

# Management of Udavartini Yonivyapada with Ruchakadi Chruna - A Single Arm Study

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**Abstract:** *Introduction: Health of women is primary importance for the wellbeing of Family. Recently life of women's is facing challenges encountered by stressful life resulting in mithya aahar, consumption of junk food, lack of exercise, over exertion which ultimately leads to many health issues affects quality of life. Dysmenorrhea is painful menstruation which hampers day to day activities, it is commonest Gynaecological problem neglected by women which has direct impact on physiological and social life of female, so that it becomes difficult for her to accomplish her goals.*

*Material and Methods: 18 patient fulfilling inclusion criteria were selected from OPD of streeroga and prasuti tantra department (2 dropout). Oral administration of Ruchakadi churn 750 mg thrice a day before meal for 5 days. The effect of churna studied by change in assessment criteria grading.*

*Result: Significant result obtained in duration of pain (70.2 %), suprapubic pain (64.29 %) also in nausea (70.1%), vomiting (69.2 %)*

*Discussion: Ruchakadi churn was mentioned in Bruhad Nighantu Ratnakar in Shool roga dhikar. (01) The formation is having Vatanuloman, shoolprashaman, deepan pachan properties by which it will correct the vimarg gati of vayu.*

*Conclusion: Oral administration of Ruchakadi churna is found to be effective in management of udavartini Yonivyapada..*

**Keywords:** Health of women

## I. INTRODUCTION

Health of women is primary importance for the wellbeing of Family. Recently life of women are facing challenges encountered by stressful life resulting in *mithya aahar*, consumption of junk food, lack of exercise, over exertion which ultimately leads to many health issues affects quality of life.

Dysmenorrhea is painful menstruation which hampers day to day activities, it is commonest Gynaecological problem neglected by women which has direct impact on physiological and social life of female, so that it becomes difficult for her to accomplish her goals. Acharya's has told 20 yonivyapadas. Udavartini Yonivyapada is one of twenty Yonivyapada told by classical text (2). According to Ayurveda pain is indication of vata vikruti. Vitiating of vata dosha is the main cause of Udavartini Yonivyapada. It is mainly due to either dhatukshyajanya or margavarodhajanya. The main clinical feature of Udavartini yonivyapada is Raja kricchata i.e. pain and difficult expulsion of menstrual flow, from these symptoms it Appears Udavartini Yonivyapada resembles the sign and symptoms of Primary Dysmenorrhea. As the incidence of Primary Dysmenorrhea is high, it affects day today activities of the school girls, college girls, working women and house wives.

**Prevalence** of primary dysmenorrhea is 70.2% (03) Primary Dysmenorrhea is mostly confined to adolescent. The incidence of primary Dysmenorrhea of sufficient magnitude with incapacitation is about 15-20% Primary Dysmenorrhea are the pain begins before or just with the onset of Menstruation. Pain is Spasmodic and confined to Lower Abdomen may radiate to back and medial aspect of thigh. Associated symptoms are Nausea, vomiting, fatigue, Diarrhoea, headache, and tachycardia, Vasomotor changes such as Pallor, cold sweats and occasional fainting. (4)

*Acharya Charaka* has mentioned that due to suppression of natural urges *vata* dosha gets aggravated. The aggravated *vayu* (*Apana Vayu*) moving in reverse direction fills *yonis* and gets seized with pain, initially throws or pushes the *raja*



upwards and it gets discharge with great difficulty during menses. The woman feels relief immediately following discharge of menstrual blood. **Treatment in modern science** includes Analgesics, Antispasmodics, anti-prostaglandin Drugs, sedatives, combined oral contraceptive pills. Although NSAIDs are highly effective and widely available without a prescription many adolescents are not utilizing effective treatment. In one study 25% of adolescents used less than recommended dosage of medication and 43% failed to reach the maximum daily frequency (5). Also antispasmodic, oral contraceptive pills and hormonal therapy also prescribed to relieve pain. These medicines being effective symptomatically, but have their own side effects if used for longer time.

The principle of treatment (chikitsa Siddhant) for Udavartini Yonivyapada is use of medicine having a property of vatashamana. The Ruchakadi churna having the properties like Vatanuloman, vatashaman, sadhyashoolprashaman. The content of Ruchakadi churna are easily available. Also, Ruchakadi churna is palatable and cost effective. Thus, the clinical trial was planned to evaluate the efficacy of Ruchakadi churna in management of Udavartini Yonivyapada.

