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"A CLINICAL STUDY OF AGARUVADI YONI DHUPANA ON EPISIOTOMY WOUND"

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ABSTRACT
Episiotomy is one of the most commonly performed procedure in obstetrics. Post natal complications were more common among women who were subjected to episiotomy compared to those who did not have episiotomy hence postpartum care for episiotomy wound should begin as soon as possible, so the present study work has been done on episiotomy wound healing. Basically shodhana and ropana, are the qualities of the drug essential for proper healing. Many drugs have been described in classics for healing. Hence, to fulfil the aim the drugs explained under Agaruvadi yoni dhupana are mainly having vrana shodhana property which are helpful in healing episiotomy wounds. **Aim:** To evaluate the effect of Agaruvadi yoni dhupana on episiotomy wound. **Materials and methods**: 30 Patients fulfilling the inclusion and exclusion criteria were selected from I.P.D of SKAMCH & RC for the study. Patients were subjected to Agaruvadi yoni dhupana twice daily for 7 days. **Follow up**- Was done on 14th day and 21st day. **Results**: The study gave significant results on pain and tenderness and helped in preventing infection thereby aiding in wound healing w.r.t REEDA scale. **Conclusion**: Agarvaadi yoni dhupana was found effective in reducing the pain, tenderness and inflammation of episiotomy wound.

KEYWORDS: *Episiotomy, Agaruvadi yoni dhupana, vrana shodhana ,vrana ropana.*

INTRODUCTION
"It is well recognized that the best maternal outcome of pregnancy, is a normal vaginal delivery with an intact perineum". A healthy baby without any iatrogenic injuries is the requirement of an obstetrician. Hence, an episiotomy becomes inevitable at times. Episiotomy is defined as, a surgical incision on the perineum (the area of the skin between the vagina and the anus) during the second stage of labour to enlarge the diameter of the vulval outlet to facilitate the passage for the fetal head and prevent uncontrolled tear of the perineal tissue. In India, the overall rate of episiotomy was 67% in 2014-2015. A current medical literature documented that 60% of women with episiotomies reported severe postpartum pain, 25% experienced infection at the site and 20% had problems during intercourse for up to 3 months after childbirth. Hence it is evident that special care must be taken to prevent infection and fasten the healing. After delivery, puerperal sepsis is one of the important areas of concern. As the perineum is highly susceptible to infection due to different secretions like vaginal discharges, faeces and urine, episiotomy wound requires a proper intervention which could otherwise be self - limiting due to high vascularity of perineal area. If not taken care, episiotomy wound may lead to immediate complications like infection, dehiscence and remote complications like dyspareunia, scar endometriosis, chances of perineal lacerations in subsequent labour.

In Ayurvedic samhita, detailed description of episiotomy wound is not much clear, but it can be taken as *shuddha agantuja vrana* or *vaidyakrit vranas*, the vrana made by the surgeon and which should be adequate in length and width with clear division, absence of hollow space inside and should be done at the proper time.

MATERIAL AND METHODS
Patients with sutured episiotomy wound following normal vaginal delivery and fulfilling the inclusion criteria were selected for the study from I.P.D of SKAMCH & RC, Vijayanagar, Bangalore.

INCLUSION CRITERIA
All primi and multi gravida who underwent vaginal delivery with Episiotomy.

EXCLUSION CRITERIA
1. History of impaired wound healing.
2. Patient with 3 degree and 4 degree perineal tears.
3. Patients with local hematoma or abscess.
4. Patients with local skin diseases.
5. Systemic disorders which interferes with the treatment.

PLAN OF TREATMENT

After washing the episiotomy wound with *Sukhoshna jala* patients were subjected to Agaruvadi yoni dhupana. Patients were also told not to indulge in any kind of strenuous work during the course of treatment and follow up period and to maintain local hygiene.

