shiras* and the pain increasing in its frequency and intensity. She is asked to bear down with encouraging words like *Prajata*. Bearing down should be concurrent along with the contractions. Untimely bearing down effort will not only make her tired but will also have an effect on the fetus causing *Swasa, Kasa, Badhira* etc.

The expulsion of fetus must be followed by the expulsion of placenta, which completes the entire process of labor. Kashyapa says that till the expulsion of placenta the delivered female will not get the name of *Sootika*.^[24] It suggests the significance of placental delivery at the end of the fetal expulsion. This completes 3rd stage of labor. There are also references about complications of this stage of labor such as *Aparasanga* i.e. retention of placenta, with its management.^[23]

Prasava Avasthas (Stages of Labour)

Acharya Kashyapa has explained in *Shaareera sthana jatisutriya adhyaya*, the process of labor in two stages, a) first stage (not named) and b) *Garbha Parivartan* (second stage).^[24] Acharya Sushruta a) *Prajayini* (prelabor), b) *Prajanayishyamana* (early first stage), c) *Upasthita Prasava* (late first stage) and d) *Apara patana* (third stage).^[17] Acharya Charaka a) *Prajanana kaalaabhimata* (late first stage), b) *Parivartita adho garbha* (second stage) and c) *Apara patana* (third stage).^[14]

Ashtanga Sangraha- *Aasanna prasava* or *Upasthita garbha* (late first stage) b) *Parivartita garbha* (second stage) and c) *Apara patana* (third stage).^[25] Ashtanga Hridaya a) *Asanna prasava* or *Upasthita garbha* (late first stage) and b) *Apara patana* (third stage).^[23]

Bhavaprakasha explains as a) *Prasavotsuka* (early first stage), b) *Asanna prasava* (late first stage) and c) *Apara patana* (third stage).^[21] Bhela Samhitaa *Aasanna prasava* (late first stage) and b) *Apara Patana* (third stage).^[19]

Table 2: Prasava Avastha: As per different Acharyas

Avastha	Author	Modern View
<i>Prajayini Prasavoutsukha</i>	Sushruta Bhavamishra	One or two days before the labour or just beginning of the first stage of labour
<i>Asanna prasava</i> , No terms specified <i>Prajanana Kaalabhimata</i>	Vagbhata charaka	First stage of labour
<i>Upasthita prasava Parivartita garbha</i> <i>Parivartita garbha</i> <i>Parivartita garbha</i>	Sushruta Bhavaprakasha Charaka, Kashyapa	End of first stage or Beginning of Second stage of labour
No term specified	By all Acharyas	Third stage of labour

Acharya Kashyapa describes the features of onset of labour as *Mukhaglani* (Malaise on face), *Anga klama*, (exhaustion of body parts) *Akshi bandhan muktata* (feeling of removal of bonds of eye) *Kukshi avasada* (descended *Kuksi* i.e., abdomen, uterus) *Kukshi avasamsrana*. *Adhobhaga gurutwa* (heaviness in lower part of abdomen), *Prustha, Parshva, Kati, Basti, Vankshana, Vedana* (severe pain in back, flanks, waist, *Basti* i.e., pubic region and groin), *Yoni prasarvana* (discharge per vaginam), *Audarya* (generosity), *Bhaktadwesa* (anorexia) *Aratee* (lassitude) and *Klama* (tiredness).^[24]

Virtually all the Ayurvedic classics provide description pertaining to *Prasava* and its *Paricharya*, the management. Acharya Kaashyapa stresses more on recitation of auspicious hymns to facilitate smooth and uneventful labor, Acharya also advises intake of meat soup during this period; in the lines similar to Acharya Kaashyapa, Acharya Sushruta also advocates the chanting of auspicious hymns, he also advises the parturient lady to be

surrounded by male children and carry in her hand fruits that bear masculine names. Acharya also stresses on intake of *Yavaagu* prior to labor possibly with the intention in keeping her energy level. Acharya Charaka opines that *Prasavini* should lie down on the ground on soft beddings possibly to make her feel comfortable, Acharya stresses on educating the woman regarding the role she has to play in labor such as to bear down during pain and not to beardown in the absence of pain, Acharya also advocates the employment of mantras, all these acts can place the woman in a psychologically pleasant and self confident mood which is so very essential for labor to progress. Acharya Vagbhata opines similar to Acharya Charaka and Sushruta and advocates *Yavaagu* with *Gruta* to be consumed by the *Prasavini* before the commencement of labor, Acharya also advocates inhalation of medicinal smoke during the inter contraction period as well as gentle massage of the flanks with oil. These acts are

intended to increase the strength of the contraction and bring in labor that is smooth and safe.

DISCUSSION

Pregnancy, parturition and puerperium are the three main stages occurring during active reproductive period of a woman's life. Among them parturition is the stage that needs highest attention. Labour is a nature's process. Very often it requires minimal assistance. However, due to altered anatomy and physiology a perfectly normal labour may suddenly become abnormal and even fatal.

The opinions of Acharyas regarding the onset of labor vary with each other; still all the opinions coincide to conclude that in between 9 and

12 months the labor should take place. *Kaala prakarsha* and *Naadi Vibandha Mukti* (Sushruta), *Garbha vaasa Vairaagya* (Haareeta), *Sampoorna Gaatrata* (Bhela) are the causes mentioned for onset of labor.

On the basis of Clinical features, the process of labor can be divided into five stages as, *Prajaayini*, *Prajananakaalaabhimata*, *Upasthita prasava*, *Vishikaantara praveshanam* and *Apara paatana*. Along with the detailed description of *prasava* with its causes, features, stages and the management of *prasava* is also found in comprehensive manner.

Table 3: Mechanism of Prasava (labour)

Mechanism of Labour	Ayurvedic references
	<i>Kuskhi Avasramsanam</i>
	<i>Adhobhaga Gouram</i>
Engagement	<i>Vanksha bandhana vimuktata</i>
	<i>Adhogurutvam</i>
	<i>Kukshiravasramsanam</i>
	<i>Purisha Pravritir Mutram</i>
	<i>Bahu Mutrata</i>
Descent	<i>Vimuchya hrudaya udaravimshati</i>
	<i>Basti Shiro Avagrahanaati</i>
Flexion	<i>Vasti Shiro Avagrahanaati</i>
	<i>Sankochitangam</i>
Internal Rotation	<i>Evam Avak Parivartate garbhaha</i>
	<i>Yoni bheda ruja toda spuranam</i>
Crowning	<i>Sravanaani cha</i>
	<i>Yoni Utpeedana Bheadnam</i>
Extension	<i>Abhimukhi bhuta garbham</i>

Description of labour in Ayurvedic science, though found since 5000yrs ago is a very less known concept to many people as they are not much in practice. Currently the labour is managed only by the conventional medicine with some interventions like yoga and Ayurveda in the Antenatal care. By evaluating the complete knowledge of *Prasava* or the labour explained in Ayurvedic science, the same may be incorporated as an add-on in the future studies to make it evidence based and also to corroborate the authenticity of the science through research.

CONCLUSION

This study gives an insight both to Ayurveda and the Non -Ayurveda people regarding the concept of labour that is described in detail in Ayurvedic science. This knowledge may help the doctors to manage the labour with the holistic approach by application of Ayurvedic principles as an add-on

approach with a positive impact on both the mother and the child and also in the prevention of maternal mortality.

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