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Study of efficacy of *bala siddha taila pitchu* on cervical ripening and effacement

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Abstract

As the infiuence of elderly primigravida increasing operative or invasivedeliveries are increasing.Garbhini paricharya plays important role in sukhaprasav.yonimardavata that is good cervical ripening and effacement as well as good vaginal laxity leads to normal labour process.madhur aushadhi siddha tail pitchu (tampoon) application is adviced by ashtanga sangraha3/12.so that 100 patient of trial group and 100 patient of controll group taken.In trial group daily application of bala siddha tail pitchu done from 36 weeks till delivery.Where as in control group there is no such pitchu (tampon) application. Due to this medicated tampon application at onset of labour bishop score was highly favorable and cervical dialatation rate was >1 cm/ hr that favours normal delivery in most of the patient.in this study for statistical analysis chi- square test and kruskal wallis test are applied and p value was<0.005 .thus pitchu increases muscle laxity of vagina brings changes in cervical collagen which favours cervical ripening and effacement cusing good progress of labor.

INTRODUCTION

Reducing no. of obstetric complication is one of the national health policy which is under safe motherhood challenge taken by WHO. (WHO/UNICEF2003) To keep garbhini physically & mentally fit is goal of gharbhini paricharya. katimardavta,yonomardavta is also important factor for sukhprasavay .Acharya vaghbhata has included yoni pitchu in 9 month of pregnancy as paricharya upkarama and madhur aushadhi sidhtail has been advised. Referance taken for this study is

from *Ashtang sangraha sharirshtan*

Pitchu is beneficial for promoting nonvitition of sthanik vatadosha and proper tone of mansadhatu i.e.cervical and vaginal is maintained.Acharya vaghbhata has included bala in madhurskandha.

By considering the need of pitchu and its effect on cervical ripening & effacement will definitely be a step forward for achieving the goal of " sukhaprasavay " So we did our study in two groups. A trial group has hundred patients and control group contains hundred patients.

AIM:- To study the efficacy of Bala (*Sida Cordifolia*) siddha taila pitchu on cervical ripening and effacement.

OBJECTIVES:

1. To study the normal labour process and intrapartum changes in cervical ripening and dilatation.
2. To study the action of Bala siddha taila pitchu on cervical ripening and effacement.

MATERIALS: Volunteers for trial and control group

Drugs:-Balapanchanga,Tilataila & bala siddha taila Pitchu- autoclaved.

METHODOLOGY

Random selection of Patients done according to inclusion criteria.

INCLUSION CRITERIA:-Primipara with singleton pregnancy of 36 week

EXCLUSION CRITERIA**:-**Multipara, garbhopdravas like pregnancy induce hypertension, anaemia, cardiac disease,Patient having garbhavyapdas

GroupA)Trialgroup-100patients
Group B) Control group-100 patients

All patient with Pelvic assessment was done and confirmed.

Autoclave and sterile bala siddha taila pitchu (of size 6×3 cm) application will be done on everyday from 36 weeks up to the start of labour process for 6hrs daily.Control group volunteers were assisted under same criteria and followed for weekly.

Assessment criteria:

The efficacy of the drug was judged on the following criteria
1. Bishops score 2. Cervical ripening
3. Cervical effacement

4. Cervical consistency 5.Cervical position 6 Cervical dilatation cm/hr

7. First stage duration 8.Second stage duration

9. Total duration of labour. 10. Mode of delivery 11. Vaginal elasticity.

Observation and results

Statistical analysis was done on the following attributes:

1. Bishop score
2. Cervical ripening
3. Cervical effacement in %

Frequency Analysis:

Onset of labour:

Onset of labour for majority of the patients (i.e. 95% and 91%) of both trial and control group respectively were spontaneous. In trial group there is spontaneous onset dueto riped cervix.

Bishop score:

For 84% of trial group patients bishop score was above 6 and for 53% of control group patients bishop score was 0 to 5.

Bishop score	Trial Group	Control Group
0 to 5	16	53
Above 6	84	47

favorable bishop score facilate the progress of labour,there is good cervical dilatation and reduces the chances of prolonged labour. The bishop score was more favorable in more than 50% of volunteers, in trial group in 84%, while in only 47% of control group it was favorable.

Cervical ripening:

Frequency distribution was done on the basis of cervical ripening.

Cervical ripening	Trial Group	Control Group
Yes	82	40
No	16	60

Pitcu is highly effective for ripening of cervix as 82 volunteers of trial group were with ripe cervix at onset of labour as compaired to control group, in which only 40% were with ripe cervix.

Cervical effacement %:

Frequency distribution was done on the basis of cervical effacement %.

