

Original Research Article

## Effect of Agar (Aquilaria Agallocha) Dhupan in Sutika Avastha (Puerperium)

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### ABSTRACT

Regarding women reproductive health, period of puerperium is equally important as that of pregnancy and delivery. Mother's body including hormonal level and uterus size return to a non-pregnant state during puerperium. During delivery, prolonged labor, trauma, over distension of uterus, laceration etc. predisposes abnormal puerperium. Infection, sub involution and post partum haemorrhage are common complications found in this period. So the care must be taken to prevent complications.

Ayurveda mention 'sutika-avastha' i.e. the period after expulsion of placenta up to about one month as a delicate period. Due to *pravas* (labor), there occurs vitiation of 'vata' along with 'dhatukasya' (deterioration of function of physiological elements). To maintain proper function of elements, healing phenomenon and to prevent complication, Ayurveda describe typical regimen in the term of 'sutika-charya'. Amongst these, *vrana-chikitsa* and *dipan-panchan chikitsa* play an important role in providing normal puerperium.

In present research work, efficacy of *Panchakol vati* and *Dhupan-karma* with 'Agaru' (Aquilaria agallocha) was evaluated in 'sutika'. For the purpose, 60 *sutika* (after delivery of placenta) selected and drawn in 2 groups. Group 'A' treated with *panchakol vati* and *agaru-dhupan* where as group 'B' treated with *panchakol vati* 7 days. Local application i.e. *dhupan* to 'yoni' and oral application of *panchakol vati* when administered to group 'A', showed highly effectiveness causing proper involution of uterus and healing at lesion.

**Keywords:** *Dhatukhaya, Dhupan, Puerperium, Sutika, Vata-prakopa.*

### INTRODUCTION

Health of female should be maintained as reproduction as well as fetal/neonatal nourishment depend on it. [1] Anti natal care is important for better outcome of pregnancy i.e. healthy gestation and prevention of complications. Likewise, post natal care is equally necessary regarding health of mother. Post partum period considered as 2 days after normal delivery and 3-5 days after caesarian section (period in stay in hospital). [2] But not only this period but entire puerperium [3] is delicate

phase through which lot of changes regarding mother's body and hormonal level occurs for the maintenance of homeostasis. Puerperium is about 6 weeks duration [4] which is most critical and yet most neglected phase in lives of mother and babies.

Ayurveda mentioned 'sagarbhavastha, prasavavastha and sutikavastha' i.e. special phases in women's life requiring specific dietetic and daily regimen. [5] Uterine contraction, bleeding during labor lead to excessive fatigue that is

‘dhatu-daurbalya’ (deterioration of functions of elements). [6] Condition of mother’s body after delivery responsible for chronicity and complexity of abnormality if occur. To maintain health and to prevent the complication, *Acharya kashyapa* mention *sutika-paricharya* (regimen in puerperium) in details including local as well as internal application.

*Yonidushti* is primary cause of ‘*stravdushti*’. Prolonged bleeding, lower abdominal pain, fever, burning micturition, septicaemia caused by *yonidushti*.

Involution i.e. size of uterus turn to non pregnant state is important change must occur in puerperium. *Dhupan* with *agaru* beneficial for both i.e. *garbhashaya shodhan* and *yonidushti*. Internal medicinal treatment (*panchakol*) helpful to suppress *kleda* at lesion, vitiated *vayu* and to improve digestion. [7]

#### **Aim & Objective:**

- 1) To evaluate combined effect of ‘*Dhupan karma*’ with *Agaru* and *Panchakol vati* in *sutika* to prevent complication in puerperium.
- 2) To study efficacy of ‘*Dhupan* with *Agaru*’ in *yonigatstrava* and *dushti* in *sutika- avastha*.
- 3) To study anatomical changes in FRS during *sutika avastha* (puerperium) according to modern science and Ayurveda.

## **MATERIALS AND METHODOLOGY**

The present research work was carried out in following manner:

1. Selection of patient.
2. Administration of local and central treatment.
3. Observation of patients i.e. *sutika*.
4. **Selection of patient**

‘*Sutika*’ (just after expulsion of placenta) considered as patient and were selected from IPD of Sheth Tarachand Ramnath Rugnalya of Tilak Ayurved college, pune .

#### **Inclusive criteria:**

1. Patient having normal delivery (FIND)
2. Patient of episiotomy also included.

#### **Exclusive criteria:**

1. Patients having toxemia of pregnancy.
2. Patients having h/o severe anaemia.
3. Post partum eclampsia
4. Delivery by caesarian section.
5. Early post partum hemorrhage.