Duration of Treatment: 1st to 7th day after delivery , Twice daily.
Follow up: Was done on 14th & 21st day

ASSESSMENT CRITERIA

SUBJECTIVE PARAMETERS

1. The Numerical Rating Scale (NRS) to measure the intensity of perineal pain
2. Odour
3. Discharge

OBJECTIVE PARAMETERS

1. The Standardized REEDA Scale (Redness, Edema, Ecchymosis, Discharge, Approximation)
2. Tenderness

LABORATORY INVESTIGATIONS

Hb%, CT, BT, RBS,VDRL, HBsAG , HIV.

STATISTICAL ANALYSIS

- Completed 30 patients were taken for statistical analysis
- Suitable statistical test was applied to assess the subjective and objective parameters.

PROBABLE MODE OF ACTION OF AGARVADI YONI DHUPANA

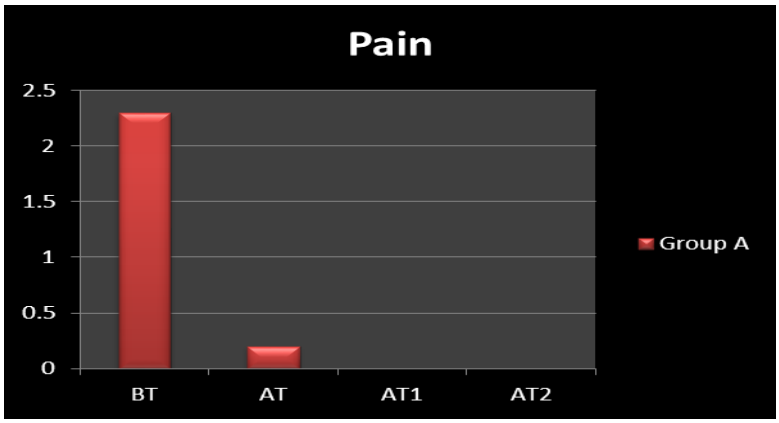
Drug name	Botanical name	Rasa	Guna	Virya	Vipaka	Karma
Agaruh	Aquilaria Agallicha	Katu, Tikta	Laghu,Ruksha, tiksana	Usna	Katu	Sothahara,vedana-sthapana, Dusta-vranaropana
Sarjarasa	Shorea Robusta	Katu, Tikta, kasaya	Laghu,Ruksha	Sita	Katu	Vranaropana, krimighna,yonirogahara
Vaca	Acorus Calamus	Katu, Tikta	Laghu, tiksana	Usna	Katu	Sulaghna, krmighna
Guggulu	Commiphora Wightii	Katu, Tikta, kasaya	Laghu, tiksana, sara, suksma, picchila, snigdha	Usna	Katu	Sothahara, vedanasthapana, Vranaropana.
Sarsapa	Brassica Campestris	Katu, Tikta	Tiksana, snigdha, Ruksha	Usna	Katu	vedanasthapana,Jantughana

Agaruvadi yoni dhupana has mainly *Ushna veerya* drugs due to which *Pachana karma* is seen as quoted by Acharya Dalhana '*Pachanam Vranadinam'*. So, this helps in proper blood supply to the wound area and thus relieve pain. Agaruh, Guggulu, Sarsapa , vaca due to its vedanasthapana property helps in reducing pain. Agaruh, Guggulu, due to its Sothahara property helps in reducing swelling. Sarjarasa, Vaca due to its krimighna property helps in preventing infection. Hence, *Agaruvadi yoni dhupana* is also effective in preventing infectious odour from the episiotomy wound.

