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## An Ultrasonography Based Survey Study To Understand The Importance Of *Vata* In Pathogenesis Of Pain W.S.R. To Phrase “*Vatadrite Nasti Ruja*”

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**ABSTRACT: Introduction:** Pain is the commonest presenting symptom and *Vata* is considered as the main causative factor of pain according to Ayurveda. There are various shades of pain described in Ayurveda like *Stambha* (stiffness), *Gaurava* (heaviness), *Chatita* (cracking type of pain), *Udvestana* (cramp), *Sparsha-Asahatva* (tenderness), *Pipilika-Sarpati-Ev* (numbness), *Vrikkashula* (renal-colic), *Sphurana* (fasciculation), *Kartana* (cutting pain), *Toda* (pricking pain), *Daha* (burning pain), *Graha* (stiffness), *Sankocha* (contraction), *Bheda* (tearing pain) etc.

**Objective:** The present study was done to evaluate the pathological aspect of *Vata* in context of pain.

**Material & Method:** To reveal the factors, survey study was done on 500 patients presenting with pain as one of the chief complaints at NIA, OPD & IPD. 170 patients out of these 500 were assessed on the basis of USG and classified according to the Ayurvedic descriptions of pain.

**Result:** *Stambha* (28.6%), *Gaurava*(23%), *Chatita* (17.4%), *Sankocha* (8%), *Vrikkashoola* (4.2%) followed by *Toda* (4%) were commonly observed in the population of 500 patients, whereas, USG revealed PID (21%) as the major cause of pain and showed *Gaurava* (11.74), *Chatita* (4.7%) type of pain followed by *Stambha* (1.76%) & *Udvestana* (1.76%). *Vrikka shoola* (12.35%) was the second leading cause of pain.

**Conclusion:** Vitiating of *Vata* either due to *Avarana* or due to *Dhatukshaya* has been identified as the leading cause of pain, and various types of pain are due to vitiation of different *Guna* of *Vata Dosha*. So it can be concluded that treatment strategy of any type of pain should be fixated on the basis of *Anshsansha Kalpana* of *Vata Dosha*

**Keywords:** *Vata*, *Ruja*, *Anshsansha Kalpana* Pain, USG.

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## INTRODUCTION:

Pain is a distressing feeling often caused by intense or damaging stimuli, because it is a complex subjective phenomenon, defining pain has been a challenge. The international association for the study of pain, widely describe the pain as “An unpleasant sensory and emotional experience associated with actual or potential tissue damage”<sup>1</sup>. The last decade has seen dramatic changes in the way we understand the pain, rather than viewing pain as a symptom of trauma, infection, inflammation or surgery, we now see it as a discrete disease entity, one that fundamentally alters the entire nervous system. *Ayurveda* suggest a different approach to pain. *Vata* has given the most important attention among all three *Dosha*. There are many chapters given separately to explain the *Prakrita* and *Vikrita* status of *Vata* in various *Samhitas*. Different classics of *Ayurveda* explain the physiology &

pathology of *Vata* by describing the five subtypes with the specification of *Sthana & Karma*<sup>2</sup>. As it plays the most important role in the pathogenesis of pain, *Shoola* is described as outcome of *Vata-Vyadhi*. *Acharya Shusruta* stated that there cannot be pain without involvement of *Vata* but *Pitta & Kapha* influence the nature and intensity of pain. There are various shades of pain described in *Ayurveda* like *Stambha* (stiffness), *Gaurava* (heaviness), *Chatita* (cracking type of pain), *Udvestana* (cramp), *Sparsha-Asahatva* (tenderness), *Pipilika-Sarpati-Ev* (numbness), *Vrikkashula* (renal-colic), *Sphurana* (fasciculation), *Kartana* (cutting pain), *Toda* (pricking needle like pain) etc. described in various context of *Vata Dosh*.<sup>3,4</sup>

The present study was very much limited to the pathological aspect of *Vata* in context of pain to prove the phrase “*Vatadrite Nasti*

*Ruja*<sup>5</sup> and to understand the pathogenesis of various types of the pain on the basis of *Anshansha Kalpana of Vata Dosha*.