Cervical effacement %	Trial Group	Control Group
0 to 40	57	62
40 to 60	34	28
60 to 80	6	8
80 to 100	1	2

Around 75% volunteers of trial group had >40% effacement, while 60% of control group had <40% effacement. There is rapid increase in effacement of

trial group with progress of labour. There was rapid change in effacement with contraction and desent of head in trial group and dialatation accured easily.Most of the volunteers of control group needed more time for 100% effacement as compaired to trial group, and needed augmentation with oxytocin.

Cervical consistency

Cervical consistency	Trial Group	Control Group
Soft	90	54
Medium	8	28
Firm	0	18
Total	98	100

There was 90% volunteers of trial group had soft consistency as compaired to control group which were only50%.50% volunteers of control group were had medium and firm consistency which causes delay in progress of labour.

Cervical position:

Frequency distribution was done on the basis of cervical position.

Majority of the patients of trial group i.e. 56% have anterior cervical position and 40% of the patients from control group have midpost cervical position. As anterior position favours labour.

Cervical dilatation:

Majority of the patients of trial group i.e. 51% have more than 1 cm per hour cervical dilatation.

Cervical dilatation (cm/hr)	Trial Group	Control Group
More than 1 cm per hour	67	34
Less than 1 cm per hour	18	51
Total	85	85

Out of 67,62 volunteers delivered normally. 5 them had dilatation rate >3 cm/hr, but there no sign of precipitation of labour. >2cm/hr :- trial group 12 , Control group 3

In control group, 34 who needed lscs 25 had <1 cm/hr, out of which 18 had no progress in dilatation of cervix.

Uterine contraction: Majority of the patients of both trial and control groups i.e. 67% and 63% respectively have moderate uterine contraction. there was good dialatation with each contraction and desent of head in trial group.

Augmentation: There was no need of augmentation in majority of the patients of trial group i.e. 63% as compaired to control group in which 44 volunteers needed invasive drug thearapy.

Partogram curve:

Partogram curve	Trial Group	Control Group
Action line	21	25
Alert line	25	25
Normal	34	20

In >50% volunteers of trial group the partogram was normal, where as in 60% of cases of control group partogram curve was midway or prolonged.

In control group, 66 who had normal delivery, only 20 had normal partogram curve.In trial group,only 21 of 82 had abnormal curve.

Labour Stage 1:

Majority of patients from trial group i.e. 51% had time less than 10 hrs for labour stage Majority of patients from trial group i.e. 60% had time duration less than 10 hrs for labour stage. 34 from control group needed lscs of which 15 Had prolonged 1st stage.

Labour Stage 2:

Labour Stage 2	Trial Group	Control Group
More than 30 min	19	17
Less than 30 min	62	49

In control group 5 volunteers had >30 min duration who also had prolonged labour. In trial group only 2 volunteers had >30 min duration.

Labour Stage 3:

Majority of patients from both trial and control groups i.e. 79% and 64% have less than 10 min labour stage 3 respectively.

Total labour duration:

Total labour duration	Trial Group	Control Group
More than 12 hrs	22	30
Less than 12 hrs	63	36

Above table indicates that about 75% primi delivered within 12 hrs of labour onset, there is marked reduction in duration of labour.22 volunteers of trial group had >12 hrs duration, while 30 of control group had >12 hrs duration.

Mode of delivery:

the rate of operative delivery in control group is 2 times higher than trial group.

Vaginal elasticity:79% of trial group patients had vaginal elasticity and 66% of control group patients had no vaginal elasticity.

Conclusion:

Bishop Score: The P-value for Bishop Score (P=0.007) is significant and the alternative hypothesis can be confidently retained. The null hypothesis can be rejected.

Cervical Ripening: The P-value for Cervical Ripening (P=0.0001) is significant and the alternative hypothesis can be confidently retained. The null hypothesis can be rejected.

Cervical Effacement: The P-value for Cervical Ripening (P=0.082) is significant and the alternative hypothesis can be confidently retained. The null hypothesis can be rejected.

To compare the mean tendency between the 2 groups, Kruskal-Wallis test was used. Bishop Score, Cervical Ripening and Cervical effacement being non-paramteric data, Kruskal-Wallis test was used for the comparison.

DISCUSSION

Distribution according to the position of foetus.

Occipito posterior position is one of the cause of cervical dystocia. There are 4 volunteer from trial group had right occipito posterior position initially. But there is no cervical dystocia due to soft and ripe cervix.

Distribution according to onset of labour.

pichu withch causes local oleation and softening of cervix. for induction with prostaglandins cervix should be ripe and soft. Pichu causes proper ripening of cervix.

Distribution according to Bishop's score.