RESULTS

Table 1 - EFFECT OF TREATMENT ON PAIN

Parameter	Paired t Test						
	Treatment	Mean	SD	SE	t value	P value	Remarks
Pain	BT-AT	2.3 0.2	±0.55	0.12	16.99	<0.001	HS
	BT-AF1	2.3 0	±0.57	0.12	18.01	<0.001	HS
	BT-AF2	2.3 0	±0.57	0.12	18.01	<0.001	HS



GRAPH

Table 2 - EFFECT OF TREATMENT ON TENDERNESS

Parameter	Paired t Test						
	Treatment	Mean	SD	SE	t value	pvalue	Remarks
Tenderness	BT-AT	2 0.05	±0.61	0.14	14.42	<0.001	HS
	BT-AF1	2 0.05	±0.61	0.14	14.42	<0.001	HS
	BT-AF2	2 0.05	±0.61	0.14	14.42	<0.001	HS

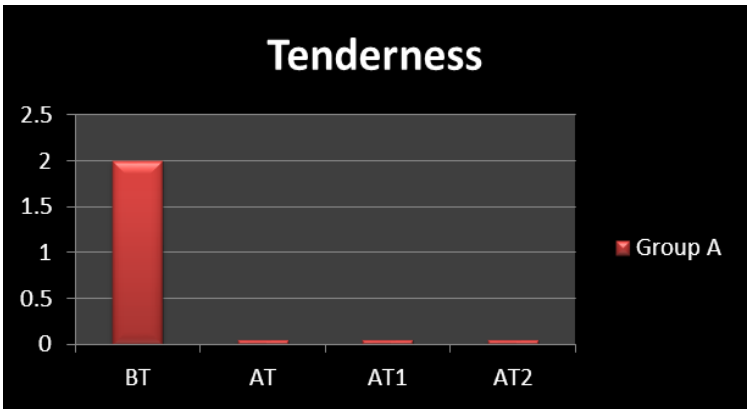


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Table 3 - EFFECT OF TREATMENT ON INFLAMATION

PParameter	Paired t Test						
	Treatment	Mean	SD	SE	t value	P value	Remarks
Inflammation	BT-AT	1.1 0	±0.31	0.07	15.92	<0.001	HS
	BT-AF1	1.1 0	±0.31	0.07	15.92	<0.001	HS
	BT-AF2	1.1 0	±0.31	0.07	15.92	<0.001	HS

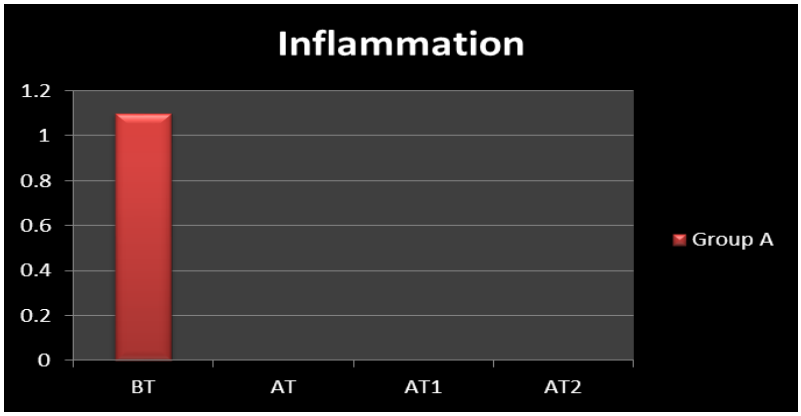

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Table 4 - EFFECT OF TREATMENT ON ODOUR

Parameter	Paired t Test						
	Treatment	Mean	SD	SE	t value	pvalue	Remarks
Odour	BT-AT	1.05 0	±0.22	0.05	21	<0.001	HS
	BT-AT1	1.05 0	±0.22	0.05	21	<0.001	HS
	BT-AT2	1.05 0	±0.22	0.05	21	<0.001	HS

