Involvement of *vata* in Cases of *Asrigdara* w.s.r. Dysfunctional Uterine Bleeding

Mishra Sarita
*** Asst. Professor, Department of Prasuti Tantra,**
Jeevak Ayurvedic Medical college,Hospital & Research Center,Kamlapur,Akauni,Chandauli,
Uttar Pradesh, India

[1] **Prof. Mukta Sinha**
Professor, Department of Prasuti Tantra,
Faculty of Ayurveda, Institute of Medical Sciences,
Banaras Hindu University. , *Varanasi,*
Uttar Pradesh, India

[2] **Dr. S.P. Mishra**
Head and Asso. Professor,
Department of Medical Biochemistry,
Institute of Medical Sciences, Banaras Hindu University , *Varanasi,*
Uttar Pradesh, India

Abstract- Dysfunctional Uterine Bleeding (DUB) is debilitating disorder that is responsible for iron deficiency anemia, chronic illness along with psychological upset due to prolong heavy menstrual bleeding. Inspite of medical advancements in field of understanding of disease pathogenesis even at cellular level and gene level, knowledge about regulatory factors of these pathological changes are missing in modern medical science. As per *Ayurvedic* concept of disease pathogenesis, diet and lifestyle have role in vitiation of *dosha* in body that is responsible for Inception of disease.

Clinical study done on 120 patients of DUB shows that patients having *vata-pitta prakriti* are more prone for DUB. Incidence of anxiety, constipation, sleep, *jaran shakti* (digestive power) along with associated symptoms are showing predominance of vata in patients suffering from DUB.

Key Words- ***Asrigdara* , Dysfunctional Uterine Bleeding,*Vata Dosha***

Introduction- As per WHO incidence of 3 month severe bleeding is 8-27% (BJOG 2004).The prevalence of abnormal uterine bleeding in reproductive age group ranges from 9-30 % (Farquhar C & Brown J 2009). FIGO menstrual disorder working group in 2005 recommended that old term "Dysfunctional Uterine Bleeding" be divided into three classification

1. Disorders of endometrial origin

2. Disorders of HPO axis

3. Disorders of hemostasis (Munro MG et al. 2011).

According to this classification, DUB that is studied in this study as a part of *Asrigdar* comes under disorders of endometrial origin because in this type there is disturbance of the molecular mechanism responsible for regulation of the volume of blood lost during menstruation.

Dysfunctional uterine bleeding accounts for 50% of all cases of excessive menstruation and is ovulatory in 80% of cases (Cameron IT 1989).

It is of two types -

1. Anovulatory Dysfunctional Uterine Bleeding

2. Ovulatory Dysfunctional Uterine Bleeding

1-**Anovulatory DUB-** bleeding is heavy ,prolonged or irregular in this type that is due to **disturbed function of the hypothalamic - pituitary - ovarian axis**. Possible causes of this type of bleeding is

- Excess estrogen lead to excessive endometrial proliferation and hyperplasia having dilated veins and suppression of spiral arterioles (Beilby et al. 1971).
- Uterine blood supply get increased and vascular tone get reduced due to excess estrogen in blood (Fraser IS et al. 1996)and reduced vasopressin release (Gannon BJ et al. 1997) .
- Stromal VEGF in response of excess estrogen leads to disturbed angiogenesis (Zhang, L et al. 1995).
- Prolonged, unopposed estrogen synthesizes disturbes prostaglandin balance in endometrium that disturbes vascular tone in endometrial vessels.(Smith SK et al. 1981).
- Excessive and unopposed estrogen stimulates endometrial nitric oxide (endothelium-derived relaxing factor) to excessive blood loss in anovulatory menstruation (Chwalisz K et al. 2000).

2-**Ovulatory DUB--**Ovulatory DUB is characterized by regular episodes of heavy menstrual loss, with 90% of the loss on the first 3 days as in normal menstruation . Hypothalamic – pituitary - ovarian axis and gonadotrophin and steroid hormone profiles are normal inthis type of bleeding (Eldred, J.M. and Thomas, E.J. 1994).The main cause of increase blood loss is due to defect in the processes of vasoconstriction and haemostasis.

