

EFFICACY OF *SHIGHRAPRASAVAKARA YOGA* ON THE DURATION OF STAGES OF LABOUR

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ABSTRACT

Women have given a great respect as they have an ability to regenerate. Parturition is the gift of god due to which she is honoured in the society. Labour is a natural process, it can be critical in cases as prolonged labour. There is undue prolongation in labour process it needs to give any medicines. In *Ayurved Samhitas* there are so many references or *yoga* given to accelerate the process of labour. But practically these are used at very less extent compared to modern drugs. A study was conducted in R.A. Podar Medical College, Worli; Mumbai in 2008 on acceleration of labour process after only smell of *Shighraprasavakara yoga*. Out of 60 patients, 42 patients delivered

normally, 16 patients had to administer oxytocin, & 2 underwent LSCS. The *yoga* increases rate of cervical dilatation, effacement, reduces hours of different stages of labour & favours normal delivery.

KEYWORDS: Prolonged labour, *Shighraprasavakara yoga*.

INTRODUCTION

Charaka has described that baby is totally dependent on her mother & she is the ultimate caretaker of her child. In India, women have given a great respect as they have an ability to regenerate. The act of labour is the series of events that takes place in the genital organs in an effect to expel the viable products of conception out of the womb through vagina into the outer world. The act of labour is the most critical event in the woman's life. Labour is the natural process; it can become critical in some cases, such as prolonged labour. Prolonged

labour predispose to infection, dehydration, ketosis & exhaustion in the mother, it causes fetal distress, increased morbidity & mortality during labour. When the process goes smoothly, there is no need to give any medicines, but when there is undue prolongation it needs to give the management therapies to accelerate the process of labour to save the fetal as well as maternal life. Nowadays oxytocin & prostaglandins are the only choice of drugs to induce or augment the labour process. There are many complications associated with these drugs. In *Ayurveda samhitas*, there are so many references or *yoga* to accelerate the process of labour. One of such holistic preparation is *Shighraprasavakara yoga* mentioned in the text of *Kashyap Samhita*. It is described that after taking only the smell of this *yoga*, labour process is accelerated. Also the process of administration is very easy & safe. Drug is cost effective and easy to prepare. If this *yoga* is introduced in common obstetrics practice, the complications related to prolonged labour or with the drug used for induction/augmentation of labour will be definitely minimized. Thus the safe motherhood will be achieved.

AIMS AND OBJECTIVES

1. To accelerate the process of labour by using *Shighraprasavakara yoga* & thus the reduction in duration of all stages of labour without any maternal or fetal complications.
2. To study the mechanism of normal labour.
3. To observe mode of action, complication of *Shighraprasavakara yoga*.

STAGES OF LABOUR

- **1st stage:** It starts from the onset of true labour pains & ends with full dilatation of cervix. Average duration-12hrs in primi, 6hrs in multigravida.
- **2nd stage:** It starts from full dilatation upto descent of expulsion of fetus from the birth canal. Average duration-2 hrs in primi, 30 mins in multipara.
- **3rd stage:** It begins after expulsion of fetus & ends with expulsion of the placenta & membranes. Average duration-15 minutes in both primi & multigravida
- **4th stage:** It is a stage of observation for atleast 1hr, after expulsion of the after births.

PROLONGED LABOUR

The labor is said to be prolonged when the combined duration of the first stage & second stage is more than the arbitrary time limit of 18 hrs. The prolongation may be due to

protracted cervical dilatation in the first stage &/or inadequate descent of the presenting part during the first & second stage of labor. Labor is considered prolonged when the cervical dilatation rate is less than 1cm/hr. & descent of presenting part is less than 1cm/hr. for a period of minimum 4hrs observation.

Causes of Prolonged labour

First stage: Failure to dilate the cervix

First stage is considered prolonged when the duration is more than 12 hrs. The rate of cervical dilatation is less than 1cm/hr. in primi & 1.5 cm/hr. in multi. The rate of descent of the presenting part is less than 1cm/hr. in a primi & less than 2cm/hr. in multi

Second stage: Sluggish or non-descent of the presenting part.

It is considered prolonged if it lasts for more than 2 hrs. in primi & 1hr in multi.

Hazards of prolonged labor

- **Fetal:** Hypoxia, Intrauterine infections, intracranial stress, haemorrhage, fetal acidosis
- **Maternal:** Distress, PPH, Puerperal sepsis, Subinvolution, Increased operative deliveries, Trauma to genital tract

Dangers of Oxytocin

- **Maternal:** Uterine hyperstimulation, uterine rupture, water intoxication, hypotension, antidiuresis
- **Fetal:** Fetal distress, increased incidence of neonatal jaundice.

