



**A STUDY TO EVALUATE THE EFFECT OF ANUVAASANA BASTI (MATRA BASTI)
AND PICCHU IN ADVANCED PREGNANCY ON PHENOMENON OF LABOUR.**

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ABSTRACT

The objective of prenatal care is to assure that pregnancy culminates in the normal uneventful delivery of a healthy baby without affecting the health of the mother. Although the women are working nowadays but they are having very less physical activities, so the rate of uterine inertia is on increasing side causing operative interference in most of the cases in spite of no cephalopelvic disproportion. For *Sukha* and *Nirupadrava prasava* Ayurvedacharyas have described well documented protocol i.e. *Garbhini Paricharya*, so in this research, regimen during 9th month of pregnancy described by *Acharya Charaka* i.e. the use of *Anuvaasana Basti* and *Picchu* was studied. 27 Patients were given *Anuvaasana Basti* twice a week & *Picchu* daily with *Balyam Taila* (oil prepared with drugs of *Madhuradi group*) till delivery and the effect on phenomenon of labour was compared with 30 patients of control group. This clinical trial shortened the 1st & 2nd stages of labour by having good effect on ripening of cervix and stretching & relaxing of vaginal canal and perineum. The comparative study of results showed that the mean duration of 1st stage of labour in Group – I was significant as compared to Group-II, 2nd stage of labour was comparatively insignificant while 3rd stage of labour was highly significant. 100% patients of trial group had spontaneous onset of labour and 74.1% patients were delivered normally without episiotomy. No operative interference was reported in trial group patients. Patients also got relief in different *lakshanas* like *Shveta srava*, *Yoni kandu* and *Vibandha*. This study should be carried out on a large scale as a long term project with hormonal study to evaluate if there is any effect of drug at hormonal level.

KEYWORDS: *lakshanas* like *Shveta srava*, *Yoni kandu* and *Vibandha*.



INTRODUCTION

Pregnancy is one of the most important stage in the life of every woman. The mother is the base of family life and a healthy mother can parturate a mentally and physically fit baby showing the importance of motherhood.

Ayurveda has a well documented protocol called "*Garbhini Paricharya*"^[1] which describes *Ahara* (diet), *Vihara* (life style) and *Vichara* (thought process) to be followed during pregnancy as these have a direct effect on the mother and the child.

The clinical efficacy of *Garbhini Paricharya* mentioned by *Acharya Charaka* in ninth month of pregnancy i.e. use of *Anuvaasana Basti* and *Picchu*^[2] with the oil prepared with the drugs of *Madhura Group*^[3] for the purpose of *Sukha and Nirupadrava Prasava*, was studied.

For clinical study, the patients were taken from O.P.D. and I.P.D. of R.G.G.P.G. Ayurvedic Hospital Paprola, Distt. Kangra (H.P.). Patients were randomly selected for two groups.

GROUP – I

Patients of this group were given *Anuvaasana Basti* twice a week and *Picchu* daily from 32-35wks of gestation till delivery.

GROUP – II

Control group includes the patients under observation without the use of *Anuvaasana Basti* and *Picchu*.

Inclusion criteria

- Pregnant women between 32 – 35 weeks were randomly selected for the trial with age groups between 20 – 35 years irrespective of gravida preferably primigravida.
- Patients having adequate pelvis, borderline pelvis, cephalic presentation.

Exclusion criteria

- Patients having cephalo pelvic disproportion, malpresentation, abnormal size of foetus, contracted pelvis, history of ante partum haemorrhage, history of precipitate labour.
- Patients having systemic diseases like diabetes mellitus, hypertension, T.B., jaundice, eclampsia, preeclampsia, heart disease, epilepsy, polyhydramnios, ascitis, generalized edema etc.
- Malignancy of the genital tract.

In total 60 patients were taken and selected as per criteria of the patients for trial. After registration of these patients, 3 patients left the treatment due to one or other reason. Thus the study was conducted on 57 patients in total.

Trial Group – I

Patients of this group were given *Anuvaasana Basti* twice a week and *Picchu* daily till delivery.

1. *Anuvaasana Basti* - 60 ml. (*Matra Basti*)
2. *Picchu* - Soaked in *Balyam Taila*.

Trial Group – II (control group)

Includes patients under observation without the use of *Anuvaasana Basti* and *Picchu*.