Endometrial molecular systems responsible for functional abnormalities are as follows -

Endothelins – Receptors of endothelins get reduced in this type of DUB . Reduced levels of endothelins is responsible for an increase in the volume of blood lost. Less intense endothelin-like

immunoreactivity is found in endometrial glandular and luminal epithelium in women with menorrhagia than in controls (Marsh *et al.*, 1996).

Prostaglandins -PGs have role in the prevention of excessive menstrual blood loss (Baird *et al.*, 1996). Circulating steroid level have their role in endometrial PG release (Smith and Kelly, 1987). PGF2a induces vasoconstriction and PGE2 and prostacyclin (PGI2) induce vasodilation. PGI2 is also one of the most potent substances known for preventing platelet aggregation and the formation of haemostatic plugs. In ovulatory DUB there is an increase in total PG release and disproportionate rise in PGE2. Vasodilatation is because of increased synthesis of PGE2 and PGI2 in women with menorrhagia (Adelantado et al 1988).

Disturbed haemostatic mechanism -Haemostatic mechanisms are very important in limiting the volume of blood lost at menstruation. These are as follows-

- Prevention of platelet aggregation by increased PGI2 release
- Increased endometrial tissue plasminogen activator content.
- Increased local fibrinolytic activity (Casslen *et al.*, 1986)
- Excessive endometrial heparin-like activity (Livingstone M, Fraser IS 2002 ..)
- This combination of increased PGI2, fibrinolysis and heparin-like activity will result, very limited and deficient haemostatic plug formation.
- Matrix metalloproteinases is also responsible for abnormal endometrial breakdown and abnormalities of menstrual bleeding (Vincent AJ et al. 2000).

As per *Ayurvedic* concept, *artava* get accumulated throughout the month in uterus via *artava-vahi dhamanies* after formation of *ahar rasa* by proper functioning of *vata dosha* and get expelled through *yoni mukha* as menstrual blood (A.H. Sh.1/43). As per pathogenesis of *Asrigdar* is concerned *vata dosha* is first dosha that get vitiated by *nidanas* (Ch.Chi. 30/204-209) .

As per *samprapti* of *Asrigadara*,the woman who consumes excessive salty, sour, hot, *vidahi* (producing burning sensation) and unctuous substance; meat of domestic, aquatic and fatty animals; *Krishara* (made up with rice and pulses) *payasa* (rice cooked with milk and sweetened) ; curd, *shukta* (vinegar), *mastu* (curd water) and vine ; these things aggravates *vata in body.Rakta dhatu* also get vitiated by above factors. Vitiated *vata* and *rakta* reaches in *raja* carrying vessels (branches of ovarian and uterine arteries) of the uterus where it increases immediately the amount of *raja* (*artava* or menstrual blood). This increase in menstrual blood is due to relative more increase of *rasa*, in this condition, excessive blood is discharged hence it is known as *pradara*.Excessive bleeding during menstruation is also vitiating *vata* causing depletion of *dhatus* and subduing functioning of *agni* (Su.Su. 14/37,38).

Need of Present Study- Importance of normal function of *vata* for accumulation of *artava dhatu* in uterus and its expulsion during menstruation and vitiation of *vata* in pathogenesis of *Asrigdar* seems very parallel to the type of DUB that is due to disturbance of molecular mechanism responsible for regulation of blood volume lost during menstruation. Hence this study was planned to study incidence of symptoms in patients of DUB which are due to vitiated *vata*.

This study will help to manage DUB in holistic way by identification of causative factors related to *doshic* vitiation and management of *dosha* by proper diet and life style opposite to that *dosha* along with proper drug.