MATERIAL AND METHODS

Materials

Design: Open type of study

60 patients in first stage of labour are included. As duration of normal labour is already proved in modern science, there was no need to take control group.

Inclusion criteria

1. Age group: 16-45 yrs.
2. Trials are conducted on the patients-
 - Primigravida
 - Multigravida

- Prolonged labour

(All with Vertex presentation in the 1st stage of labour)

Exclusion criteria

- Obstructed labor-
- Cephalopelvic disproportion
- Contracted pelvis
- Preterm labour
- All patients with abnormal presentation

Investigations

- CBC, ESR, Blood group, Rh factor
- HIV, HBsAg, VDRL
- Blood sugar fasting & PP
- Urine-routine & microscopic
- USG of gravid uterus

Drugs

Sr.no	1	2	3	4	5	6
Drugs	<i>Langali</i>	<i>Kushta</i>	<i>Vacha</i>	<i>Karanja</i>	<i>Chitraka</i>	<i>Sukshmaila</i>
Part used	Tuber	Root	Rhizome	Root, leaf, flower, seed	Root, root bark	Seed
Rasa	<i>Katu, Tikta</i>	<i>Tikta, Katu Madhur</i>	<i>Katu, tikta</i>	<i>Tikta, Katu, Kashaya</i>	<i>Katu</i>	<i>Katu, Madhur</i>
Virya	<i>Ushna</i>	<i>Ushna</i>	<i>Ushna</i>	<i>Ushna</i>	<i>Ushna</i>	<i>Shita</i>
Vipak	<i>Katu</i>	<i>Katu</i>	<i>Katu</i>	<i>Katu</i>	<i>Katu</i>	<i>Madhura</i>
Prabhava	<i>Garbhapatan</i>	<i>Garbhashayotejak, Artavajanan</i>	<i>Medhya</i>	<i>Garbhashaya vishodhana</i>	<i>Garbhashaya sankocha, garbha sravakara</i>	<i>Anuloman, Balya, Uttejak, Mootrajanana</i>
Guna	<i>Laghu, Tikshna</i>	<i>Laghu, Ruksha Tikshnaa</i>	<i>Laghu, tikshna, sara</i>	<i>Laghu, Tikshna</i>	<i>Laghu, Ruksha, Tikshna</i>	<i>Laghu</i>
Doshagnata	<i>Kaphavatashamak</i>	<i>Kaphavatashamak</i>	<i>Kaphhavatashamak</i>	<i>Kaphavatashamak</i>	<i>Vatakaphashamak, Pittavardhak</i>	<i>Tridoshashamak</i>
Pharmacological Action	Spasmolytic, Oxytocic Uterine stimulant Promote labour pain, expulsion of placenta	Spasmolytic, anticytotoxic, diuretic, anti-inflammatory	Antispasmodic, diuretic, anti-inflammatory, antipyretic	CNS stimulant, antibacterial, antipyretic, anticholinergic, hypotensive	Antipyretic, CNS Depressant, anticoagulant, antibacterial Abortifacient, uterotonic, antibacterial	Anti inflammatory, antispasmodic, antimicrobial, analgesic

METHODOLOGY

All patients are divided into two groups. Written informed consent was obtained. A detail of general and obstetrical history and examination along with hourly monitoring of patient was recorded.

Groups

Group I –Primigravida-20 patients

Group II –Multigravida-40 patients

Method of preparation

Shighraprasavakara yoga contains 6 drugs viz. *Langali*, *Kushtha*, *Karanja*, *Vacha*, *Chitraka*, *Sukshmaila*. *Langali* is purified by its *shuddhi* method & after that fine powder of all these 6 drugs is made. 20-25gm powder is taken to make the *pottali* of the drugs.

Procedure to use *Shighraprasavakara yoga*

The patient in the first stage of labour is allowed to lay down on the soft bed. Patient is advised to take deep breathing. *Pottali* made from fine powders of 6 drugs is kept near the nose of subject & she is advised to smell it deeply. This procedure is done *Muhurmuhu* & up to the delivery of fetus. Patient is monitored time to time.