Ingredients Of *Balyam Taila*

- *Tila Taila*
- *Bala*
- *Shalparni*
- *Vidari*

Criteria of assessment

Clinical result was assessed on the basis of duration and events of stages of labour and nature of delivery on the basis of grades given to the patients.

Grade – 0

Onset of labour - spontaneous
 Partogram - before alert line
 Uterine contractions - normal pattern
 Type of delivery - spontaneous vaginal
 delivery without episiotomy

Per vaginum (cervix)

Position - forward

Consistency - soft
 Length of cervix - <4 cm.

Grade – I

Onset of Labour - Spontaneous
 Partogram - Before Alert
 Line/Between Alert Line & Action Line
 Uterine Contractions - Normal Pattern
 Type of Delivery - Spontaneous Vaginal
 Delivery with Episiotomy

Per vaginum (Cervix)

Position - Forward
 Consistency - Soft/Firm
 Length of cervix - <4 cm.

Grade – II

Onset of Labour - Induced
 Partogram - Before Alert
 Line/Between Alert Line & Action Line
 Uterine Contractions - Normal
 Pattern/Irregular Pattern
 Type of Delivery - Spontaneous Vaginal
 Delivery with or without Episiotomy

Per vaginum (Cervix)

Position - Backward
 Consistency - Firm
 Length of cervix - >4 cm.

Grade – III

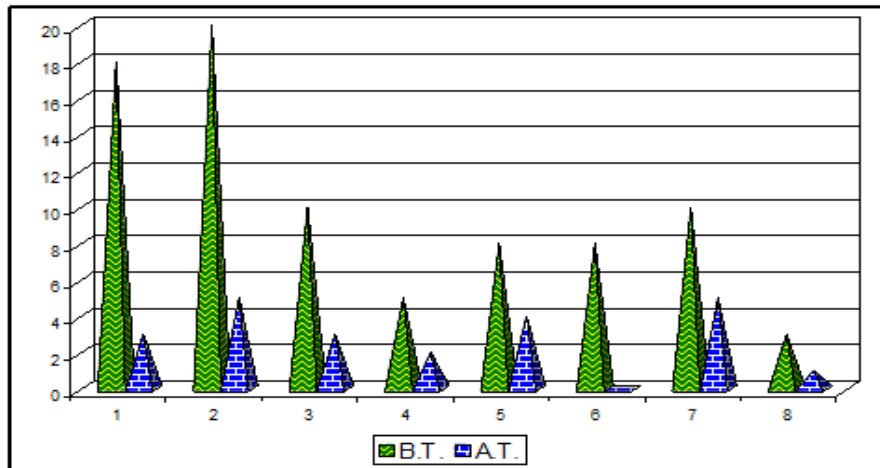
Onset of Labour - Spontaneous/Induced
 Partogram - After Alert Line
 Uterine Contractions - Irregular Pattern
 Type of Delivery - Forceps / LSCS

Per vaginum (Cervix)

Position - Backward
 Consistency - Firm
 Length of cervix - >4 cm.

1. Effect of *Anuvaasana Basti* and *Picchu* on different *Lakshanas* in 27 patients of Group-I:-**Table No 1.**

Sr. No.	Lakshanas	B.T.	A.T.	% relief
1.	<i>Udarashoola</i>	18	3	83.3
2.	<i>Katishoola</i>	20	5	75
3.	<i>Daurbalyata</i>	10	3	70
4.	<i>Kshudha vaishmya</i>	5	2	60
5.	<i>Nidra vaishmya</i>	8	4	50
6.	<i>Vibandha</i>	8	0	100
7.	<i>Mootrakrichhata</i>	10	5	50
8.	<i>Shirashoola</i>	3	1	66.6