Plan of Study- In present study 120 patients having symptoms of prolong/ heavy bleeding/ having reduced inter menstrual period not < 20 days were selected. Patients having any known cause of vaginal bleeding where excluded in this study because this study is having focus on incidence of doshic involvement in cases of DUB where no any identified cause of heavy/ prolonged menstrual bleeding present. Study was done on the observation collected in clinical proforma during the period of 2012- 2015 in OPD of Prasuti Tantra, S.S. Hospital, Varanasi. In this study, DUB was considered as a part of Asrigdar having similarity in symptoms.

Observation:

- **Table 1.: Showing incidence of *prakriti,* Psychological Status,Sleep,Bowel Habit,Jaran Shakti in total number of cases**

Prakriti **(N=120)**	**Psychological Status**	**Sleep**	**Bowel habit**	
Vataj-pittaj 59 49.2%	**Mentally balanced** 59 49.2%	**Normal** 69 57.5%	**Regular** 72 60.0%	***Pravara*** 36 30.5%
Vataj-Kaphaj 9 7.5%	**Anxious** 42 35.0%	**Disturbed** 51 42.5%	**Irregular** 48 40.0%	***Madhyama*** 58 49.2%
Kaphaj-Pittaj 52 43.2 %	**Depressed** 19 15.8%	-	-	***Avara*** 24 20.3%

- Above table highlights that maximum i.e. 59 (49.20%) patients had *Vata-Pitta prakriti*, whereas 52 (43.2%) had *Kapha-Pittaja prakriti* and 9 (7.5%) had *Vata-Kaphaja prakriti*.
- Table shows that 59 (49.2%) patients were mentally balanced whereas 42 (35%) and 19 (15.8%)patients had anxiety and depression respectively.
- Table reveals that 72 (60.00%) patients were having regular bowel habit while rest 48 (40.00%) were having irregular bowel habit.
- In present study 69 (57.5%) patients had normal sleep whereas 51 (42.5%) patients complained disturbed sleep.
- The data in table, suggests that maximum 58 (49.2%) patients were of *madhyam jaranashakti*, while 36 (30.50%) patients and 24 (20.3%) patients were of *pravara* and *avara jaranashakti*.

- **Table 2 :Showing incidence of Duration of Menstrual period, Inter-menstrual Period, Amount of Blood Loss (Number of pad used/day) in total number of cases**

Duration of Menstrual Period (in day/month)	**Total (N=120)**	**Intermenstrual Period**	**Total (N=120)**	**Amount of Blood Loss (Number of pad used/day)**	**Total (N=120)**
2-3days	3 2.5%	**15-20 days**	20 16.8%	**2 –3**	2 1.7%
4-5days	76 63.3%	**21-25 days**	35 29.4%	**4–5**	76 63.3%
>6days	41 34.2%	**26-30 days**	64 53.8%	**>6**	42 35.0%

It is evident from above mentioned data that maximum i.e.76 (63.3%) patients were having duration of menstrual period of 4-5 days while 41(34.2%) had it for >6 days.

Amongst 120 patients, maximum i.e.64 (53.80%) patients were having inter menstrual period of 26 – 30 days where as 35 (29.4%) and 20 (16.8%) patients had it for 21 – 25 days and 15-20 days respectively.

It is evident from above mentioned data that maximum i.e.76 (63.3%) patients were using 4-5 pads/day and 42 (35.00%) patients were using >6 pads/day in present study.

- **Incidence of Associated Complaints in total number of cases-**

Incidence of associated complaints were as follows- pain in lower abdomen 77.5 %,backache 30.83 %, bodyache 56.66%, headache 8.33 %, Pain in calf muscle 50 %, Breast tenderness 19.16 %, Giddiness 20.83 %, Burning in feet & palm 21.66 %,anxiety 49.16 %,weakness 48.33 %,loss of appetite 50.83 %.

Discussion- As *vata* is having control over *manas*, expulsion of *malas* from body along with menstrual blood, regulatory role over digestive fire and sleep process (Ch.Su. 12/7). All these functions get disturbed if there is *vata dushti* in body along with these deranged function of body physiology vitiated *vata* gives symptoms of *vriddha vata* (Su.Su. 21/27,28,32).