Criteria for Assessment

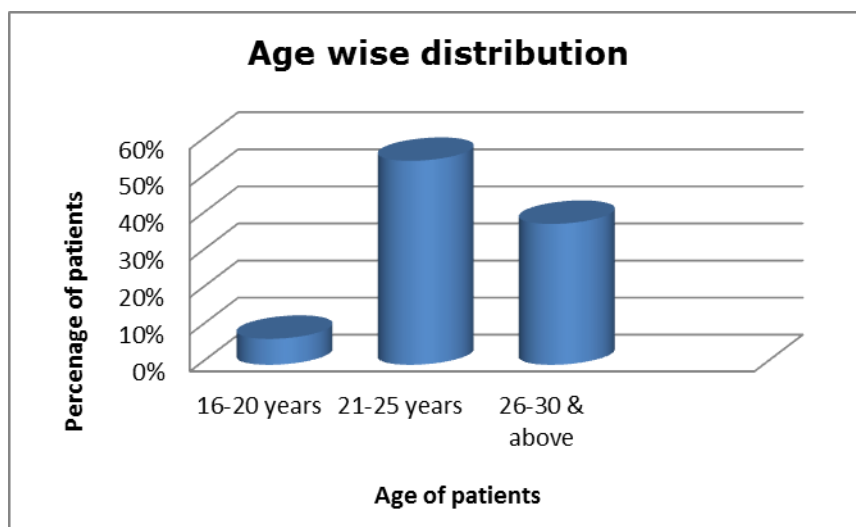
The patient in labour has given first the *Basti* of *Triphala Kwatha* & *Tila taila* & rectum is evacuated. The effect of therapy was assessed on the basis of following criteria-

- Contractions- Duration, Interval, frequency, intensity-mild, moderate, hyper
- Cervical dilatation
- Cervical effacement
- Descent of head
- Duration of labour, mode of labour, complication of labour, associated symptoms of labour in mother, fetal monitoring & observation in newborn.

OBSERVATION AND RESULT

- Age wise distribution of 60 pregnant women

Age	Total	
	Number	Percentage
16-20	4	7
21-25	33	55
26-30 & above	23	38



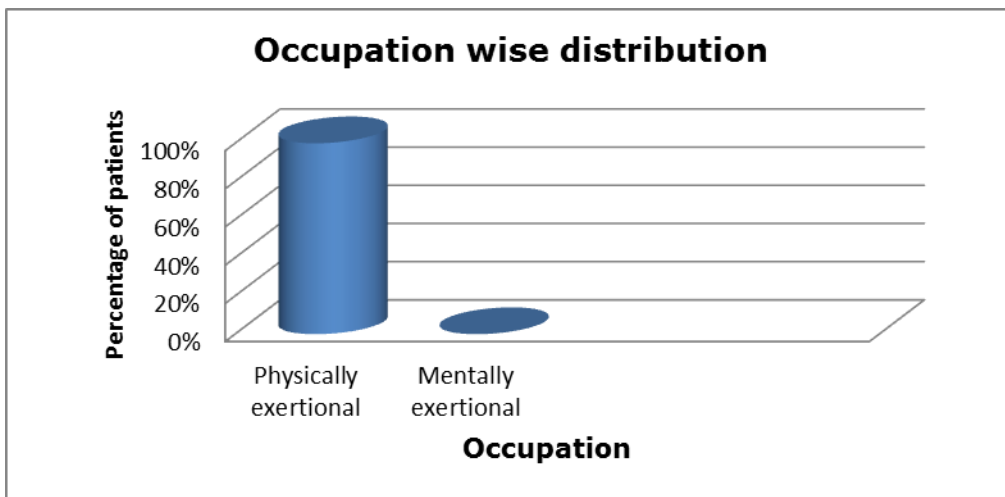
- Religion wise distribution

Religion	Total	
	Number	Percentage
Hindu	44	73.33
Muslim	16	26.66



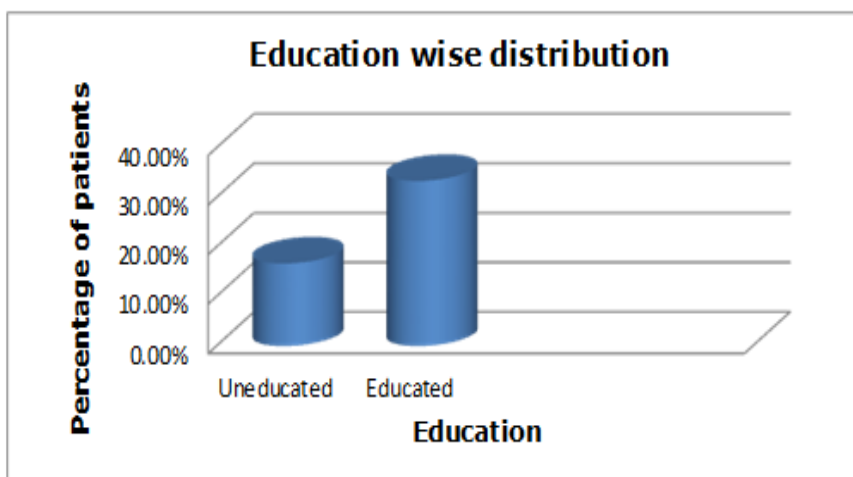
- Occupation wise distribution

Occupation	Total	
	Number	Percentage
Physically exertional	60	100
Mentally exertional	00	00



