

AN OBSERVATIONAL STUDY TO EVALUATE VASTRARANJANA IN
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ABSTRACT

Objectives: Menstrual problems and infertility are the major problems affecting society nowadays. It can occur due to many reasons namely pathology of *Garbhashaya*, *Artavavaha Dhamani*, *Dushta Artava* etc. For the evaluation of structural abnormalities, various technologies like USG, HSG, Hormonal assay etc. are available. But no methods were developed yet to check the purity of *Artava*. In this background, the *Vastraranjana* concept mentioned in the context of *Shudha Rakta Lakshana* can be considered as a useful tool for diagnosing *Artava Dushti*. The practicality of this *Pareeksha* if proved it envisages a new and simple diagnostic tool in Ayurveda. **Methods-** Menstrual blood samples-stained cotton clothes were washed, and changes were noted. **Results-** *Dushita Artava* was found to be causing a stain on the cloth. **Conclusion-** Changes in the character of *Dosha* produces *Soshana Vidaha Ghanatha* etc. of *Artava* which involve a change in pH, viscosity like elements creating a stain on the cloth.

Keywords: *Artava Pareeksha*, *Vastra Ranjana*, Menstrual Cycle

INTRODUCTION

Pareekshas play a major role in the diagnosis of any disease. They are the tools that give confirmatory knowledge for a better understanding of *Vyadhi Avastha*. The ancient system of medicines has its investigation methods which are currently not under practice. In classics, *Rogi Pareeksha*¹ and *Roga Pareeksha*² evaluation is done through *Pramanas* in a very systematic manner. Its assessment gives an idea about the extent of *Dosha Dushti*, *Sanchaya Prakopa Avastha* of *Dosha*, the structural and functional disturbances in *Dhatu*s, the physical and mental strength of the patient and the degree of alteration by disease. The examination of urine, faeces, sputum, vomitus, pulse, tongue, skin, built, nourishment is aware and under practice. But few methods like *Tailabindhu Mutra Pareeksha*³, *Artava Pareeksha* were considered as unsophisticated and got omitted from current diagnostic methods. *Artava* one among the *Upadhatu* takes its origin from the essence of *Rasa Dhatu*. A wide range of applications is possible for the word *Artava*, which includes menstrual blood, ovum, hormones etc. If the whole process of menstruation is divided into phases, then menstruation can be taken as *Raja Kala* where *Prakruta Vata* dominates and acts as *Preraka* for its discharge⁴. This is a field where modern systems of diagnosis lack parameters. Contemporary sciences have developed a lot of objective ways of laboratory and radiological examination, but examination of menstrual blood is not yet developed by modern science too. Thus, *Artava Pareeksha* is a unique concept of our science that should be enlightened to see its practicality. Menstrual problems and infertility can occur due to many reasons namely pathology of *Garbhashaya*, *Artavavaha Dhamani*, *Dushta Artava* etc. This understanding is essential for the selection of treatment too. For the evaluation of structural abnormalities, various technologies are available. But the assessment of *Artava Dushti* is difficult. But in classics, it is mentioned that no individual is having equality of *Tridosha* due to variation in *Ahara Vihara* by everyone even if there are no evident *Vikruti Lakshana* in them. In this background, *Vastra Ranjana* concept mentioned in