As previously no study has been done on *Ruchakadi churna* till the date in *Udavartini yonivyapada*, hence research work is needed to find out the effect of *Ruchakadi churna in Udavartini yonivyapada*. The Classical reference of Ruchakadi churna is Bruhad Nighantu Ratnakar in Shool roga dhikar.

## II. MATERIAL AND METHODS

**Selection of patients:** Patients of age 13-25 yrs presenting with sign and symptoms of Udavartini yonivyapada like painful menses with associated complaints such as nausea, vomiting, lumbosacral pain, constipation, anorexia, nervousness etc were enrolled from OPD of department of Prasuti tantra and streeroga, SMBT ayurved college and hospital Dhamangaon Nashik.

Patient who are pre diagnosed cases of pelvic pathologies like uterine fibroids, polyp, malignancy of uterus, adenomyosis, ovarian congenital or acquired anomalies, heavy menstrual bleeding or any bleeding disorder are excluded.

## III. PREPERATION OF DRUG

The Raw drugs for the preparation of drugs were collected from authentic source. The drugs authentication and standardisation of drugs done at SMBT Pharmacy college Nashik. The raw drugs were made into fine powder and Shodhana of hingu was done as per classical reference from the Rasashastra and Bhaishajya kalpana department of ayurved college, and subjected to air tight packing in polythene bags.

### Ingredient of Ruchakadi churna

| Name of Drug        | Latin Name          | Total quantity |
|---------------------|---------------------|----------------|
| Hingu               | Ferula asafoetida   | 1 part         |
| Mahaushad (Shunthi) | Zingiber Officinale | 1 part         |
| Ruchak lavan        |                     | 1part          |

Patient were advised to take 750 mg of Ruchakadi churn with Luke warm water before meal thrice a day during painful menses for 5 days

### Collection of Data-

The study was started of getting the approval from institutional ethical committee. Written informed consent was taken from each patient before enrolment to the clinical trial. A specially prepared CRF was used to record the data of patients before and after treatment. The effect of therapy was assessed based on the scores of visual analogue scales for severity of pain before ad treatment as well the grading of other subjective parameter as per assessment criteria



**Assessment criteria**

|                              |             |                    |                      |                                          |
|------------------------------|-------------|--------------------|----------------------|------------------------------------------|
| Grade →                      | 0           | 1                  | 2                    | 3                                        |
| Symptoms ↓                   |             |                    |                      |                                          |
| Duration of pain             | Absent      | Pain for few hours | Pain for 1 whole day | Pain for greater than or equal to 2 days |
| Suprapubic pain (VAS scale)  | 0cm         | 1-3 cm             | 4-6cm                | 7-10cm                                   |
| Lumbosacral pain (VAS scale) | 0cm         | 1-3cm              | 4-6cm                | 7-10cm                                   |
| Nausea                       | No Nausea   | 2-3 episodes/day   | 4-5 episodes/day     | >5 episodes/day                          |
| Vomiting                     | No episodes | 2-3 episodes/day   | 4-5 episodes/day     | >5 episodes/day                          |

**IV. RESULT**

After collection of data and preparation of Master chart, statistical analysis was done with IBM SPSS Statistics (Ver. 25) software. A significance level of  $\alpha = 0.05$  was set to determine statistical significance.

**General Observation:**

**Distribution of patients**

Table No.: showing distribution of patients in group A and B

| Group | Complete Follow up | Withdrawals | Total |
|-------|--------------------|-------------|-------|
| Trial | 18                 | 2           | 20    |
|       |                    |             |       |