Bishop's Score is said to be favorable that lies between 6-13 ripped cervix is favorable for effacement and dilataion .

The pichu treatment brings changes . The elasticity and stretching capacity of cervix increases . The bala taila causes mardavta(softening), kledana (wetting) locally . Bala causes hypertrophy and hyperplasia, is also a demulcent which enhances the ripening action .

While in the volunteers of control group, stretching capacity was not much and it bleed on stretching. At same dilatation, in trial group there is thining of cervix noted while in control group cervix is unripe ,thick, no stretching is there.

Distribution according to cervical consistency and position

In trial group volunteers (80%) pichu caused oleation , enhanced softness, moistened the cervix and thus favored cervical ripening . Bala being madhur , snigdha and demulcent aggravated the effect of cervical softening .

Shows distribution of volunteers according to effacement .

Effacement is a process by which the muscular fibers of cervix are pulled upward and merges with the fibers of lower uterine segment .Volunteers from trial group had good effacement of cervix (>50%), at onset of labour and effacement and dilatation occurred simultaneously like that of multipara. Due to good effacement dilatation of cervix occurs easily which helps in shortening of first stage.

Distribution of volunteers according to Cervical dilatation .

Local action of bala siddha taila pichu enhanced the same i.e. softening and ripening of cervix that favours dilatation . and hence 75% of volunteers had dilatation of more then 1cm/hr Pichu causes local snehana, kledana and mardavata. In trial group volunteers cervix easily dialates with each strong contraction.

Distribution of volunteers according to need of augmentation.

Augmentation is the process of stimulating uterine contractions that are already present but found to be inadequate. There was no need of augmentation in majority of the patients of trial group i.e. 63% as compared to control group in which 44 volunteers needed invasive drug thearapy.

According to cervical dilatation:

Most of the volunteers of trial group had total duration of labour<10 hrs, up to 8-9 hrs. There was good dilatation rate of cervix without sign of fetal distress.cervix is smooth stretchable and easily dilatable. PICHU was highly effective as it increases rate of dilatation of cervix more than 1.5 cm/hr.

Distribution according to duration of 1st stage of labor

The short duration (6-7hrs) of first stage was found in trial group volunteers. It indicates good progress of lobour without any complications in mother and fetus also.In control group 15 of 34 volunteers landed up in L.S.C.S. with prolonged 1st stage. (>12 hours). After augmentation also 7 needed lscs.Pichu by local action causes kledana and vishyandana, snehana and mardavata that favors the cervical ripening and effacement. **Distribution according to 2nd stage of labour**

Pichu causes increased muscle laxity of apatyapatha, snehan causing good descent of foetus and thus shortening the 2nd stage duration.As bala taila increases stetching capacity of muscles no lacerations,tears were noted in trail group volunteers.

Distribution according to total duration of labor.

Labour is said to be prolonged when cervical dilation is less then 1cm/hr. And descent is less then 1 cm/hr. For a period of minimum 4 hours observation (according to WHO – 1994).While pichu causes local kledana, snehana and prevents cervical dystocia and increases elasticity of perineum.Due to prakrut gati of apana vayu, mal position and mal presentation is prevented and hence all the factors facilitated the normal labor progression.

Distribution according to mode of delivery.

In todays practice,according to WHO only 63% primipara patient delivered normally without any invasion and have spontaneous onset.So there is high incidence of normal delivery. The volunteers who needed L.S.C.S. had good cervical effacement ,dilatation and effective uterine contractions.

Distribution according to need of episiotomy.

Episiotomy is nowadays considered as a part and parcel of normal labour. To avoid tears, fistula and lacerations episiotomy is routinely Practiced. Pichu increases elasticity of perineum and increase stretching capacity. Still normal delivery without episiotomy is risky one.

Thus the PICHU was effective on cervical ripening and effacement and did not cause any complication which would be hazardous to maternal or fetal health.

CONCLUSION

Bala taila pichu is highly effective to bring about spontaneous labour onset at optimal time.Ripening, softness of cervix accurs most of the patient had at onset of labour. Hence pichu causes ripening without altering uterine contractions in antenatal period.3.Bishop's score was highly favorable, that means pichu causes cervical changes favoring the dilatation and effacement.Pichu helps in soft consistency and anterior position of cervix.also causes ripening and effacement of cervix, due to which there was more than 1 cm dilatation per hour and thus labour progress was very fast. Duration of first stage of labour was reduced, resulting in reduction of total labour duration by Bala siddha taila pichu. It helps or enhances chances of normal delivery with minimal invasion.From all above statements it can be concluded that bala siddha taila pichu administration in 9th month is highly effective to bring about normal delivery by doing cervical ripening and better effacement.

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