the context of *Shudha Rakta Lakshana* can be considered as a useful tool for diagnosing *Artava Dushti*. It is mentioned that *Sudha Rakta* will never remain as a stain on the cloth after washing but *Ashudha* does. The practicality of this *Pareeksha* if proved it envisages a new and simple diagnostic tool in Ayurveda. In the classics, *Acharyas* mentioned *Rtumaty Charya* and *Rajaswala Charya* which highlights the importance of lifestyle in changing the quality and quantity of *Artava*. Only a healthy *Artava* can produce a healthy child. Dietary habits are fundamental factors that influence human lifestyles and individual quality of life. Menstrual disorders and infertility are more in the present day due to lifestyle changes. Conception and delivery of a healthy child is the aim of society. Thus, women health needs utmost importance. Menstrual blood not vitiated will resemble the blood of rabbits, like the secretion of laccifer laccica, slightly blackish with a peculiar smell⁵ which will be taken by the normal *Apana Vayu* and evacuated out from the body at an interval of one month. This regular *Artava Chakra* with *Sudha Artava* shows that *Kshetra* and *Beeja* are healthy. The female reproductive cycle typically ranges from 24-35 days with four phases- the menstrual phase, the preovulatory phase, ovulation, the post-ovulatory phase⁶. Ovary and uterus are two important determining factors, understood as the concept of *Kshetra* in classics for the regular cycle, hormone balance, healthy pregnancy and labour. The regular menstrual cycle occurs due to morphologic changes in the uterus by hormonal variations. The changes in the luteal or secretory phase are due to progesterone and estrogen secreted by the corpus luteum. In the absence of fertilization, the corpus luteum degenerates and the hormonal level of progesterone and estrogen of luteum falls causing bleeding. Also, the fall of follicle-stimulating hormone and the luteinizing hormone is seen. Normally blood in the menstruation flow is liquefied by a fibrinolytic mechanism thus does not clot. But excessive bleeding expels blood fast before liquefying resulting in clots. In ovular menstruation, there is no corpus luteum formation, thus estrogen of luteum falls resulting in

bleeding⁷. A highly complex system of blood vessels is involved especially spiral arteries. Fall of ovarian hormone in the blood causes regression shrinkage and atrophy of the endometrium. Both the functional layer and its blood supply by spiral arteries develop together at each menstrual cycle. This progressive coiling of the spiral arteries triggers the vascular mechanism of menstruation. Blood is slightly alkaline with a pH of 7.4. The acidic environment pH 3.8-4.5 of the vagina is a natural protective barrier to infections⁸. Vagina maintains the healthy flora by Doderleins bacillus by degradation of glycogen to lactic acid. During menstruation, pH elevates slightly during the flow of menstrual blood. Blood viscosity is the inherent resistance of blood to flow. Hyper viscosity reduces blood flow causing increased conges-

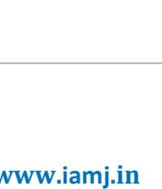
tion. It can damage the blood vessels. Normal menstrual flow can maintain the level of healthy RBC in a higher proportion than older fragile RBC. Disturbance of cycle making more fragile RBC releasing haemoglobin a high molecular weight protein. Hemosiderin is a dark yellow to brown endogenous pigment thus released from haemoglobin which has the ability to stain⁷.

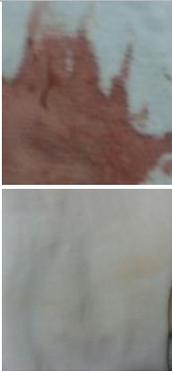
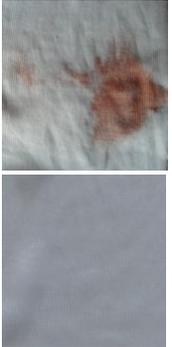
Materials And Methods:

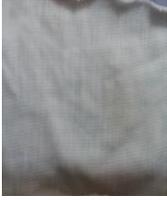
As an initial study to see the practicality, patients who visited Stree Roga OPD of SDM Hassan were screened and menstrual blood samples were collected by staining sterile cotton white cloth provided. Washing was done with the same detergent after a period of twenty hours of drying. The results were analysed based on their symptoms and investigation reports.