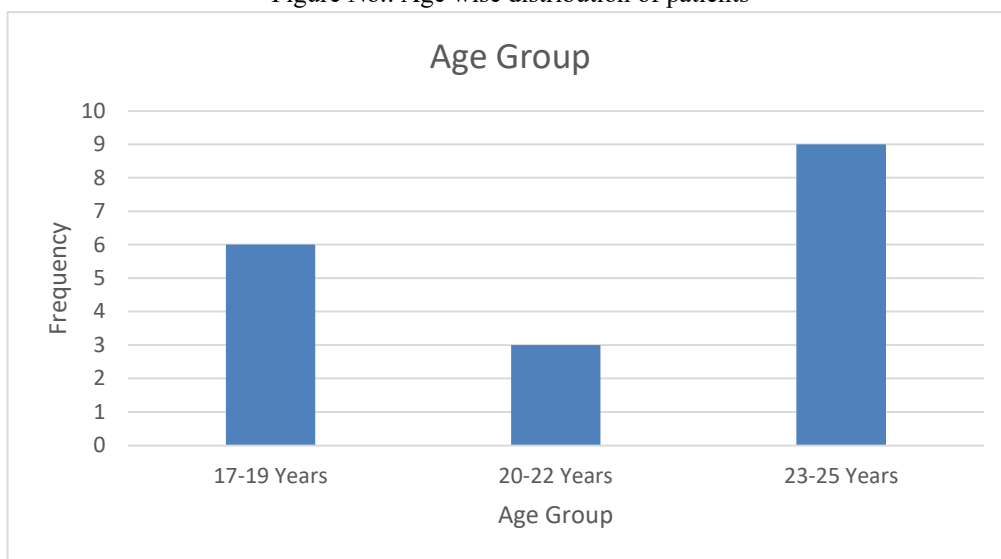
**2. Age wise distribution of patients:**

Table No.: Age wise distribution of patients

| Age Group   | Frequency | Percent |
|-------------|-----------|---------|
| 17-19 Years | 6         | 33.3    |
| 20-22 Years | 3         | 16.7    |
| 23-25 Years | 9         | 50      |
| Total       | 18        | 100     |



Figure No.: Age wise distribution of patients



## Descriptive Statistics of parameters:

### 1. Duration of pain

Table No.: Frequency of distribution of patients

| Duration of pain | BT | AT |
|------------------|----|----|
| Grade 0          | 0  | 6  |
| Grade 1          | 0  | 10 |
| Grade 2          | 7  | 2  |
| Grade 3          | 11 | 0  |

Figure No. : Frequency of distribution of patients

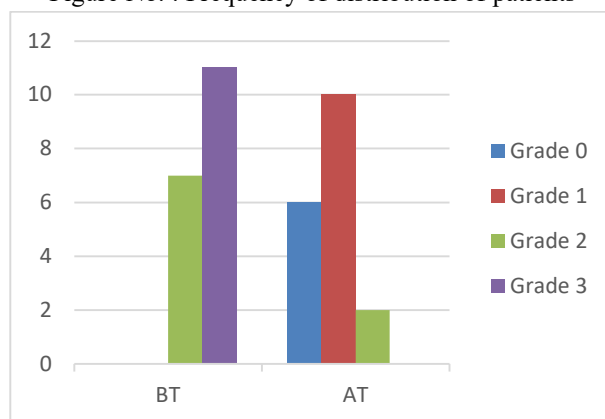


Table No.: Descriptive Statistics

| Duration of pain | BT   | AT   |
|------------------|------|------|
| Mean             | 2.61 | 0.78 |
| SD               | 0.50 | 0.65 |



|        |   |   |
|--------|---|---|
| Median | 3 | 1 |
| Mode   | 3 | 1 |

## 2. Suprapubic pain

Table No.: Frequency of distribution of patients

| Suprapubic pain | BT | AT |
|-----------------|----|----|
| Grade 0         | 0  | 8  |
| Grade 1         | 8  | 10 |
| Grade 2         | 10 | 0  |
| Grade 3         | 0  | 0  |

Figure No.: Frequency of distribution of patients

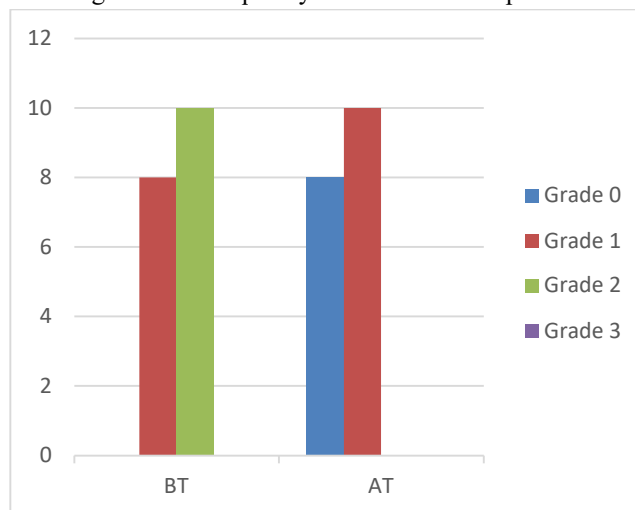


Table No.: Descriptive Statistics

| Suprapubic pain |      |      |
|-----------------|------|------|
|                 | BT   | AT   |
| Mean            | 1.56 | 0.56 |
| SD              | 0.51 | 0.51 |
| Median          | 2    | 1    |
| Mode            | 2    | 1    |