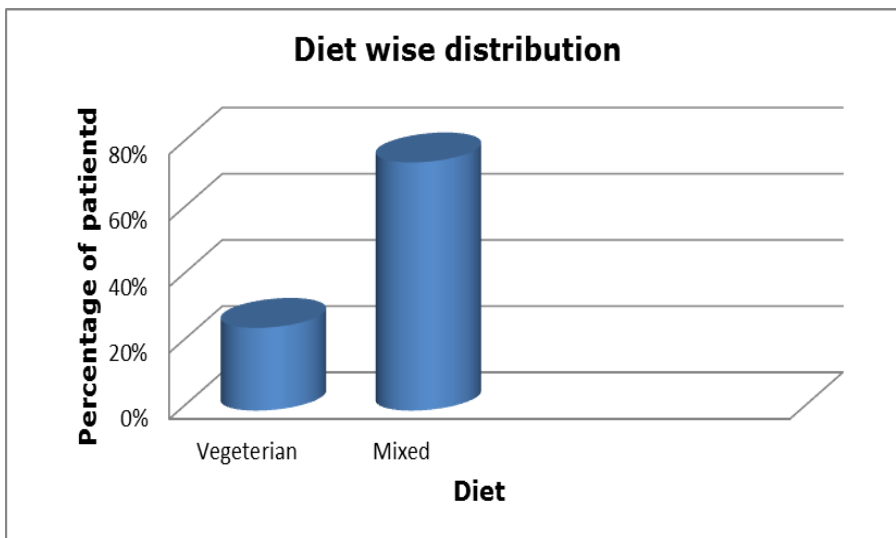
- Education wise distribution

Education status	Total	
	Number	Percentage
Uneducated	10	16.66
Educated-Primary	20	33.33