Observations:

Sl No	Age/Sex	Chief Complaint	Age of Menarche	Duration /Interval	Features of Bleeding	Result
1	35/F	Excessive bleeding 1&1/2 month Scan- moderate nonspecific inflammation	13yrs	10-15 Days/ 1&1/2-2 Months	Pain+ Clot+++ Foul smell+ Increased bleeding	Stain remained 
2	25/F	Irregular menstrual cycle- 4 years	12yrs	3-4 Days/ 2-3 Months	Pain+ Clot- Foul smell +	No Stain 

							
3	24/F	Irregular menstrual cycle- 6 years	12yrs	2Days/ Months	2-3	Pain- Clot- Foul Smell- Decreased Bleeding	No stain  
4	18/F	Severe abdominal pain during cycles – 1year Weight loss- 14kg in 5 Months	13yrs	5Days /	28 Days	Pain+++ Clot++ Foul Smell+ Decreased Bleeding	Stain remained  
5	49/F	Irregular menstrual cycle- 2years	12 yrs	5-6Days/ 3Months		Pain+ Clot- Foul Smell- Increased Bleeding	No Stain  
6	18/F	Increased White dis- charge- 10 Months Itching in vulva- 3 months	13 yrs	4Days/ Days	26-30	Pain++ Clot+ Foul Smell+	Stain remained 

						
7	16/F	Irregular menstrual cycle-2years Inter menstrual bleeding-2 years	13 yrs	2-3 Days/ 20 Days	Pain+ Clot- Foul Smell- Increased Bleeding	<p>No Stain</p> 
8	21/F	Irregular menstrual cycle-7 months Mild white discharge- 2 months	14 yrs	20Days/2 Months	Pain+ Clot+ Foul Smell-	<p>No Stain</p> 
9	26/F	Increased bleeding since conception-2month Irregular menstrual cycle-4years	14 yrs	3Days/ 26-38 Days	Pain+ Clot++ Foul Smell- Increased Bleeding	<p>Stain remained</p> 

						
10	23/F	Irregular menstrual cycle- 5years	14 yrs	3-5Days/2 Months	Pain- Clot+ Foul Smell+	No Stain  

RESULT AND INTERPRETATION

Artava in its Dooshita Avastha loses its normal characteristics like colour viscosity pH etc. Considering the cases where stain remained even after washing may be understood on the basis of *Doshas*

Case1	35/F Excessive bleeding-1&1/2-month Scan-moderate nonspecific inflammation Pain+ Clot+++ Foul smell+ Increased bleeding Stain remained	shows inflammation of the endometrium, increased bleeding signifies aggravation of <i>pitta</i> along with <i>drava guna</i> producing <i>vidaha avastha</i> . This excess <i>pitta</i> increases the <i>Ranjan</i> property of <i>Artava</i> .
Case 4	18/F Severe abdominal pain during cycles – 1year Weight loss- 14kg in 5 Months Pain+++ Clot++ Foul Smell+ Decreased Bleeding Stain remained	weight loss, severe pain, reduced bleeding signifies the <i>dushti</i> of <i>vata dosha</i> causing <i>soshana</i> of <i>Artava</i> thus making the stain dry up fast and is retained.
Case 6	18/F Increased White discharge- 10 Months Itching in vulva- 3 months Pain++ Clot+ Foul Smell+ Stain remained	Itching of vulva, white discharge shows <i>kapha dushti</i> increasing the <i>ghanata</i> of <i>Artava</i> , thus abnormal constitution of <i>Artava</i> produces stain.
Case 9	26/F Increased bleeding since conception- 2month Irregular menstrual cycle- 4years Pain+ Clot++ Foul Smell- Increased Bleeding Stain remained	Assumption can be made as <i>samyoga</i> of <i>shukra</i> and this <i>dooshita Artava</i> would have produced an unhealthy <i>garbha</i> resulting in <i>garbha srava</i> .

CONCLUSION

Thus, changes in the character of *Dosha* produce *Soshana Vidaha, Ghanatha* etc. of *Artava* which involve a change in pH, viscosity like elements creating a stain on the cloth. This is a primitive test where an initial hypothesis is drawn. But further study with

large sample size and vast spectrum of observations including other parallel parameters are suggested.

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