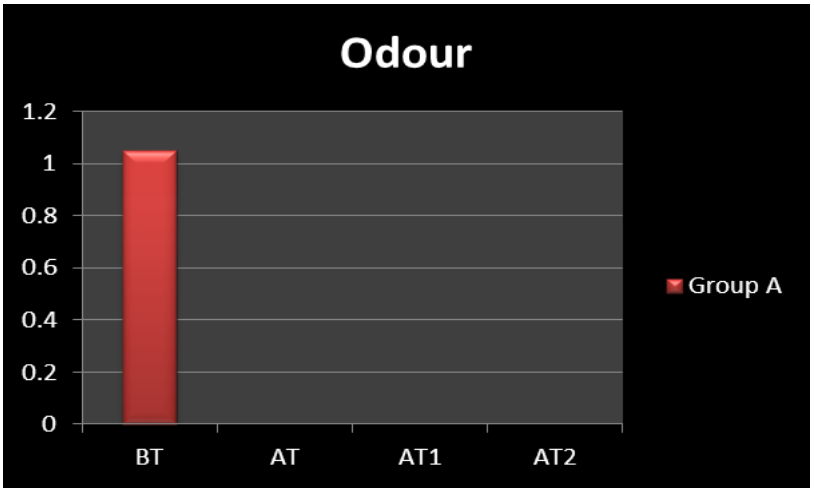

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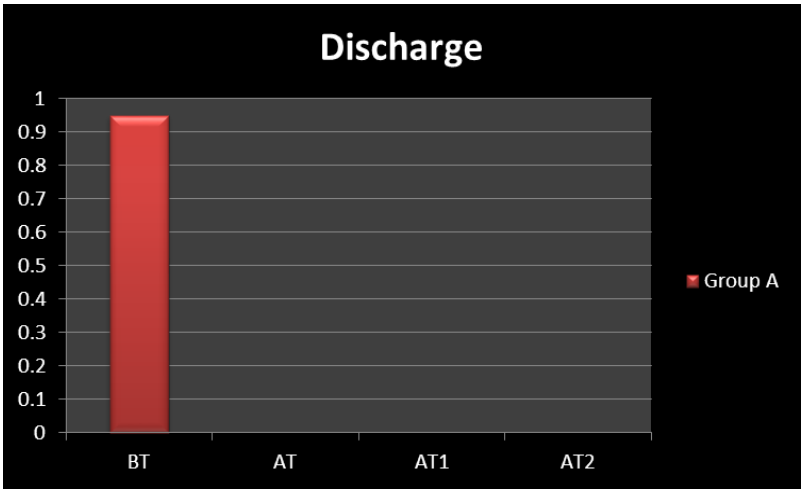
Table 5- EFFECT OF TREATMENT ON DISCHARGE

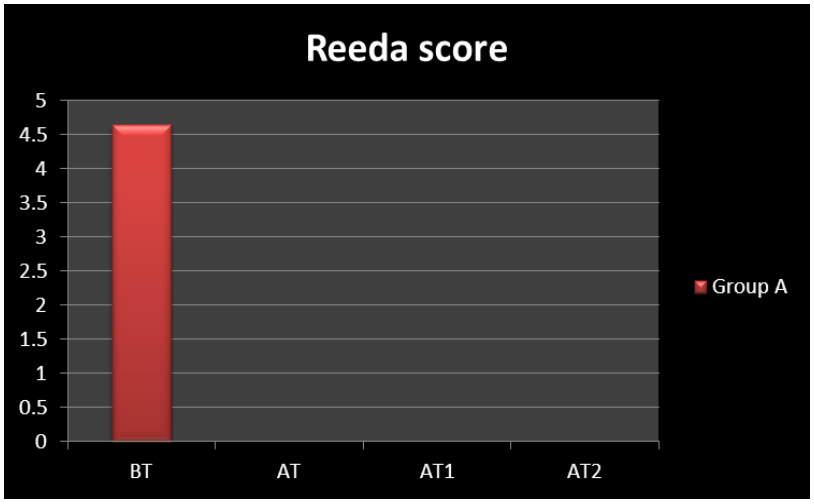
Parameter	Paired t Test						
	Treatment	Mean	SD	SE	t value	pvalue	Remarks
Discharge	BT-AT	0.95 0	±0.22	0.05	19	<0.001	HS
	BT-AT1	0.95 0	±0.22	0.05	19	<0.001	HS
	BT-AT2	0.95 **0**	±0.22	0.05	19	<0.001	HS