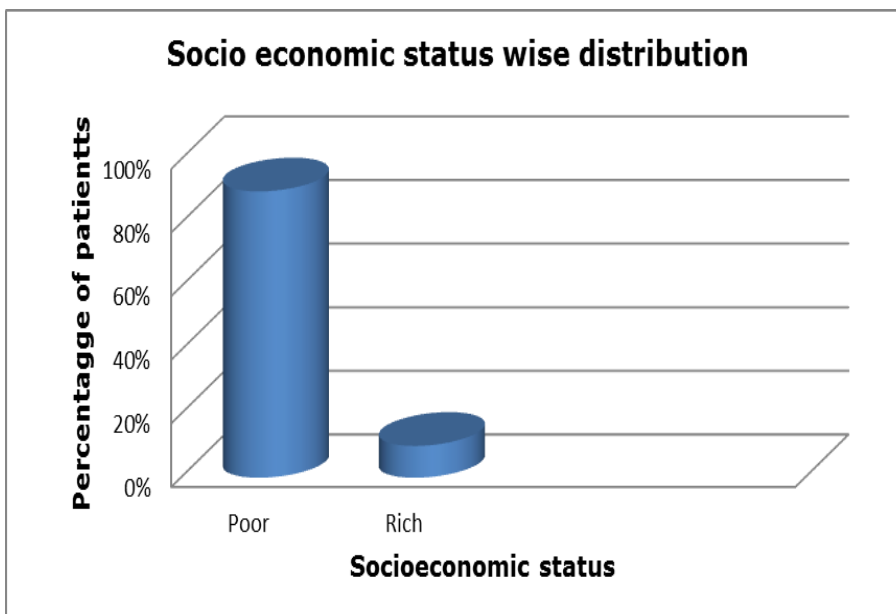
- Diet wise distribution

Diet	Total	
	Number	Percentage
Veg	15	25
Mixed	35	75



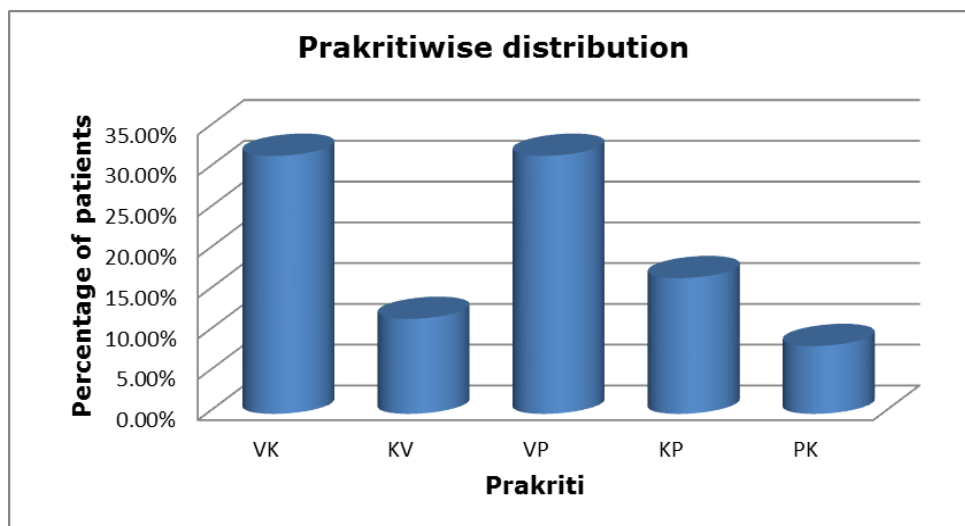
- Distribution according to socio-economic status

Socio economic status	Total	
	Number	Percentage
Poor class	50	90
Middle class	10	10
Rich	00	00



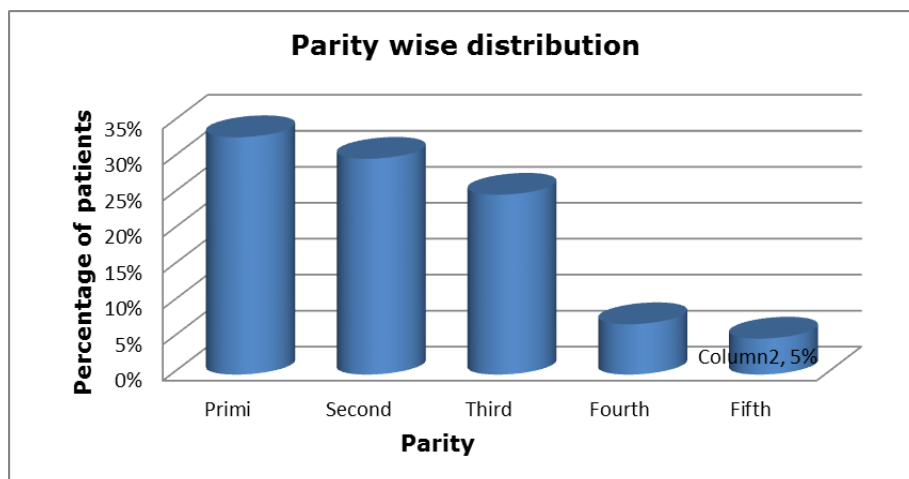
• **Prakritiwise distribution**

Prakruti	Total	
	Number	Percentage
Vatakaphaj	19	31.66
Kaphavataj	7	11.66
Vatapittaj	19	31.66
Kaphapittaj	10	16.66
Pittakaphaj	5	8.33