Selected 60 patients drawn in two groups, group A and B. History of pregnancy, normal delivery and previous illness taken in details with case record form.

#### **Administration of drugs**

**For group A:** Treatment including ‘*Dhupan karma*’ and ‘*Panchakol-vati*’ was applied from 2<sup>nd</sup> day of delivery, in the morning, for 7 days.

No	Treatment given	Drug used	Dose/duration	Total duration
1.	<i>Yoni-Prakshalana</i> (Perineal Cleaning)	<i>Koshna Jala</i> (Lukewarm water)	2-3 time	7 days
2.	<i>Parishek</i>	<i>Til tail (koshna)</i>	3-4 min	
3.	<i>Dhupan karma</i>	<i>Agaru-churna</i>	7.5gm for 5min	
4.	Rest	-	10 min	

**Medicinal treatment:** *Panchakol vati*- 500 gm- b.i.d x 7days.

**For group B:** Patients of group ‘B’ administered only with *Panchakol-vati* 500 gm bid for 7 days.

## **OBSERVATIONS AND RESULTS**

During treatment and after completion of treatment, following parameters observed in CRF.

1. *Garbhashaya-rhasa* (Involution of uterus)
2. *Yonigata Raktastrava* (Appearance and change in lochia)
3. *Yonidushti* (Inflammation/Infection).
4. *Yoni/kati shula* (pain).
5. PH of Vagina.

#### **Score for assessment of parameters**

Score for assessment of involution-  
08 - Fundus of uterus felt at umbilicus.  
07 - 1 finger below umbilicus.

06 - 2 finger below umbilicus.  
 05 - 3 finger below umbilicus.  
 04 - 4 finger below umbilicus.  
 03 - 5 finger below umbilicus.  
 02 - 6 finger below umbilicus.  
 01 - 7 finger below umbilicus.  
 00 - 8 finger below umbilicus.

**Score for assessment of lochia (Raktastrava)**

Lochia Rubra- 03  
 Lochia serosa- 02  
 Lochia alba-01  
 Score for assessment of bleeding (strava praman)-  
 Moderate bleeding -03  
 Mild bleeding -02  
 Scanty (spotting) - 01  
 Absence of bleeding -00

**Table 1- On 7<sup>th</sup> day of treatment, degree of involution observed**

Group A		Group B	
No of patients	Degree of involution	No of patient	Degree of involution
03	05	10	06
06	04	07	04
04	06	13	05
17	03	00	01

**Table 2: Appearance of bleeding noted on 7<sup>th</sup> day of treatment**

Group A		Group B	
No of patient	Appearance	No of patient	Appearance
08	02 (lochia serosa)	12	03 (lochia rubra)
22	01 (Lochia alba)	10	02(lochia serosa)
-	-	08	01(Lochia alba)

**Table 3: Quantity of bleeding assessed in both groups at the end of treatment**

Group A		Group B	
No. of patients	Quantity	No. of patients	Quantity
10	04 (severe)	15	04 (severe)
10	03 (moderate)	10	03 (moderate)
10	02(mild)	05	02(mild)

**Score for assessment of Sthanik Yonidushti (infection/inflammation) -**

Present - 02, Absent - 00

**Healing of wound-**

Non healing - 03  
 Delayed healing - 02  
 Proper healing - 01

**Pain at lesion -**

Severe - 03                      Mild - 01  
 Moderate - 02                 Absent - 00

**pH of vagina -**

pH 7.0 - 03                      pH 6.00 - 01  
 pH 6.5 - 02                      pH 5.5 - 00

**Table 4: Sthanik Yonidushti assessment**

Group	Sthanik Yonidushti	
	Day 1	Day 7
A	30	00
B	30	13

**Table 5: Site of vrana episiotomy/ tear was observed for healing**

Group	Proper healing	Delay but sterile	Inflected/ inflamed
A(30)	30	-	-
B(30)	22	04	03

**Table 6: Reduction in pain at lesion was observed as follow**

Group	Absence of pain	Mild	Moderate	Severe
A	24	06	-	-
B	02	15	08	04

**Table 7: pH of vagina observed on 7<sup>th</sup> day of treatment:**

Group	No. of patients having pH 7.0	No. of patients having pH 6.5	No. of patients having pH 6.0	No. of patients having pH 5.5
A(30)	01	05	21	03
B(30)	11	13	05	-

**Statistical analysis**

For analysis of efficacy of treatment in patients of group A and B, paired 't' test applied.