### AIMS & OBJECTIVE-

1. A survey study to find out all possible types of pain and their variation due to potency, consistency & intensity on the basis of etiology with special reference to *Vata Prakopaka*.
2. To made understanding of pain in disease like *Gulma, Ashmari, Udar-Shoola, Vatarakta, Amavata, Yoni-Vyapad* etc.

### MATERIAL & METHODS-

The study was conducted at OPD & IPD of NIA Hospital, Jaipur. 500 patients were

registered having pain as one of the chief complaint. Out of these 500 patients, 170 were assessed on the basis of ultrasonography.

A detailed survey proforma had been prepared for investigating the prevalence of *Vata Prakopaka Nidana*, their pathological symptoms to explain the inter relation between *Nidana, Lakshana & Samprapti*. Assessment of pain was done on the basis of duration, intensity, location, interval, associated symptoms, season & time for increase, season & time for decrease, posture where increase, posture where decrease, disease diagnosed (provisional/final), *Upshaya/ Anupshaya*.

### OBSERVATIONS & RESULTS:

**Table 1: Showing distribution of age in 500 cases**

S.No.	Age Groups (in years)	No. of cases	
		No.	%
1.	20-30	125	25%
2.	31-40	77	15.4%
3.	41-50	112	22.4%
4.	51-60	76	15.2%
5.	>61	110	22%
Total		500	100%

**Table 2: Showing the sex incidence in 500 cases**

S.No.	Sex	Sex incidence	
		No. of cases	%
1.	Male	168	33.6%
2.	Female	327	65.4%
Total		500	100%

**Table 3: Showing distribution of Habitat in 500 cases**

S.No.	Habitat	No. of cases	%
1.	Rural	230	46%
2.	Urban	270	54%
Total		500	100%

**Table 4: Showing Distribution of occupation in 500 cases**

S.No.	Occupation	No. of cases	%
1.	House-wife	256	51.20%
2.	Student	21	4.2%
3.	Privet service	96	10.2%
4.	Businessmen	9	1.8%
5.	Govt.-service	23	4.6%
6.	Agriculture	4	.8%
7.	Others	91	18.2%
Total		500	100%

**Table 5: Showing distribution of Socio-Economic Status of 500 cases**

S.No.	Socio-Economic status	No. of cases	%
1.	Lower	233	46.6%
2.	Middle	247	49.4%
3.	Upper	20	0.4%
Total		500	100%

**Table 6: Showing *Sharirik Prakriti* in 500 cases:**

S.No.	<i>Saririk Prakriti</i>	No. of cases	%
1.	<i>Vataja</i>	6	1.2%
2.	<i>Pittaja</i>	12	2.4%
3.	<i>Kaphaja</i>	31	6.2%
4.	<i>Vata-Pittaja</i>	334	66.6%
5.	<i>Pitta-Kaphaja</i>	70	9.6%
6.	<i>Vata-Kaphaja</i>	48	14%
7.	<i>Sannipataja</i>	0	0%
Total		500	100%

**Table 7: Distribution of type of pain in 500 patients**

S. NO.	Types of pain	No. of cases	% of patient
1.	<i>Stambha</i>	143	28.6%
2.	<i>Gaurava</i>	115	23%
3.	<i>Chatita</i>	87	17.4%
4.	<i>Udvestana</i>	7	1.4%
5.	<i>Sparsh-Ashatva</i>	7	1.4%
6.	<i>Pipilika-Sarpati-Ev</i>	1	0.2%
7.	<i>Sakthi Utkshepa Nirgati</i>	1	0.2%
8.	<i>Vrikkashoola</i>	21	4.2%
9.	<i>Sphurana</i>	7	1.4%
10.	<i>Biliary Colic</i>	2	0.4%
11.	<i>Kartana</i>	4	0.8%
12.	<i>Toda</i>	20	4%
13.	<i>Daha</i>	16	3.2%
14.	<i>Karnashoola</i>	8	1.6%
15.	<i>Graha</i>	2	0.4%
16.	<i>Siravyasa</i>	3	0.6%
17.	<i>Shirah-Shoola</i>	4	0.8%
18.	<i>Sankocha</i>	40	8%
19.	<i>Annadrava-Shoola</i>	2	0.4%
20.	<i>Tadyata</i>	6	1.2%
21.	<i>Bheda</i>	4	0.8%
	<i>TOTAL</i>	500	100%