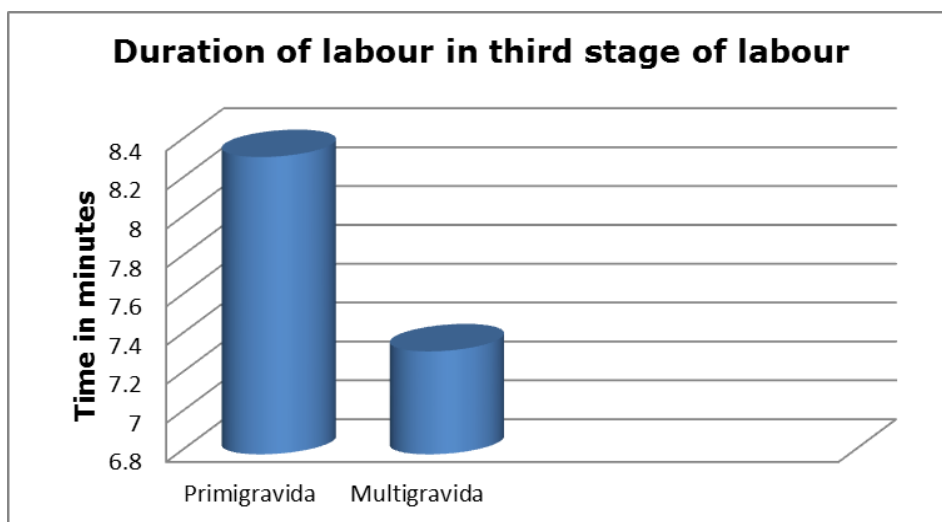
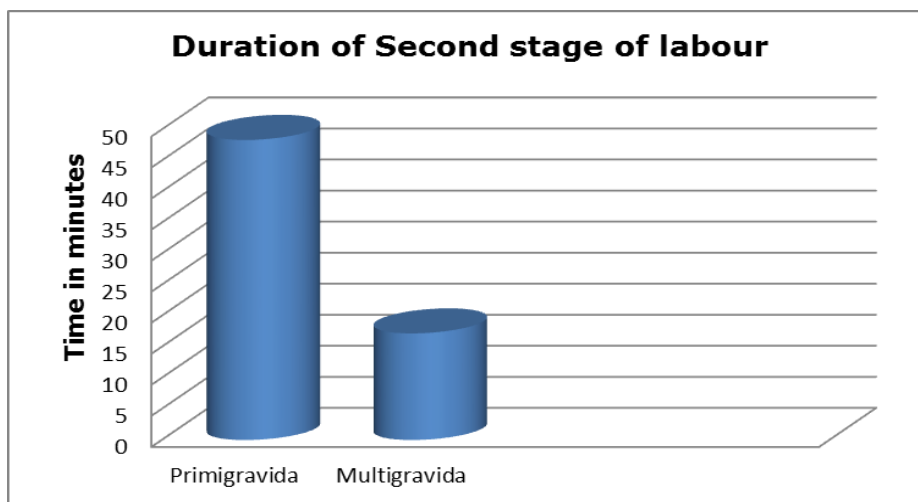
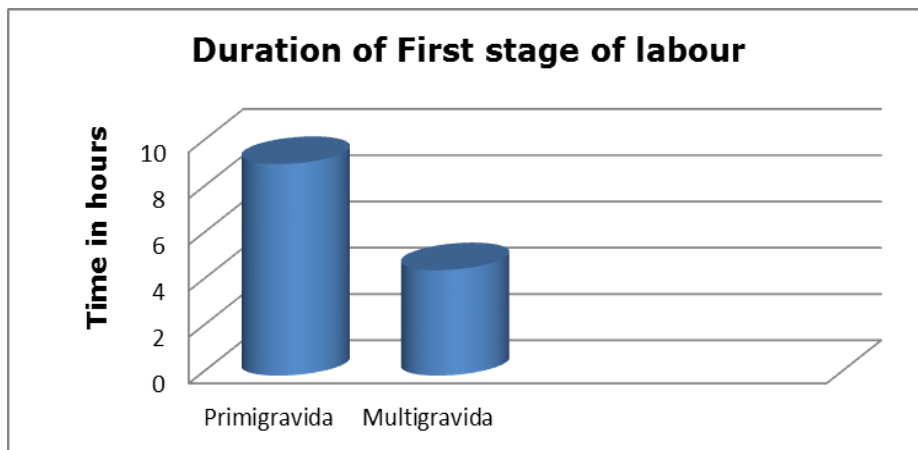
• **Parity wise distribution**

Parity	Total	
	Number	Percentage
Primigravida	20	33
Second gravida	18	30
Third gravida	15	25
Fourth gravida	04	07
Fifth gravida	03	05



- Average Duration of labour after giving *shighraprasavakara yoga*

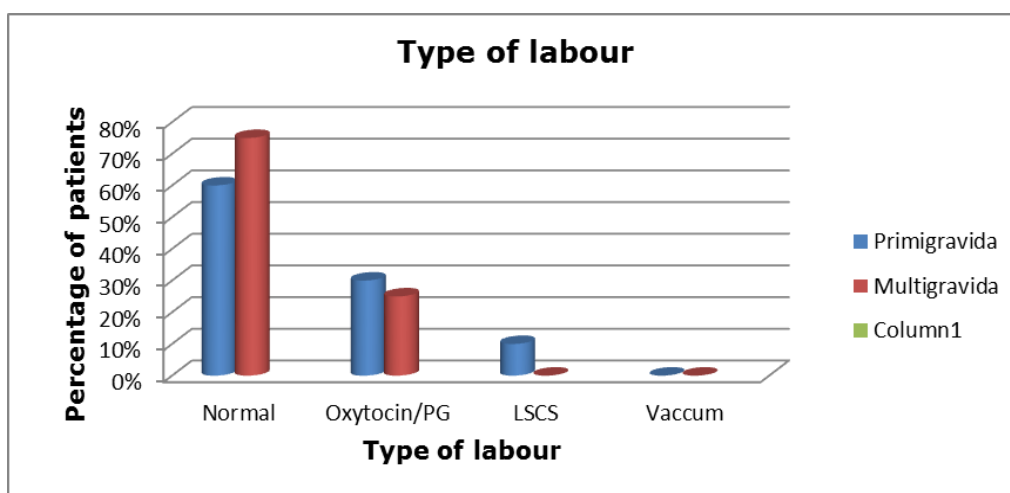
	Primi	Multi
1 st	8 hrs 15 min	4 hr 56 min
2 nd	48.33 min	17.17 min
3 rd	8.33 min	7.73 min