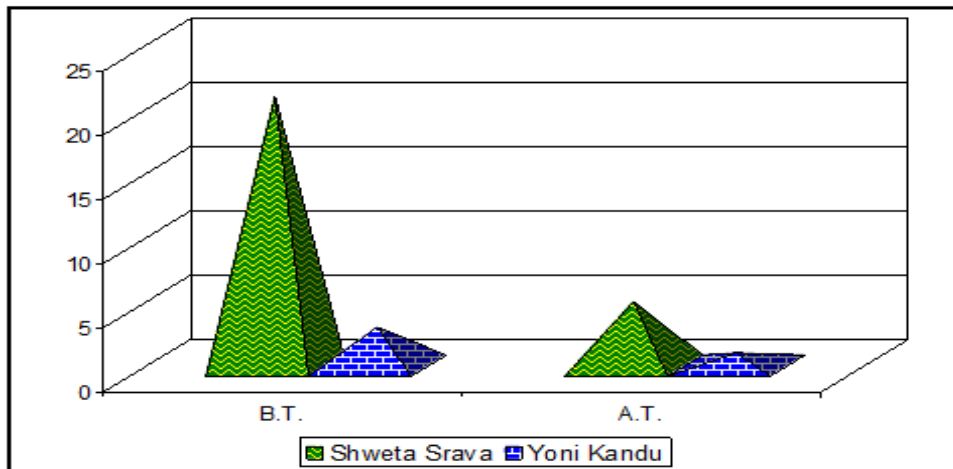
Graph No 1: Effect of Anuvaasana Basti and Picchu on different Lakshanas in 27 patients of Group-I.

This table shows that in 100% relief was observed in Vibandha, 83.3% relief was observed in Udarashoola, 75% relief in Katishoola, 70% in Dourbalyata, 66.6% relief in Shirashoola, 60% in Kshudhavaishamy and 50% relief was observed in Nidravaishamy and Mootrakrichhata.

2. Effect of Picchu on different Lakshanas in 27 patients of Group – I:-

Table No 2.

Sr. No.	Lakshanas	No. of Patients Group –I		Percentage
		B.T.	A.T.	
1.	Shveta Srava	21	5	76
2.	Yoni Kandu	3	1	66.6



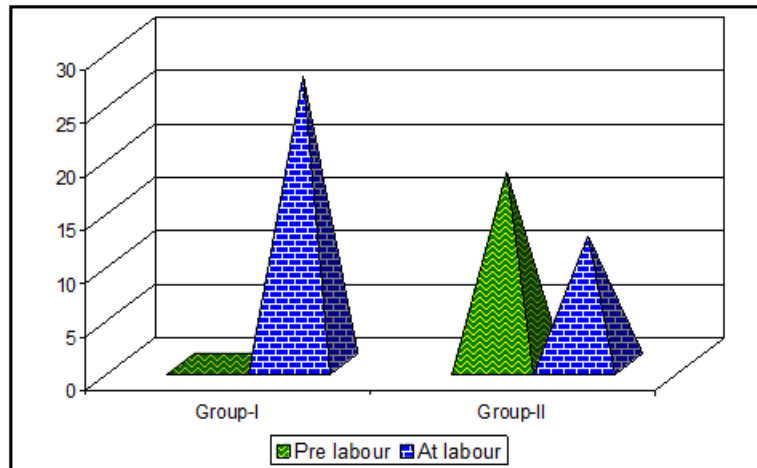
Graph No. 2: Effect of Picchu on different Lakshanas in 27 patients of Group – I.

Above table shows that administration of Picchu caused relief in Shveta Srava in 76% patients and Yoni Kandu in 66.6% patients.

3. Incidence of Rupture of Membrane in 57 patients of Both Groups.

Table No 3.

Sr. No.	Rupture of membranes	No. of Patients		Percentage	
		Group–I	Group–II	Group – I	Group – II
1.	Pre labour	0	18	0	60
2.	At labour	27	12	100	40



Graph No. 3: Incidence of Rupture of Membrane in 57 patients of Both Groups.

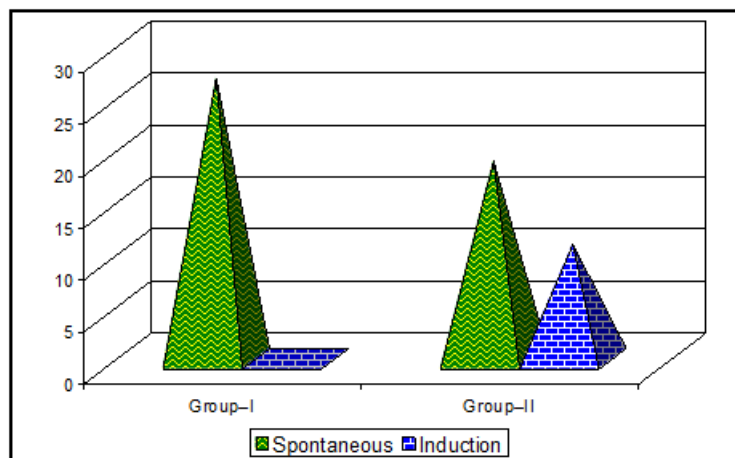
Above table reveals that in Group – I 100% patients had rupture of membranes after the onset of labour while in Group – II 60% patients had rupture of the membrane

before the onset of labour and 40% patients had rupture of membranes after the onset of labour.