## 3. Lumbosacral pain

Table No.: Frequency of distribution of patients

| Lumbosacral pain | BT | AT |
|------------------|----|----|
| Grade 0          | 0  | 5  |
| Grade 1          | 10 | 11 |
| Grade 2          | 7  | 2  |
| Grade 3          | 1  | 0  |



Figure No.: Frequency of distribution of patients

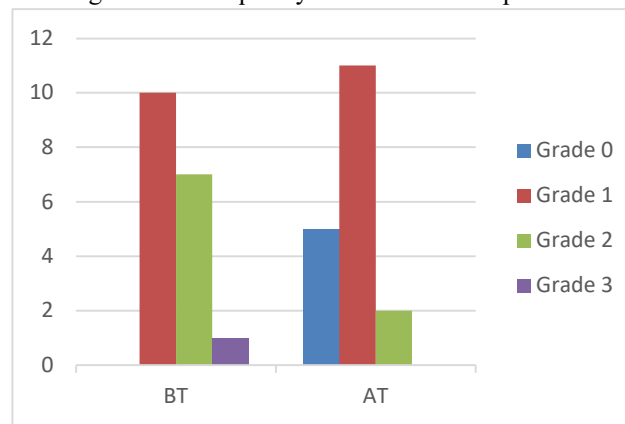


Table No.: Descriptive Statistics

| Lumbosacral pain |      |      |
|------------------|------|------|
|                  | BT   | AT   |
| Mean             | 1.50 | 0.83 |
| SD               | 0.62 | 0.62 |
| Median           | 1    | 1    |
| Mode             | 1    | 1    |

#### 4. Nausea

Table No.: Frequency of distribution of patients

| Nausea  | BT | AT |
|---------|----|----|
| Grade 0 | 2  | 12 |
| Grade 1 | 11 | 6  |
| Grade 2 | 5  | 0  |
| Grade 3 | 0  | 0  |

Figure No.: Frequency of distribution of patients

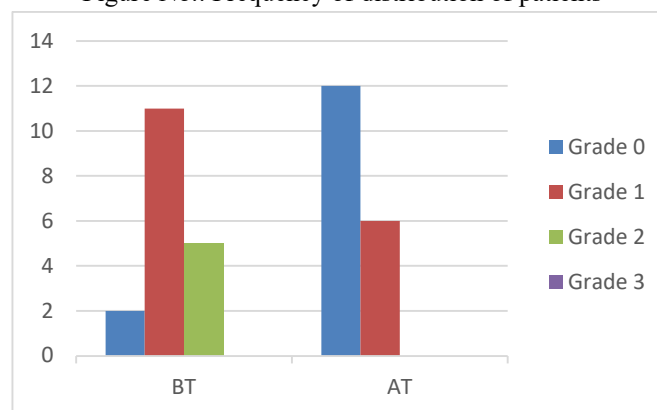


Table No.: Descriptive Statistics

| Nausea |      |      |
|--------|------|------|
|        | BT   | AT   |
| Mean   | 1.17 | 0.33 |
| SD     | 0.62 | 0.49 |
| Median | 1    | 0    |
| Mode   | 1    | 0    |

## 5. Vomiting

Table No.: Frequency of distribution of patients

| Vomiting | BT | AT |
|----------|----|----|
| Grade 0  | 6  | 14 |
| Grade 1  | 11 | 4  |
| Grade 2  | 1  | 0  |
| Grade 3  | 0  | 0  |

Figure No.: Frequency of distribution of patients

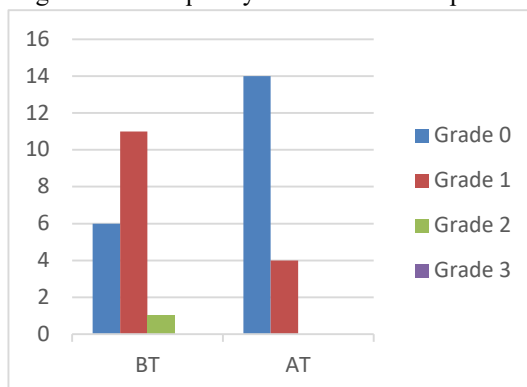


Table No.: Descriptive Statistics

| Vomiting |      |      |
|----------|------|------|
|          | BT   | AT   |
| Mean     | 0.72 | 0.22 |
| SD       | 0.57 | 0.43 |
| Median   | 1    | 0    |
| Mode     | 1    | 0    |

## Statistical analysis within groups

To examine the effectiveness of Drug, a within-group analysis was conducted by comparing Before & After scores.