**Table 8: Distribution & reason of pain assessed with Ultrasonography of 170 patients:**

S. No.	Types of pain	Site of pain	Ultrasonography	%
1.	<i>Gaurava</i>	Lower abdomen	PID	11.74
2.	<i>Udvestana</i>			1.76
3.	<i>Chatita</i>			4.70
4.	<i>Sparsha-Ashatva</i>			1.18
5.	<i>Pipilika-Sarpati-Ev</i>			0.59
6.	<i>Stambha</i>			1.76
7.	<i>Vrikka-Shoola</i>	Renal Angle	B/L Renal Calculus Right	12.35
		Loin to Groin	Renal Calculus	
		Loin	Left Renal Calculus	
		Loin to Groin	Left Hydronephrosis	
8.	<i>Sphurana</i>	Right Iliac Region	Right VUJ Calculus	2.35
		Left Renal Angle	Left Renal Calculus	
		Groin Region	Left VUJ Calculus	
9.	<i>Chatita</i>	Groin Region	Left Ureteric Stone	2.35
10.	Biliary Colic	Right Hypochondrium	Cholelithiasis	1.18
11.	<i>Gaurava</i>	Testicular Region	Right Hydrocele	1.18
12.	<i>Gaurava</i>	Lower abdomen	Small gut loops are prominent	0.59
13.	<i>Sparsha-Ashatva</i>	Right Iliac Region	Appendicitis	0.59
14.	<i>Kartana</i>	Lower abdomen	Sub Mucosal Fibroid	0.59
15.	<i>Gaurava</i>	Lower abdomen	Gr 1 Enlarged Prostate	0.59
16.	<i>Sphurana</i>	Lower abdomen	Gr 1 Enlarged Prostate	0.59
17.	<i>Chatita</i>	Lower abdomen	Gr 2 Enlarged Prostate	1.18
18.	<i>Gaurava</i>	Lower abdomen	Hepatomegaly, Gr 2 Enlarged Prostate	2.35
19.	<i>Gaurava</i>	Chest	Right Pleural Effusion	1.18

**Table 9: Distribution of pain associated with USG of 170 Patient**

S.NO.	Type of Pain	Site of Pain	Cause	USG	%
1.	<i>Kartana</i>	Lower abdomen	Excessive bleeding after pregnancy	Bulky Uterus	0.59
2.	<i>Sankocha</i>	Kati	Amenorrhea	Lt ovarian cyst	2.94
3.	<i>Gaurava</i>	Lower abdomen	Prolonged cycle	Cystic Rt. Ovary	1.18
		Lower abdomen	Retention of urine	UB Mass	0.59
		Lower abdomen	Prolonged cycle	Dermoid cyst/ Endometrial cyst	0.59
		Epigastrium	Typhoid	N	2.35
4.	<i>Annadrava-Shoola</i>	Epigastrium	Annadrava-Shoola	N	1.18
8.	<i>Gaurava</i>	Lower abdomen	Leucorrhea	N	4.12
9.	<i>Chatita</i>	Lower abdomen		N	2.94
10.	<i>Stambha</i>	Kati, Whole body		N	1.18
11.	<i>Stambha</i>	Lumber region	Leucorrhea	N	1.76
				Mild hepatomegaly	0.59
12.	<i>Chatita</i>	Lower abdomen	Cervicitis	N	4.70
13.	<i>Chatita</i>	Lower abdomen	Endometritis	N	1.18
				Fluid in Endometrial Cavity	0.59
14.	<i>Gaurava</i>	Lower abdomen	Vaginitis	N	1.18
15.	<i>Kartana</i>	Lower abdomen	Vaginitis	N	1.18
16.	<i>Chatita</i>	Lower abdomen	Menorrhagia	N	1.18
17.	<i>Chatita</i>	Lower abdomen	Perimenopausal period	N	0.59