4. Incidence of Nature of Labour in 57 patients of Both Groups.

Table No. 4.

Sr. No.	Nature of labour	No. of Patients		Percentage	
		Group-I	Group-II	Group – I	Group – II
1.	Spontaneous	27	19	100	63.33
2.	Induction	0	11	0	36.66



Graph No. 4: Incidence of Nature of Labour in 57 patients of Both Groups.

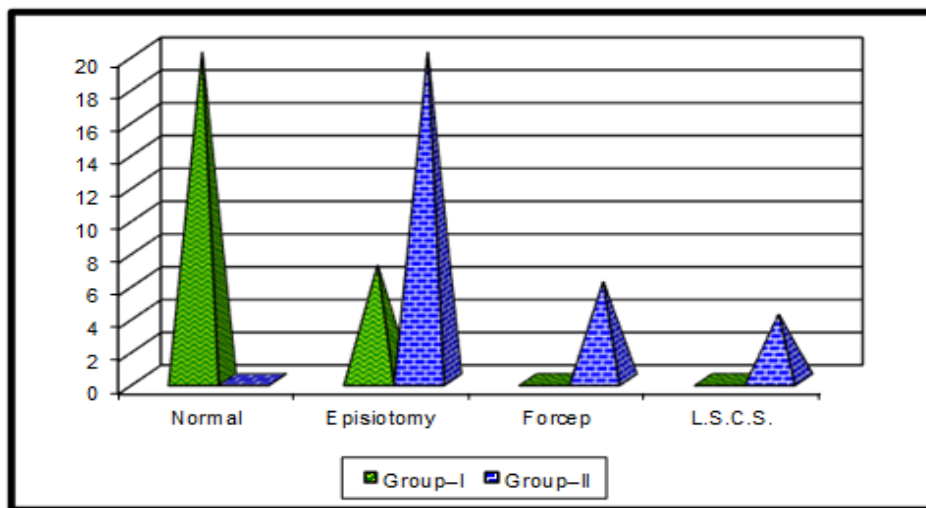
This table depicts that in group-I, 100% deliveries were spontaneous in onset while in group-II, 63.33% patients

had spontaneous labour and 36.66% patients had induced labour.

5. Incidence of type of Delivery in 57 patients of Both Groups.

Table No. 5.

Sr. No.	Type of Delivery	No. of Patients		Percentage	
		Group-I	Group-II	Group – I	Group – II
1.	Normal	20	0	74.1	0
2.	Episiotomy	7	20	25.9	66.6
3.	Forcep	0	6	0	20
4.	L.S.C.S.	0	4	0	13.3



Graph No. 5: Incidence of type of Delivery in 57 patients of Both Groups.

Above table reveals that in Group – I 74.1% patients delivered vaginally without episiotomy, whereas in Group – II, 66.6% delivered vaginally with episiotomy.

25.9% patients in Group-I delivered normally with episiotomy. While 20% patients delivered by Forceps and 13.3% patients delivered by L.S.C.S. in Group – II.

6. Duration of 1st, 2nd and 3rd Stage of Labour in 27 patients of Group – I.

Table No. 6.

Sr. No.	Stages of Labour	Normal mean duration ^[4]	Group – I Mean duration	S.D. ±	SE. ±	‘t’	‘P’
1.	Stage – I	13.3 (13 h. 18m.)	9.88 (9 h. 53 m.)	4.48	0.86	3.95	<0.001
2.	Stage – II	0.95 (57 m.)	0.56 (34 m.)	0.21	0.04	9.45	<0.001
3.	Stage – III	0.25 (15 m.)	0.04 (2.4 m.)	0.019	0.003	45.9	<0.001

This table reveals that means duration of Ist stage of labour was 9 h. 53m., IInd stage of 34 m. and mean

duration of IIIrd stage was 2.4 m. ‘p’ value is highly significant in all stages.

7. Duration of 1st, 2nd and 3rd Stage of Labour in 26 patients of Group – II.

Table No. 7.

