



**A CROSS SECTIONAL STUDY TO ASSESS THE STATUS OF LFT IN  
RAKTAPRADOSHAJA VYADHI WITH SPECIAL REFFERENCE TO ASRUGDARA**

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**ABSTRACT**

*Ayurveda* is an ancient and a very authentic life science. Following the path of *Ayurveda* leads us to a very healthy and nourished life. Main Goals of Life presented by Vedic Sciences are *Dharma, Artha, Kama, Moksha, Ayurveda* helps us to fulfill these goals and lead a disease-free life. '*Asrugdara*' is one of the common disease characterised by excessive menstrual bleeding in menses and in intermenstrual period due to its *Raktapradoshaja* origin and predominance of *Pitta*. The clinical manifestation of *Asrugdara* closely mimics with Menorrhagia, Metrorrhagia and DUB. It is caused due to many reason like uterine defect, ovarion tumor and many other but according to *Ayurveda* it is a *Raktapradoshaja Vyadhi* which may caused due to liver dysfunction because it is a *mulsthana* of *Raktavaha strotasa*. It may life threatening if not treated properly and immediately. **AIM:** To assess the status of LFT in *Asrugdara* patients. **Method:** Survey of 60 patients with questionnaire fulfilling the inclusion criteria. **Study Design:** The method of survey was questionnaire and observed LFT level in the patients. **Result:** Out of 60 patients *Aartavaatipravrutti* (In days) observed in 43.33% patients were from grade 3, *Artavaatipravrutti* (In quantity): 56.67% were from grade 2, *Katishool/Udarashool:* were present in 61.67%, *Grathit Artavata* (Consistency): were absent in 75%. The p-value from ANOVA test applied on the LFT values for Serum Total Bilirubin, Serum Direct Bilirubin, Serum Indirect Bilirubin, ALP, Serum total protein and Serum albumin value is greater than 0.05. But at the same time p-value for SGOT and SGPT is less than 0.05. **Conclusion:** In the study included 8 parameters of LFT out of which only 2 were statistically significant and 6 were non significant. So, the study could not establish statistically significant correlation in *Asrugdara* and Liver Function Test.

**KEYWORDS:** *Asrugdara, Menorrhagia, Raktavaha strotasa, LFT.*

**INTRODUCTION**

*Ayurveda* believes that human body is structured with different *strotasa* which are basic and fundamental parts of body. The concept of *Strotas* is defined clearly and scientifically in *Ayurvedic Samhitas*.<sup>[1]</sup>

**RAKTAPRADOSHAJA VYADHI**

In *ayurveda* the formation of *Raktadhatu* and its distribution, takes into account a group of organs involved in the process of genesis directly or indirectly. From these organs, the *Raktadhatu*, after getting originated follow certain tracts or roots to reach in the channels of greater circulation. Thus the channels carrying the *Raktadhatu* from its sites of origin to the pumping place of greater circulation and from there to each and every part of the body appear to come under the

heading of *Raktavaha Srotas*.<sup>[2]</sup> According to *Charaka, yakrit* (liver) and *pleeha* (spleen) is the *moolsthan* of *raktavaha srotas*.<sup>[3]</sup> *Sushruta* also stands with the same view with *charaka* considering the *raktavaha srotasa* he has mentioned that they are of two types and regarded the *yakrit, pliha* and *raktavahi dhamaniya* as a root of *Raktavaha Srotas*.<sup>[4]</sup> *Yakrit* and *pleeha* both are most important organs of the body. They are soft organs, formed from the *Rakta, Matrija* (maternal) in origin<sup>[5]</sup>, place of *Ranjak Pitta, Moola* of *Raktavaha Srotas* etc. The *Sara* produced by digestion of *rasa* is responsible for formation of *pleeha* and *yakrit*. *Yakrit* and *pleeha* of fetus are formed from *Shonita* (blood). The *Pitta* present in the *Yakrit* is responsible for converting *rasa* into *Rakta*. *Ghanekar* has said that portal circulation may be taken for *raktavahi dhamani*.<sup>[6]</sup> *Acharya Charaka* has described

**Yakrit(Liver)**

*Yakrit* is the place where *Ranjak Pitta* gives colour to the *Rasa Dhatu* and *Rakta* is formed.<sup>[7]</sup> The endothelial cells, kupffer cells lined internally to the sinusoids are the membrane like structures which may be considered as *Raktadharakala*. Except for the iron in the haemoglobin of blood, by far the greater portion of iron in the body is stored in the liver in form of ferritin. The hepatic cells contain large amount of proteins, apoferritin which is capable of combining reversibly with iron. Therefore, when iron is available in the body fluid in excess quantities, it is stored in the liver in the form of ferritin in hepatic cells until needed elsewhere. When iron circulating in the body reaches a low level, ferritin releases the iron. Thus the liver act as blood iron buffer as well as iron storage medium.<sup>[8]</sup>