18.	<i>Gaurava</i>	Lower abdomen	Excessive work in <i>Sutika Kala</i>	N	0.59
19.	<i>Chatita</i>	Urinary Passage	Retention of Urine	N	0.59
20.	<i>Gaurava</i>	Between umbilicus and uterus	<i>Udavarta</i>	N	0.59
				Hepatomegaly, Fatty liver	2.35
				Hepatomegaly	1.18
				Moderate Hepatomegaly, Fatty liver	0.59
				Mild Hepatomegaly	1.76
				Hepatomegaly, Hysterectomy	1.18
21.	<i>Stambha</i>	Lower abdomen	<i>Udavarta</i>	N	
22.	<i>Gaurava</i>	Below umbilicus	<i>Udavarta</i>	Hepatomegaly, Gr 1 enlarged prostate	4.12
				Hepatomegaly	0.59
				Hepatomegaly, Fatty liver	1.76
				Gr 1 enlarged Prostate	2.35
				Mild Hepatomegaly, Fatty liver	1.18
23.	<i>Chatita</i>	Lower abdomen	Retention of urine	Gr 3 enlarged Prostate	0.59
24.	<i>Gaurava</i>	Epigastrium	Abortion	N	0.59

## DISCUSSION:

Pain is the most frequent presenting complain all over the world which is defined as “*ruja* or *shoola*” in Ayurveda, and that is because of vitiation of *Vata Dosha*, and described as the profound symptom of *Vata Vyadhi*. The *Vata Vyadhi* arises due to either occlusion of *Vata* i.e. *Avarana* or due to depletion of *Dhatu* i.e. *Dhatu Kshaya*, and causes various types of pain as described above. So the main treatment of pain in Ayurveda is to bring back the *Vata* in equilibrium state and in its actual path.<sup>6</sup>

The study was conducted on 500 patients, amongst them 170 patients of *Udar-Shoola* were diagnosed with the help of USG, and rest 330 patient were diagnosed without help of any investigation.

Maximum 25% were found in age group of 20-30 years followed by 22.4% patients from 41-50 years & 22% patients belong to age group more than 60 years. Common incidences of pain in 20-30 years age group were due to Leucorrhoea, Menorrhagia, *Sutika-Kala* & in age group of 41-50 year were due to Menopause, Peri-menopausal, *Amavata*. Results were affected due to the female dominant population suffering mostly with gynecological disorders which are stated as *Vata Dosha* dominant

condition in ayurveda.<sup>7</sup> Increased incidences in age group more than 60 years is also supported by various epidemiological researches revealing the fact that painful conditions are more prevalent in older people.<sup>8</sup>

65.40% patients were female having pain due to Leucorrhoea, Menorrhagia, *Sutika-Kala*, Menopause, Perimenopausal, *Amavata* etc. Most of the pains were associated with psychological factors. Epidemiological studies also supported the findings as studies clearly demonstrates that women are at substantially greater risk for many clinical pain conditions, and there is some suggestion that postoperative and procedural pain may be more severe among women than men.<sup>9</sup> Another study reveals differences in pain sensitivity between women and men partly because of social conditions, psychosocial factors, sex differences in sensitivity to noxious stimuli. In addition, sex hormones influence pain sensitivity; pain threshold and pain tolerance in women vary with the stage of the menstrual cycle. Imaging studies of the brain have shown differences between male and female in the spatial pattern and intensity of response to acute pain.<sup>10</sup> There is some evidence to suggest that these

gender-related differences are associated with age-related hormonal changes of puberty and menopause involving oestrogen.<sup>11</sup>

51.20% were house-wives followed by patients belonging to private job (19%) that may be due to excess work, stress. Data also supported by factors that women are found to have lower pain thresholds and lower pain tolerance, experience greater unpleasantness (or intensity) with pain and have different analgesic sensitivity. Women are over-represented (or men under-represented) in the proportion of those seeking treatment for pain.<sup>12</sup>

*Vata-Pitta Prakriti* was observed in maximum patients (58.6%) followed by *Pitta-Kapha Prakriti* (31%). As *Vata-Dushti* is more prominent in *Shoola* followed by *Pitta & Kapha Dushti*. It can be understood by the fact that patients having *Paittika* constitution shows less tolerance i.e. *klesh-ashahishnu*.<sup>13</sup>