Sr. No.	Stage of Labour	Normal mean duration	Group – II Mean duration	S.D.	S.E.	‘t’	‘P’
1.	Stage – I	13.3 (13 h. 18m.)	14.88 (14 h. 53 m.)	6.33	1.24	1.38	>0.05
2.	Stage – II	0.95 (57 m.)	1.03 (1h. 2 m.)	0.52	0.102	0.73	>0.05
3.	Stage – III	0.25 (15 m.)	0.07 (4.2 m.)	0.049	0.009	14.8	<0.001

This table reveals that mean duration of Ist stage of labour was 14h. 53m., IInd stage of 1h. 2m. while IIIrd stage of labour was 4.2m. ‘p’ value was insignificant in

Ist and IInd stage of labour and highly significant in IIIrd stage of labour. 4 patients of Group-II had L.S.C.S, so they are not included in this study.

8. Comparison of 1st Stage of Labour in 27 patients of Group-I and 26 patients of Group II.

Table No. 8.

Sr. No.	Groups	Mean Duration	S.D.	S.E	‘t’	‘p’
1.	I	9.88 (9h. 53m.)	4.48	0.86	3.95	<0.001
2.	II	14.88 (14h. 53m.)	6.63	1.24	1.38	>0.05

This table exhibits that mean duration of 1st stage of labour was 9h. 53m. in Group I and the mean duration of 1st stage of labour in Group II was 14h. 53m. Group I is showing highly significant effect while Group II is showing insignificant result.

9. Comparison of 2nd Stage of Labour in 27 patients of Group-I, and 26 patients of Group II.

Table No. 9.

Sr. No.	Groups	Mean Duration	S.D.	S.E	't'	'p'
1.	I	0.56 (34 m.)	0.21	0.04	9.45	<0.001
2.	II	1.03 (1h. 2 m.)	0.52	0.10	0.73	>0.005

Above table unleashes that the mean duration of 2nd stage of labour was 34m. in Group I and the mean duration of 2nd stage of labour was 1h. 2m. in Group II. Group I is

showing highly significant effect at the level of $p < 0.001$ where as Group II is showing insignificant result.

10. Comparison of 3rd Stage of Labour in 27 patients of Group-I and 26 patients of Group-II.

Table No. 10.

Sr. No.	Groups	Mean Duration	S.D.	S.E	't'	'p'
1.	I	0.04 (2.4m.)	0.019	0.003	45.9	<0.001
2.	II	0.07 (4.2 m.)	0.049	0.009	14.84	<0.001

This table depicts that the mean duration of 3rd of labour was 2.4 m. in Group I and the mean duration of 3rd stage of

labour was 4.2 m. in Group II. Both of these are showing highly significant effect at the level of $p < 0.001$.

11. Comparative Study of Results in 27 patients of Group-I and 26 patients of Group-II.

Table No. 11.

Sr. No.	Stages of Labour	S.D.	S.E	't'	'p'
1.	Ist	1.50	0.41	3.33	<0.01
2.	IInd	0.11	0.03	1.56	>0.05
3.	IIIrd	0.009	0.0026	8.085	<0.001

Abbreviation

h. - hour
m. - minute

RESULT

Result was assessed on the basis of grades as mentioned previously.

RESULT OF BOTH GROUPS

Sr. No.	Result	Group-1		Group-II	
		No. cases	%age	No. of cases	%age
1.	Grade - 0	20	74.1	00	00
2.	Grade - I	07	25.9	08	26.6
3.	Grade - II	00	00	12	40
4.	Grade - III	00	00	10	33.3

Trial Group - I

In this group out of 27 patients 74.1% i.e. maximum numbers of patients achieved Grade-0 and 25.9% patients achieved Grade-I.

Trial Group - II

In this group 40% patients had Grade II, 33.3% patients achieved Grade III and 26.6% patients achieved Grade I.

DISCUSSION

As per *Ayurveda*, the *Vyana* and *Apana Vayu* have an important role in the fetal expulsion.^[4] The *Vyana Vayu* plays role in contraction and retraction of myometrium and the *Apana Vayu* is essential to expell the foetus out of the womb. To keep these two *Vayus* in balanced state, *Acharyas* have advised administration of *Anuvaasana Basti*.