The above data shows that there is drastic reduction in all stages of labour in both primi & multi gravida.

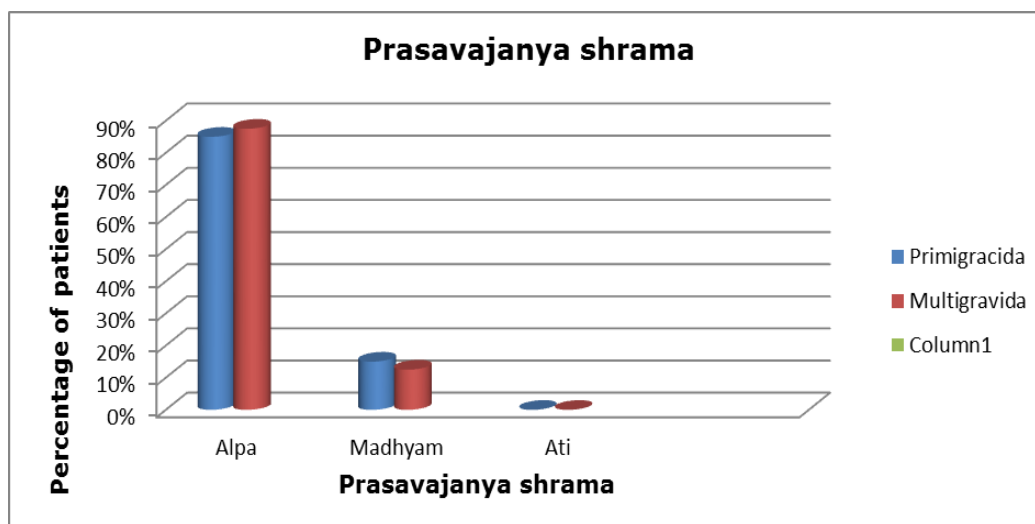
• **Mode of labour**

Types of labour	Primigravida		Multigravida	
	Number	Percent	Number	Percent
Normal	12	60	30	75
Oxytocin/Prostaglandins	06	30	10	25
LSCS	02	10	00	00
Vaccum	00	00	00	00



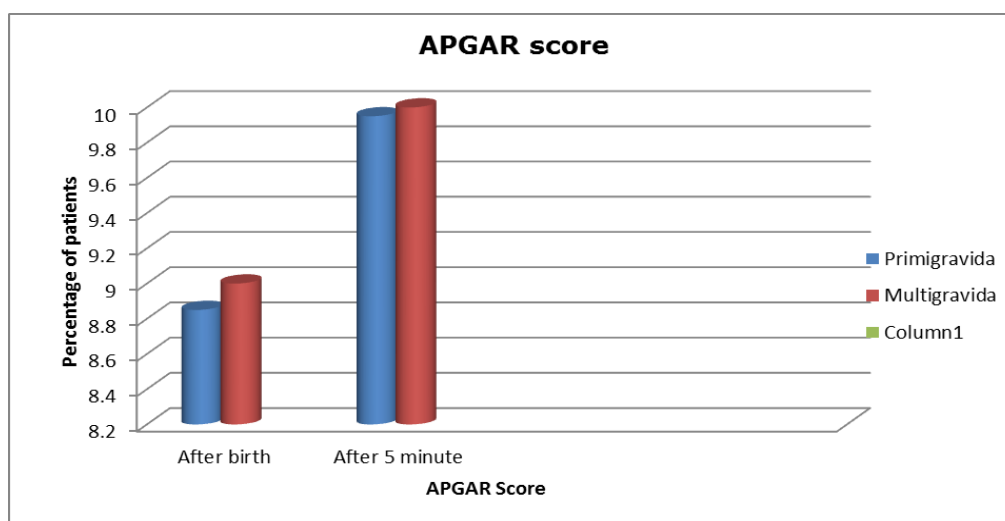
• **Associated symptoms of labour in mother**