**H0 (Null Hypothesis):** There is no significant difference between Before & After Scores

**H1 (Alternative Hypothesis):** There is a significant difference between Before & After scores.

The Wilcoxon Signed-Rank Test was employed for the data on ordinal scale. This non-parametric test is appropriate for comparing paired observations before and after an intervention within the same group.



**Comparison of before and after treatment parameter values with Wilcoxon Signed Rank Test**

Table No.: Analysis of Effect of treatment with Wilcoxon Signed Rank Test

| Parameter        | N  | Z value | p Value | Significance |
|------------------|----|---------|---------|--------------|
| Duration of pain | 18 | -3.835  | 0.0001  | Significant  |
| Suprapubic pain  | 18 | -3.819  | 0.0001  | Significant  |
| Lumbosacral pain | 18 | -3.207  | 0.0001  | Significant  |
| Nausea           | 18 | -3.638  | 0.0001  | Significant  |
| Vomiting         | 18 | -2.714  | 0.0001  | Significant  |

When comparing the values before treatment with those after treatment, significant difference was observed, with a p-value of less than 0.05, across all parameters. Hence treatment is effective in all parameters.

**Overall effect of treatment:**

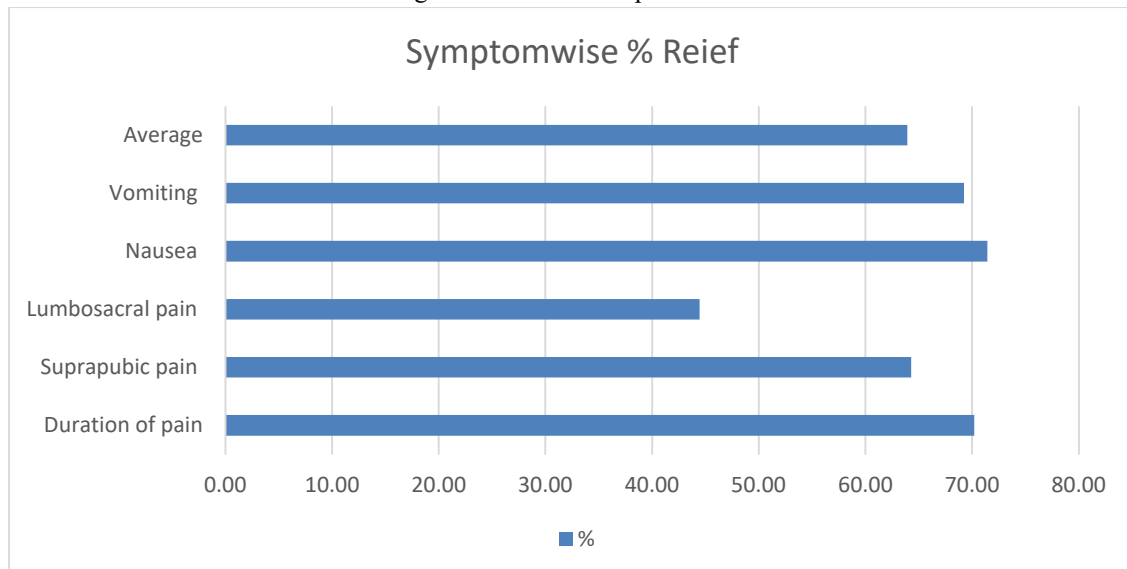
**Effect of therapy according to % relief in parameters**

Table No.: % relief in parameters

| Symptoms         | BT | AT | Relieved | % Relief |
|------------------|----|----|----------|----------|
| Duration of pain | 47 | 14 | 33       | 70.21    |
| Suprapubic pain  | 28 | 10 | 18       | 64.29    |
| Lumbosacral pain | 27 | 15 | 12       | 44.44    |
| Nausea           | 21 | 6  | 15       | 71.43    |
| Vomiting         | 13 | 4  | 9        | 69.23    |
| Average % Relief |    |    |          | 63.92    |