In 500 patients, maximum cases were of *Stambha* (28.6%), *Gaurava* (23%), *Chatita* (17%), *Sancocha* (8%), *Vrikka-shoola* (4.2%) followed by *Toda* (4%) & *Daha* (3.2%). [Table no.7]

170 Patients assessed on the basis of USG, PID has been diagnosed as the leading cause of various types of pain mostly

confined to the lower abdominal region, followed by Renal calculus & hydro-nephrosis in the form of *vrikkashoola* (12.35%). [Table. No. 8]

*Vrikka-shoola* associated with calculus were found with maximum incidence (12.35%), *Gaurava* in lower abdomen associated with PID (11.74%) followed by *Chatita* associated with PID (4.70%).

Following type of pain were found in patients registered for the study. *Chatita* type of pain was associated with *Shotha* (circulation is obstructed due to *Shotha*). Maximum incidences were of cervicitis (4.7%), leucorrhoea (2.94%), & *Amavata* (2.42%).

*Stambha* type of pain is due to *kshaya* in *vaisadya-Guna* of *Vata*. Maximum incidences were of Leucorrhoea (8.15%), *Ama-Vata* (4.5%) followed by *Sandhi-Vata* (4.24%).

*Gaurava* is due to *Sanga* of *Vata* by *Guru-Guna* of *Kapha*. Maximum incidences were of PID (11.74%) followed by Leucorrhoea (7.15%).

*Sancocha*: it is due to *Vridhhi* of *Kharatva & Rukshatva Guna* of *Vata* which leads to *Sang* of *Vata*. Maximum incidences were of *Amenorrhoea* (2.93%).

12.35% cases were reported *Vrikka-Shoola* that was due to *Sanga* of *Jalasang*.

Biliary Colic (1.18% ) due to bile obstruction by stone, *Gridhrasi* (1.21%) due to *Vridhhi* in *Chalatva & Saratva Guna* of *Vata*, *Bheda* (1.21%) due to *Vridhhi* in *Chala & Vaishdya Guna* of *Vata*, *Udvestana*(1.21% in leucorrhoea) due to *Sukshma, Laghu & Chala Guna* of *Vata*, *Annadrava-Shoola* (1.18%) due to *Ruksha & Chala Guna* of *Vata*, *Tadana*(1.21% high BP) due to *Ruksha Guna* of *Vata*, *Sparsh-Ashatava* (1.21% in *Ama-Vata*) due to *Vaishdya, Roukshya & Sukshma Guna* of *Vata*, *Pipilika-sarpati-ev* (0.59% in PID) due to *Vaishdya, Roukshya & Sukshma Guna* of *Vata*, *Sphurana* (2.35% calculus) due to *Chala-Guna* of *Vata*, *Kartana* (0.59% in bulky uterus) due to *Chala Guna* of *Vata*, *Toda* (2.42% Chikungunya, 1.82% PID) due to *Sukshma Guna* of *Vata*, *Daha* (1.82% diabetes) due to *Ushna Guna* of *Pitta & Chala Guna* of *Vata*, *Graha* (0.6% lumber spondylitis) due to *Sanga* of *Vata* by *Manda, Guru, Pichchila Guna* of *Kapha*, *Siravyasa* (0.91% of high BP), *Shirah-Shoola*(1.21% high BP) due to increase ICP and *Karna-Shoola* (2.42% *Pratishyaya*) due to infection were also reported in the study population.

## CONCLUSION:

Pain involving several body regions generally represents nervous system pathophysiology shifting from predominantly peripheral to more central. Efficacious management of acute pain is a major priority for both patients and healthcare providers. As our classics frequently expressed that *Vata* controls the forms of kinetics or activity in our body any neurological events can not been consummated without the ease of *Vata*. Pain or *Ruja* is the feeling that coerces a patient to visit the medico and this felling is governed by *Vata*. So in this study we found the prelude of pain identification resources with their surmised causes, we withal found that every property of *Vata Dosha* plays very consequential role in pathogenesis. Hence the treatment strategy of any type of pain should be fixated on the basis of *Anshsasha Kalpana* of *Vata Dosha*.

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