**Pleha(Spleen)**

It is the main organ where platelets are stored. According to modern physiology, red blood cells are manufactured in the bone marrow. *Ayurveda* has not given any reference of that. Rather, *Ayurveda* says that up to a specific age the sternum is the place where the *Rakta Dhatu* is prepared. And in modern physiology, there has been notice made that up to a certain age, the sternum bone marrow specifically plays for the development of red blood cells. That reference is also in the *Samhita*.<sup>[1]</sup>

**Raktavahini Dhamani**

These are the arterial vessels or blood vessels. *Dhamani* means only arteries. Separate terms used for arteries and veins. *Dhamini* means —which pulsates— so arteries are pulsating blood vessels.<sup>[6]</sup>

**ASRUGDARA**

The woman lays the foundation of a healthy family & society. In present era with the changing role of women in society, occupational where about and with increased stress there is increase in gynecological disorders. In today's scenario, disorder of menstruation is the commonest amongst all the gynecological complaints which have direct effect on the physical as well as psychological health of the females. Length of *Rituchakra* 1(menstrual cycle) is usually 28 to 30 days. Any abnormality in *Rituchakra* (menstrual rhythm) leads excessive and irregular uterine bleeding which is known as "*Asrugdara*".<sup>[9]</sup> It becomes obvious *Asrugdara* refers to all types of irregular excess uterine bleeding. It is characterized by excessive menstrual bleeding in menses and in menstrual period in *raktpradar* origin with predominant of *pitta*, it may be life threatening if not treated properly and immediately.

**AIM**

To assess the status of LFT in *Asrugdara* patients.

**OBJECTIVES**

1. To study the sign and symptoms of *Asrugdara*.
2. To study the relation in *Asrugdara* and *Raktavaha strotasa*.

**RESEARCH QUESTION**

Is there any association in LFT and *Asrugdara*.

**NULL HYPOTHESIS**

There is no association in LFT and *Asrugdara*.

**ALTERNATE HYPOTHESIS**

There is association in LFT and *Asrugdara*.

**MATERIALS AND METHODS****Materials****a) For Literature Study**

1. Brihatrayi with commentaries
2. Laghutrayi with commentaries
3. Madhavanidana with commentary
4. Available articles related to study

**b) For Observational Study**

Survey of 60 patients with questionnaire.

**Methods****I. Study Design**

An observational cross-sectional study.

**II. Ethical Clearance**

Clearance from ethical committee of concerned institute will be taken.

**III. Consent**

A written consent of all patients included in the trial in the language best understood by them will be taken screening them for trial and the confidentiality about the identity will be maintained.

**IV. Subject Recruitment**

Patient will be selected from OPD and IPD of the institute and its allied hospital.

**V. Location of Study**

Research Centre of our Institute.

**VI. Study Duration-18 months****VII. Method of Selection of study subjects****Inclusion Criteria**

- Newly diagnose patients of *Asrugdara*.
- Age group of 18-50 years.
- Increased no. of bleeding days.
- Quantitative increased in menstrual bleeding (no of. pad soakage)
- Decreased intermenstrual period.
- Hb more than 7

**Exclusion Criteria**

- Pregnancy
- Abortive bleedings

- Traumatic bleedings
- Neoplasm (CA uterus & cervix)
- Postmenopausal bleeding
- Fibroid, cyst, cervical erosion
- Endometriosis
- HTN, DM, bleeding disorder, cardiac disease, APH, PIH Congenital anomalies of genital tract
- HIV, HbsAg, VDRL, HPV Positive
- Patient during emergency management
- Anaemia
- IUCD
- Chronic tubo ovarian mass
- Hypothyroidism/ Hyperthyroidism
- Idiopathic thrombocytopenia, leukemia, platelets deficiency

**Withdrawal criteria**

Subjects not complying with research protocol.