Average relief in symptoms was 63.92%

Figure No: % relief in parameters



**Effect of therapy according to % of relief in patients:**

Table No.: Overall effect in all symptoms in patients

| Sr No | Total Before Treatment Score | Total After Treatment score | Relieved | % Relief | Overall Effect |
|-------|------------------------------|-----------------------------|----------|----------|----------------|
| 1     | 7                            | 2                           | 5        | 71.43    | Moderate       |
| 2     | 8                            | 4                           | 4        | 50       | Moderate       |
| 3     | 5                            | 2                           | 3        | 60       | Moderate       |
| 4     | 10                           | 5                           | 5        | 50       | Moderate       |
| 5     | 10                           | 3                           | 7        | 70       | Moderate       |
| 6     | 6                            | 0                           | 6        | 100      | Marked         |
| 7     | 7                            | 3                           | 4        | 57.14    | Moderate       |
| 8     | 6                            | 1                           | 5        | 83.33    | Marked         |
| 9     | 11                           | 3                           | 8        | 72.73    | Moderate       |
| 10    | 10                           | 3                           | 7        | 70       | Moderate       |
| 11    | 5                            | 2                           | 3        | 60       | Moderate       |
| 12    | 8                            | 3                           | 5        | 62.5     | Moderate       |
| 13    | 5                            | 2                           | 3        | 60       | Moderate       |
| 14    | 6                            | 3                           | 3        | 50       | Moderate       |
| 15    | 10                           | 6                           | 4        | 40       | Mild           |
| 16    | 10                           | 3                           | 7        | 70       | Moderate       |
| 17    | 6                            | 1                           | 5        | 83.33    | Marked         |
| 18    | 6                            | 3                           | 3        | 50       | Moderate       |

Average effect as per percent relief in patient= 64.47%

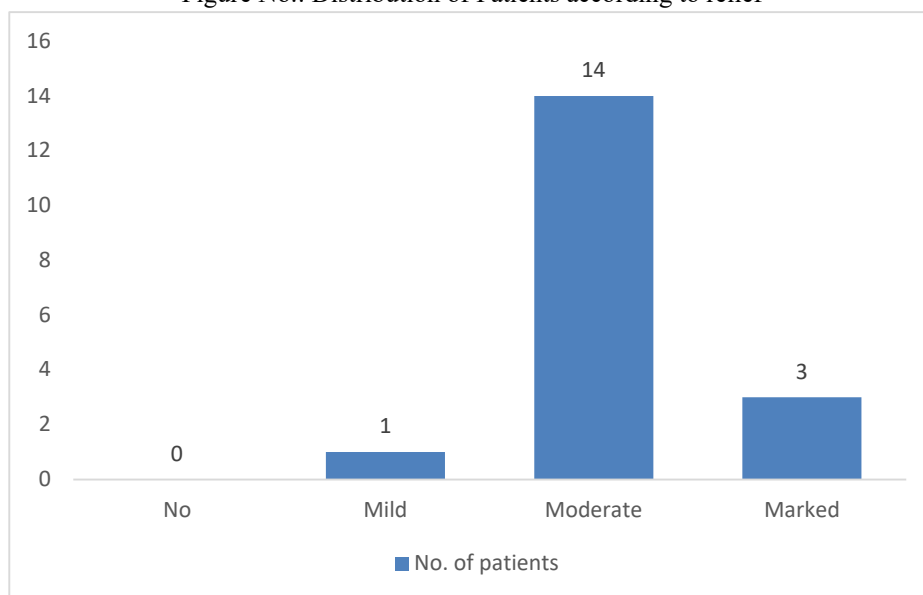
**Distribution of Patients according to relief:**

Table No.: Distribution of Patients according to relief

| Improvement | No. of patients | %    |
|-------------|-----------------|------|
| No          | 0               | 0%   |
| Mild        | 1               | 6%   |
| Moderate    | 14              | 78%  |
| Marked      | 3               | 17%  |
| Total       | 18              | 100% |



Figure No.: Distribution of Patients according to relief



## V. RESULT

20 patients of Udavartini Yonivyapada were selected considering the inclusion and exclusion criteria. Result of clinical study-The result obtained after completion of treatment have been discussed under this heading. The scoring of important features of udavartini yonivyapada before and after treatment is tabulated and percentage of improvement is taken. Overall assessment of therapeutic effect was done as marked improvement, moderate improvement, mild improvement and no relief.