In *Asrigdara* there are several factors which are responsible for vitiation of *vata*-

- As per *samanya vishasha siddhant* consumption of *vatic ahar vihar* vitiates *samyavastha* of *vata* in body (Ch.Su. 1/44).
- Excessive bleeding during menstruation vitiates *vata* in body along with depletion of *dhatu* and suppuration of normal functioning of *agni*(Su.Su. 14/37).
- *Dhatukshya* is explained as responsible factor for *vatic* vitiation (Ch.Chi. 28/58)
- Improper functioning of *agni* leads to *ama* formation in body that further causes *strotovarodha / margavarodha* (A.H.Su. 13/23-25).*Margavarodha* is one of the leading cause of vitiation of *vata*. (Ch.Chi 28/58)

As per pathogenesis of DUB is concerned there is basic cause of heavy bleeding is due to increased blood supply of uterus along with disturbed vasoconstriction , increased angiogenesis and disturbed hemostatic mechanism in uterine level .All these activity are very similar to functions regulated by *vata* as described in normal functions of *vata dosha*.

- Incidence of *vata-pitta prakriti* i.e. 49.2% in this study shows that DUB /*Asrigdar* is more common in female having *vata-pitta prakriti* .

- Incidence of anxiety/ depression in patients of this study is 35 % and 15.8% respectively that is due to involvement of *vata (Ch.Su.12/6)*. *Vata* is considered as regulator of *manas* and vitiated *vata* give symptoms like *bhaya, chinta, shok* etc.

- Incidence of reduced sleep in present patient sample is 42.5 % showing involvement of *vata dosha* because disturbed or reduced sleep is considered as a causative factor of *vata* vitiation(Su.Su.15/8) .

- As expulsion of *malas* from body is normal function of *vata*. 40 % incidence of irregular bowel habit shows vitiation of *vata (Ch.Su.12/7)*.

- Ignition of *agni* is function of *vata*. Vitiated *vata* disturbs process of proper functioning of *Agni*. 49.2 % *jaran shakti* indicate improper functioning of *Agni (Ch.Su12/7)*.

- Incidence of pain in lower abdomen 77.5 %, backache 30.83 %, body ache 56.66%, headache 8.33 %, Pain in calf muscle 50 %, Breast tenderness 19.16 %, Giddiness 20.83 %, anxiety 49.16 %,weakness 48.33 % indicates that pain in different parts of body along with weakness is due to vitiated *vata (Ch.Su.20/11)*.

Result- This study shows that maximum i.e. 59 (49.20%) patients had *Vata-Pitta prakriti* ,50.8% patients had anxiety / depression , 40.00% patients were having irregular bowel habit , 42.5% patients complained disturbed sleep , 49.2% patients were of *madhyam jaranashakti* . All these symptoms are due to disturbed physiology of body by aggravated *vata*.

Whereas vitiated *vata* in body is responsible for associated symptoms like pain in lower abdomen in 77.5 % patients, backache in 30.83 % patients, body ache in 56.66%patients, headache in 8.33 % patients, Pain in calf muscle in 50 % patients, Breast tenderness in 19.16 % patients, anxiety in 49.16 % patients and weakness in 48.33 %patients.

Conclusion and Future Perspective- In conclusion it can be said that *vata dosha* having role in formation and expulsion of *artava* and is regulatory *dosha* of reproductive physiology. Basic pathological defect in DUB are very similar to symptoms of vitiated *vata* in body.

Percentage of incidence of symptoms related *vata* in patients suffering from DUB is giving a positive link of vata dosha with DUB that is selected as a part of disease asrigdar.

Further more studies should be done on more number of patients to identify relation of *nidan* (based on different type of *dosha*) with severity of symptoms and role of avoidance of *nidan* (*aahar* and *vihar* according to vitiated *dosha*) and relief in symptom after certain time period. This study will give a more holistic approach towards management of DUB and improve women life quality in better way.

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