For comparison of effect of treatment in group A and B, unpaired 't' test was applied.

**Analysis of degree of involution:**

For group A,  $t_{29} = 21.01$

For group B,  $t_{29} = 9.51$

As  $p < 0.001$ , treatment proved to be highly effective in both groups.

For comparison of group A and B-

$T_{58} = 2.29$

Test is significant only at level of 80%.

**Analysis of bleeding form:** (appearance of lochia)

For group A,  $t_{29} = 11.35$

For group B,  $t_{29} = 31.04$

As  $p < 0.001$ , treatment proved to be highly effective in both groups.

For comparison of group A and B-

$T_{58} = 4.73$

Test is significant at level of 90%.

**Analysis of quantity of bleeding:**

For group A,  $t_{29} = 35.58$

For group B,  $t_{29} = 25.68$

Treatment proved to be highly effective in both groups.

For comparison of group A and B-

$T_{58} = 0.8039$

Test is not significant.

## DISCUSSION

*Acharya* mentioned in the term '*Vrani*' (presence of gross lesion) to the woman delivered the fetus, as there is lesion at the site of attachment of placenta and at the site of tear or episiotomy. Healing of the lesion should be proper as there occur infection or inflammation leading to delay or nonhealing. *Acharya Charaka* considered such type of wound as '*Dushtavrana*', [8] *Ruja* (pain), *Strava* (oozing), *Gandha* (false smell), *Krumi* (sepsis) are the characteristics of *Dushtavrana* which should be prevented by *Vranachikitsa* (treatment of wound). Also extreme weakness occurs due to labor leading to *vataprakopa*. *Katishula* mentioned by *Acharya Kashyapa*. So it is important to take care of vitiated *vayu*. [9]

Right from expulsion of placenta, the term '*Sutika*' applied to woman after delivery. '*Sutikakala*' is considered as one month according to *Acharya Kashyapa* [10] where as *Vagbhata*, *Sushruta* mentioned it as one and half month or up to the onset of menstruation. [11] *Yogratnakara* & *Bhawaprakasha* considered *doshasamyavastha* as a parameter for

*Sutika*. To prevent complication in '*Sutika*' (after delivery) *vataghna chikitsa* should be done. [12]

Modern science explains lots of complications in the post natal period of which PPH, infections are commonest. These complications in turn affect involution which is major change in puerperium. Localized infection of episiotomy, perineal laceration, vaginal laceration (included in *yonidushti* by *Ayurveda*) predisposes sub involution and PPH. So, special care should be taken during this period.

Considering 'vitiation of *vata*' and '*dhatukshaya*', *Acharya Charaka* [13] and *Vagbhata* suggested *snehana*, *vataghna* and *balya ahara chikitsa* along with *Pachana* (appetizer + digestion). *Acharya Kashyapa* focus over '*Yonidushti*' which causes delay healing, infection, subinvolution and explain important treatment i.e. *dhupana karma*. [14] Regimen of *Sutika* must include *dhupana* with *Agaru* following *snehana*. It prevents *katishula*, *prushtashula*, *strava* etc. *Dhupana* also improves healing phenomenon, [15] decreases infection, decreases itching and also enhances involution.

*Ayurveda* consider tear or episiotomy lesions, lesion at placental adherence as '*Sadyovrana*' for 7 days which should be treated properly. [16] So entire period for treatment considered as 07 days. *Acharya Kashyapa* mentioned '*Dhupanachikitsa*' which is special amongst '*Sutikopakrama*'. For *dhupana* '*Agaru*' is selected as it is '*Kaphavataghna*'. While applying to the lesion in the form of fumes, it improves healing and act as anti-inflammatory. *Panchakol* when given entrally, it acts synergistically with *dhupana* by improving *yonishadhana* and *vranaropana*.

When examined on 7<sup>th</sup> day, 56.28% *sutika* of group A having involution up to 5 fingers below umbilicus, whereas others have improvement up to 4 fingers. 73.33% *sutika* having bleeding in the form of lochia alba. Only in 26%, Bleeding is in the form

of lochia serosa. Within 7 days 66.66% *sutika* showed reduction in quantity of bleeding.

Group B *sutika* when observed on same day (7<sup>th</sup>), 43.33% *sutika* having involution upto 5 fingers. In 46.66% *sutika*, bleeding pattern was lochia alba while 53.33% having lochia serosa. Reductions in bleeding quantity occur in 50% of patients.