**VIII. Case Record Form**

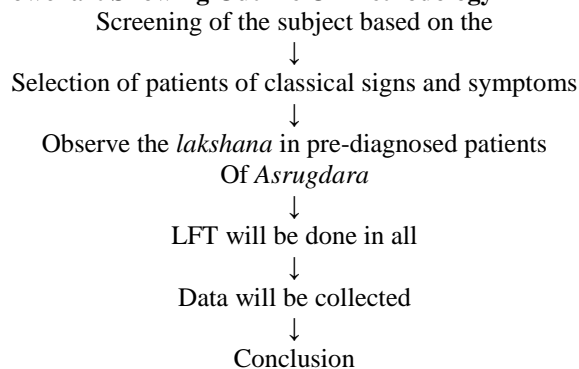
Record of all patients was documented in case record form. (Copy Enclosed)

**IX. Questionnaire:** A questionnaire was used to categories the patient according severity of diseased.

**X. Objective parameters: Liver Function Test**

INVESTIGATION	NORMAL RANGE
Total bilirubin:	Upto 1.0 mg/dl
• Direct	Upto 0.5 mg/dl
• Indirect	Upto 0.5 mg/dl
SGOT(AST)	5-45UI/DL
SGPT(ALT)	0-40UI/DL
S. Total Protein	5.5-8 mg/dl
S. Albumin	3.5-5.5 mg/dl
Alkaline Phosphatase (ALP)	25-85 IU/dl

**Flowchart Showing Outline Of Methodology**



**Subjective Parameter: Lakshanas**

**1) Duration of bleeding in days (Aartavattipravrutti)**

Grade 0	1-3days
Grade 1	4-6 days
Grade 2	7-10 days

Grade 3	>10 days
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**2) Quantity of blood loss**

Grade0	1-3 pads
Grade1	4-5pads
Grade2	6-7pads
Grade3	>7pads

**3) Katishool/ udarshool**

Absent : 0

Present : 1

**4) Consistency**

**Clots :-** Absent : 0

Present : 1

**OBSERVATION**

**A) Artavaati Pravrutti in day**

As far the study most of the subjects were from grade 3.

**B) ArtavaatiPravrutti (Quantity)**

As far the study most of the subjects were from grade 2.

**C) Katishool**

As far the study most of the patients presented with the complaint of *katishool* because of heavy bleeding leads to aggravated *Vata Dosh* and *Vata* is responsible for pain.

**D) GrathitArtavata (Consistency)**

As far the study most of the patients were Absent with the *Grathit Artavata* i.e. clot during bleeding because clot present due to aggravated *Kapha Dosh* and in *Asrugdara* patients observed that *Pitta* and *Vata* predominance.

## E) One Way Analysis of Variance (ANOVA) test

LFT Parameters	Asrugdara		
	Correlation Coefficient (R)	P-Value	N
Serum Total Bilirubin (mg/dl)	0.015	0.9094764	60
Serum Direct Bilirubin (mg/dl)	-0.028	0.8299003	60
Serum Indirect Bilirubin (mg/dl)	-0.034	0.7992567	60
SGOT U/L	0.440	0.0429756	60
SGPT U/L	0.427	0.0466807	60
Serum ALP U/L	0.017	0.8947259	60
Serum Total Protein gm/dl	0.185	0.1574815	60
Serum Albumin gm/dl	0.211	0.1050647	60

Above table shows correlation coefficient for LFT parameters with *Asrugdara* Score. From above table, we can observe that, there is significant positive correlation observed between *Asrugdara* score with SGOT and SGPT (P-Value < 0.05).

## CONCLUSION

1. Incidence of *Asrugdara* is highest in *Pitta-vata prakruti* between the age group 31-40 years. In this age group, *Dhatu kshaya* due to multiple deliveries leading to *Garbhashaya kshata* & *Pitta Dosha* is dominant in this *Kala*, so vitiation of *doshas* and *dhatu*s is more & thus *Asrugdara* is found more in this age group.
2. *Virudhasan* was found in most of the patients which lead to *Pitta Dosha prakopa* which ultimately results into *Rakta dushti*.
3. Significant results were found in Subjective parameters like Duration of bleeding, Amount of blood loss, *Katishool* and *Udarashool*.
4. Non significant results was found in Subjective parameter *Grathita artavta* (clot present at a time of bleeding) because *grathita Aartavata* occurs due to *Kapha dosha* and *Asrugdara* is a *Pitta pradoshaja vyadhi*.
5. Among the 60 subjects of *Asrugdara* were - total, direct and indirect bilirubin within normal range in all subjects, high SGOT in 25% subjects but that's also at borderline i.e. not very high, high SGPT in 38.33% subjects but that's also at borderline i.e. not very high, low ALP in 3.33% subjects, low serum total protein in 3.33% subjects, low serum albumin in 6.66% subjects.
6. There was a correlation in *Asrugdara* and Liver Function Test, which was statistically not significant except for correlation of SGOT and SGPT with *Asrugdara* which was found to be statistically significant.
7. In the study included 8 parameters of LFT out of which only 2 were statistically significant and 6 were non significant. So, the study could not establish statistically significant correlation in *Asrugdara* and Liver Function Test, this may be due to the less number of *Asrugdara* subjects in study population, which can be considered as lacuna of the study as mentioned below.

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