## VI. DISCUSSION

Ayurvedic approach towards dysmenorrhea is different from modern medicine which target only pain by controlling prostaglandin synthesis through NSAIDS or by ovarian suppression through OC pills, but in ayurveda the holistic approach -mechanism of digestion, Metabolism, formation of menstrual blood and process of expulsion which are inter connected. Th alteration in any phase can create an inflammatory environment in which pain can be manifested as main symptom leading to udavartini yonivyapada. The main aim of ayurvedic management of udavartini yonivyapada is to correct Agni (Digestive fire) and prevent formation of Aam which leads to formation Shuddha artav. Samprapti (etiopathogenesis) of udavartini yonivyapada mainly depends on the vitiation of Vata Dosha with or without the involvement of vitiated Kapha Dosha. The line of treatment should be Dipana-Pachana (digestive), Artavajanana (promoting the production of Artava), Kaphahara (alleviating Kapha), Shrotoshodhana (clearing the channels) and Vatanulomana (correction of the direction/function of Vata) which will help the easy expulsion of properly formed Artava through the unobstructed channels by the coordinated activity of Vayu. The main causative factors for vitiation of Vata are directly involved in the pathogenesis of udavartini yonivyapada. In this study, excessive use of Katu and Madhura Rasa, faulty dietary habits like Samashana (mixing the wholesome and unwholesome foods), improper sleep, lack of Vyayama (exercise) and Vata- Pitta Prakruti (physical constitution) were identified as the main risk factors for development of udavartini yonivyapada. Excessive use of Katu Rasa may be leading to Vata- Pitta Prakopa and excessive use of Madhura Rasa may be leading to Kapha Prakopa leading to the Avarana Samprapti of udavartini yonivyapada.

### Probable mode of action of Ruchakadi churna

Most of the ingredient of Ruchakadi churn are having ushna veerya, predominant rasa is katu, Hingu and ruchak lavan having Katu vipak, shunthi having madhur veepak, and lavan his snigdha guna while shunthi is rooksha thus the ruchakadi churna is vata-kapha, tridosha-har action. Shunthi is having properties like Deepan, pachan, shophhar etc which is useful in samprapti bhang of udavartini yonivyapada



Various components of ginger like Gingerol, Shogaol, Paradol, Zingerones, and Gingerdione have anti-inflammatory pharmacological actions and act as a potent inhibitor of cyclooxygenase (COX-2), resulting in the inhibition of prostaglandins and leukotriene biosynthesis.[06] A systematic review published in 2022, on effectiveness of ginger compared with non-steroidal anti-inflammatory drugs (NSAIDs), suggested that the usage of ginger up to two grams per day in divided doses of powder or dietary form for three days from the first day of the menstrual cycle is safe and effective for primary dysmenorrhoea.[07] Ginger has been shown to share pharmacological properties with NSAIDs and recommended as it suppresses PG synthesis through the inhibition of cyclooxygenase-1 and Cox 2 and has fewer side effects than NSAIDs.[08] Ginger is also found to be as effective as mefenamic acid on pain relief in primary dysmenorrhea and recommended as an alternative treatment for primary dysmenorrhea.[09]

Hingu is having the properties like Deepana, Rochana, Chedana, and Anulomana. It is especially indicated in diseases like Shoola, Adhmana, Gulma etc. which are related to the features of Kashtartava. Recent research studies indicate the effectiveness of Shodhita Hingu in the management of primary dysmenorrhoea.[10] The chemical compounds like Azulene, ferulic acid, luteolin and umbelliferones present in Hingu were found to be responsible for its anti-spasmodic and anti-prostaglandin activity.[11]

The anti-inflammatory, analgesic and antispasmodic effects in asafoetida suggests a NSAID-like mechanism and a randomized comparative trial showed significant pain reduction on day one compared with mefenamic acid and suggested as an alternative for it in cases of primary dysmenorrhea.[12] Ruchak Lavana is especially Deepana-Pachana, Rochana and Vatanulomana in nature. Thus, the prominent Katu Rasa of the formulation may act on the Jatharagni level as Deepana-Pachana and prevent the formation of Ama which leads to the proper formation of Artava. Teekshna Guna of Shunthi and Hingu may help to penetrate the Strotas and, The Vatanulomana property of the drugs leads to the correction of Vimarga Gati of Vayu. All these ultimately results in relieving the symptoms of udavartini yonivyapada by promoting easy expulsion of menstrual blood.

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