Statistical analysis shows that treatments of group A and B proved to be effective at their sites. While doing comparison, efficacy of *dhupan* is found to be more only against bleeding transformation but not against involution and flow.

## CONCLUSION

*Agaru* when administered in the form of '*dhupana*' to *sutika*, it dramatically improves healing, help in involution of uterus and suppresses pain. *Panchakol* prevent *Aama* and *doshaprakopa* and thus help to maintain health in *sutika*. *Dhupan* with *Panchakol* causes transformation of lochia (strava-swarup) earlier.

## REFERENCES

1. Shri Satyanarayana Shastri, Charak Samhita, Savimarsha Vidyotini Hindi Vyakhya, Reprint 2007, Chaukhamba Bharati Acadamy, Varanasi, Page 841.
2. D.C.Dutta, Textbook of Obstetrics including Perinatology and contraception, 7<sup>th</sup> edition 2011, New central book agency, Page 410-421.
3. D.C.Dutta, Textbook of Obstetrics including Perinatology and contraception, 7<sup>th</sup> edition 2011, New central book agency, Page 144-153.
4. WHO-Recommendation of PNC of mother and newborn, Retrived 22 december 2014.
5. Premavati Tiwari, Textbook of Ayurvedic Prasutitantra and stirog, Part 1, Edition 2<sup>nd</sup>, 1999, Chaumba Orientalia, Varanasi, Page 546 and 213.
6. Pandit Hemraj Sharma, Sanskrit translation by Shri Satyapal Bhaishajyacharya, Kashyapa samhita by Vrudha jivak, Reprint 2006, Chaukhamba Sanskrit sansthan, Varanasi, Page-308.
7. Kviraj Ambikadutta Shastri, Bhaishajyaratnavali, Vidyotini Hindi vyakhya, Edition 13<sup>th</sup>, Chaukhamba Sanskrit Sansthan, Varanasi Page 36,60,451.
8. Satya Narayan Shastry, Comentry by pt.Kashinath Shastry, and Dr. Gorakhnath Chaturvedi, Charak Samhita-Savimarsha Vidyotini of Agnivesha, Revised by Chaukhamba Sanskrit Sansthan, Varanasi, Reprint 2008, Page -652/
9. Pandit Hemraj Sharma, Sanskrit translation by Shri Satyapal Bhashagacharya, Kashyapa Samhita or Vriddha Jeevakiya Tantra by Vriddha Jeevaka, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint 2006, Page-308.
10. Shri Satyapal Bhashagacharya, Pandit Hemraj Sharma, for Sanskrit translation, Kashyapa Samhita or Vriddha Jeevakiya Tantra by Vriddha Jeevaka, Published by Chaukhamba Sanskrit Sansthan, Varanasi, Reprint 2006. Page-306.
11. Shri pandit Lalchand Shastry Vaidya, Ashtanga Sangraha-Vagbhatacharya virchit-Sarvanga sundari vyakhyasahit, published by Baidyanath Ayurved Bhavan Pvt. Ltd, 1st edition Feb 1989. Page-80.
12. Pandit Shri Bramhashankar Mishra, Vol-2, edited with Vidyotini Hindi Commentary intro by Bhashagraha, Bhavprakash of Shri Bhavmishta second part [Uttarardha] edited with Vidyotini Hindi Commentary Published by Chaukhamba Sanskrit Bhavan, Varanasi edition 2013. Page-791.
13. Pandit Kashinath Pandey, Dr. Gorakhnath Chaturvedi, Charaksamhita savimarsha vidyotini Hindi Vyakhyopeta 1<sup>st</sup> part, published by Chaukhamba Vishwabharti, Varanasi, Reprint 2008. Page-652.
14. Pandit Hemraj Sharma, Kashyapasamhita, Vriddhajivakiya



- tantra, Reprint, Vishesh Sanskaran  
2062, Chaukhamba Sanskrit  
Sansthan, Varanasi, Page- 312.
15. Pandit Kashinath Shastri, Charak  
Samhita, Vidyotini Hindi Vyakhya,  
17<sup>th</sup> edition, Chaukhamba bharti  
academy, Varanasi, Uttarardha- Page  
714.
16. Pandit Kashinath Shastri, Charak  
Samhita, Vidyotini Hindi Vyakhya,  
17<sup>th</sup> edition, Chaukhamba bharti  
academy, Varanasi, Chikitsa-sthana  
Page 20.

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