Most women experience constipation^[1] in late pregnancy due to pressure of gravid uterus over the bowel and effect of progesterone.^[5] Use of *Anuvaasana Basti* relieves constipation.^[6] *Picchu* of oil destroys pathogenic bacteria of vaginal canal and prevents the passage from any type of infection which may cause premature rupture of membranes besides this *Picchu* also helps in easy relaxation and dilatation of vaginal passage.^[7]

40% patients had irregular bowel habits, 31.66% patients had regular bowel habits, 26.66 % patients had constipation while 1.66% patients had loose bowel habits. Due to pressure of gravid uterus over the bowel, effect of progesterone and decreased physical activity, women experience constipation.

Most of the patient i.e. 70% had sedentary life style followed by moderate activities (30%). So most of patients were having less physical activities. So to ease

the phenomenon of labour in less active females, *Anuvaasana Basti* and *Picchu* play an important role.

90% patients were primigravida, only 10% patients were second gravida. In second gravida patients only 1.66% patient were primipara. (Table-20) As the vaginal passage is rigid in primigravida and cervix takes more time for ripening and they are more anxious about the outcome of labour, hence primigravida patients are selected for this study.

Maximum number of patients 91.2% delivered between 37–40 wks. of gestation. If *Apana Vayu* & *Vyana Vayu* are stated in *Samavastha*, they will initiate the labour at proper time^[6] with regular uterine contractions and *Anuvaasana Basti* keeps these *Vayus* in balanced states.

76% patients got relief in *Shveta Srava* and 66.6% patients got relief in *Yoni Kandū*. The effect of this therapy is due to local *Krimighna* effect of *Balyam Taila* and also *Picchu* might affect the pH of vagina. *Udarshoola* and *Katishoola* were found in majority of the patients. 83.3% patients had relief in *Udarshoola* while 70% patients had relief in *Katishoola*. The effect of therapy may be due to *Vedanashaka* property of *Balyam Taila* and also *Anuvaasana Basti* promote the *Anulomana of Vayu*. In *Daurbalyata* 70% relief was found. The effect of therapy on *Daurbalyata* is due to *Balya*, *Brimhaneeya* and *Rasayana* property of *Balyam Taila*. As the drugs of *Balyam Taila* are *Deepaneeya* and *Pachaneeya* so that may cause relief in *Kshudhavaishmya* in 60% patients. Along with the drug trial patients were also advised for diet, do's and don'ts during pregnancy which could have given the synergistic effect.

There was relief in 100% patients in *Vibandha*. *Vibandha* is due to pressure of gravid uterus on the rectum, effect of progesterone and diminished physical activities. *Anuvaasana Basti* causes *Apana Vayu Anulomana* and expulsion of Mala out of the body.

In Group – I 100% patients had rupture of membranes at labour. The effect may be due to *Krimighna* property of *Balyam Taila Yoni Picchu*, as infection plays an important role in the rupture of membranes.

100% patients in Group – I had spontaneous onset of labour. That is due to softening of cervix because of lubricant action of *Picchu* of *Balyam Taila*.

In Group – I maximum number of patients i.e. 74% delivered normally without episiotomy, it is due to the effect of *Picchu* on vaginal passage and rigid perineum of primigravida.

In Group – II most of the patients i.e. 66.6% delivered normally with episiotomy. In Group – I 25.9% patients delivered vaginally with episiotomy because of the reasons- big baby, face to pubis and fetal distress. In Group–I the mean duration of 1st stage of labour was 9hrs. 53min., 2nd stage

was 34min. and the mean duration of 3rd stage of labour was 2.4min. All the three stages were highly significant ($p < 0.001$).

The mean duration of 1st stage of labour in Group–II was 14hrs. 53min. and 2nd stage of labour was 1hrs. 2min., which both were insignificant at the level of $p > 0.05$. The mean duration of 3rd stage of labour was 4.2min. in Group–II which was highly significant as the level of $p < 0.001$.

But the comparative study of results showed that the mean duration of 1st stage of labour in Group – I was significant as compared to Group–II, 2nd stage of labour was comparatively insignificant while 3rd state of labour was highly significant.

CONCLUSION

The trial drug was selected from the reference of *Garbhini Paricharya* given by *Charaka* i.e. use of *Madhuraushadha sidha Anuvaasana Basti* and *Picchu* in 9th month of pregnancy.

Patients got relief in *Yoni srava* which may be due to effect in pH of vagina of the trial drug *Picchu*.

No forcep delivery or caesarean sections were reported in patients of this drug trial. Rate of episiotomy required was very less.

This clinical trial shortened the 1st & 2nd stages of labour by having good effect on ripening of cervix and stretching & relaxing of vaginal canal and perineum.

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