GRAPH

Table 5- EFFECT OF TREATMENT ON REEDA SCALE

Parameter	Paired t Test						
	Treatment	Mean	SD	SE	t value	pvalue	Remarks
Reeda score	BT-AT	4.65 0	±0.99	0.22	20.68	<0.001	HS
	BT-AT1	4.65 0	±1.14	0.25	18.29	<0.001	HS
	BT-AT2	4.65 **0**	±1.14	0.25	18.29	<0.001	HS



GRAPH

DISCUSSION

Healing of wound was appreciable in most of the patients as most of them were young i.e 89.74% belonged to the age group 20-30 years and in young age skin ,muscle tone, metabolism and circulation is good and faster. 67 % of the patients were primi para as episiotomy is majorly practiced in primi gravida. Most of them (69%) belonged to lower middle class but since majority of patients had a minimum of primary education, they were able to understand and follow the instructions given on wound care and personal hygiene. The length of episiotomy wound of maximum number of patients (62%) ranged between 4-5 cms and only 5% had episiotomy size more than 5cms.The length of the wound was not pre decided. As per the condition of the fetus, size of the fetal head, progress of labour, slight difference in length of episiotomy was observed. There was no difference of wound healing observed as per the length of the wound as tissue involved in all the cases were same. In the study, right medio-lateral episiotomy was adopted for all the patients. Medio-lateral episiotomy was preferred to a median (midline) incision as the latter is associated with a higher risk of injury to the anal sphincter and the rectum. The repair was done in layers with chromic catgut no.1. Acharya Sushruta has also advised *Seevana karma* in *Sadhyovrana*, followed by *bandhana karma*. Seevana karma should be performed only in a *Shudda vrana*. Episiotomy can be correlated to *shuddha agantuja vrana* or *vaidyakrit vranas*, so suturing the wound was the first line of intervention adopted to facilitate wound healing by primary intention. Though episiotomy is *Sukhasadhya vrana* (as it is *Sadhyovrana*, is located in *Prajanana*), still proper care is required as the perineum is highly susceptible to infection due to different secretions like vaginal discharges, faeces and urine. *Acharya Sushruta* also mentions that if wound is not taken care then *Sadhya vrana* may convert to *Yapya* and *Yapya* into *Asadhya*. On day 0, 96.66% patients had pain on sitting, on day 8, 33.33% of patients had pain on sitting and on day 21, no patients had the complaint. Almost all the patients had got relief by the end of the treatment and on the follow up. Because the wound is on the genital area and there were mattress sutures over the skin, so while sitting due to the body weight there was tenderness at the knots and as the wound got healed , the knots started to dissolve the pain disappeared. 70 % patients complained of difficulty in squatting position on day 0 which was completely relieved by the day 8. After delivery, the woman is weak due to extensive labour pains and may find difficulty in squatting position. Also, it was observed that squatting position poses stress on the perineal area and wound thereby causing pain. As, it is on the perineal area, some i.e 60 % of women felt pain during movements on day 0 which was completely relieved by the day 8. No patient complained of difficulty in defecation during the course of treatment Statistically the effect of treatment on discharge was not found to have significant result. In a wound with intact suture material and with more fat tissue, slight increase in the discharge is expected. This may be the reason for slight increase in watery discharge which was noted on 8th day.

CONCLUSION

The contents of *Agaruvadi yoni dhupana* have *Sothahara, vedanasthapana, Dustavranaropana, yonirogahara, Krimihara, shulahara & Shothahara* property which is necessary for wound healing. Proved antiseptic, antimicrobial and antibacterial action of it's component drugs also help in faster wound healing. In the present study *Agaruvadi yoni dhupana* was found effective in reducing the pain, tenderness and inflammation.

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