Prasava janya shrama		Primigravida		Multigravida	
		Number	Percent	Number	Percent
	Alpa	17	85	35	87.5
	Madhyam	03	15	05	12.5
	Aati	00	00	00	00



- Fetal monitoring & observation in newborn

Observation		Primigravida	Multigravida
Fetal distress		00	00
APGAR	At birth	8.85	09
	After 5 min	9.95	10



DISCUSSION

Shighraprasavakara yoga contains fine powder of 6 drugs viz. *Langali, Chitraka, Vacha, Kushtha, Karanja & Sukshmaila* & which is smelled to 60 patients in labour under trial. It works as *Pradhama Nasya* and according to ayurved samhita's nasal canal is the opening of brain.

Most of these drugs are *ushna, tikshna* properties (*lanagli garbhashaya sankochak, garbhashaya uttejak*)



Strong stimulus to hypothalamus which is directly connected to posterior pituitary via olfactory membrane of nose.



Hypothalamus secrete more oxytocin & enhances labour pains



Accelerates the process of labour.

EFFECT OF *SHIGHRAPRASAVAKARA YOGA* ON THE DURATION OF STAGES OF LABOUR

1. **Cervical dilatation:** In primi gravida rate of cervical dilatation was found 1.16 cm/hr, in multigravida 2.21cm/hr.
2. **Effacement of cervix :** There is gradual increase in the effacement at average rate of 8.59%/hr in primi and 18.95% /hr in multigravida.
3. **Descent of head :** In primi at average rate of 0.83 cm/hr & in multigravida is 2.18 cm/hr.
4. **Contractions**
 - **Duration:** The average rate of increase in the duration of contractions is 5.65 sec/hr in primi & 9.04 sec/hr in multigravida.
 - **Interval:** There is markedly decrease in the interval.In primi average rate is 0.78 min/hr & in multigraval 0.83 min/hr.
 - **Intensity of contractions**
 - Contractions are divided in 3 grades
 - Grade 1- mild
 - Grade 2-moderate(duration minimum 45 sec & interval 3 min)
 - Grade 3- Strong
 - In primi the average time taken to achieve grade 2 from grade1 is 4.25 hrs, grade 3 from grade 2 is 2.40 hrs.Similarly 2.30 hrs & 1.55 hrs respectively in multigravida.

- **Duration of labour**

Stage	Primi	Multi
1 st	9 hrs 15 min	4 hr 56 min
2 nd	48.33 min	17.17 min
3 rd	8.33 min	7.73 min

The above data shows that there is drastic reduction in all stages of labour in both primi & multi gravida. Out of 20 primigravida patients 12(60%) delivered normally with marked decrease in all stages of labour without any fatal maternal or fetal complications, 6(30%) patients had to administer oxytocin/prostaglandin & 2(10%) patients underwent LSCS. In 40 multigravida patients 30(75%) delivered normally & 10 (25%) had to give oxytocin/prostaglandin administer.

- **Complications of labour**

None of the patient faced fatal complication.

- **Associated symptoms of labour in mother**

Prasavajanya shrama noticed *madhyam* in 3 primi & 5 multi patients. Rest delivered with *alpa shrama*. 85%,15%,) % *alpa,madhyam,ati prasavaajnya shrama* respectively in primi & in multi 87.5%,12.5% &) % respectively.

- **Fetal monitoring & observation in newborn**

Average APGAR score at birth in group 1 was 8.85 & group 2 was 9. After 5 min APGAR score in group 1 was 9.95 & group 2 was 10.

CONCLUSION

1. *Shighraprasavakara yoga* increases the rate of cervical dilatation, effacement of cervix in both primi & multigravida.
2. Reduces hours of different stages of labour by improving descent of head in both primi and multigravida.
3. It has good effect on uterine contractions, duration of contraction is markedly increased, interval between two contractions decreased. Intensity of the contractions is also increased which ultimately enhances the process of labour.
4. It accelerates the process of labour & thus the duration of all the three stages of labour can be significantly reduced.
5. The fatal maternal complication like cervical tear, PPh etc. & the fetal complication like fetal distress of induction or augmentation of labour are negligible with the use of *shighraprasavakara yoga*.
6. *Prasavajanya shrama* is very less with the use of this *yoga*.
7. It favours normal deliveries both in primi and multi gravida with minimal complication & incidences of LSCS can be reduced.

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