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Efficacy of *Hijamat Bila Shurt* (Dry Cupping) on Intensity of Pain in Dysmenorrhoea- A Preliminary Study

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ABSTRACT

Waje rehm (Dysmenorrhoea) means painful menstruation. Since ancient times, hijamat bila shurt (Dry cupping) is a method of treatment of for this disease. Therefore, objective of this preliminary study was to evaluate the efficacy of hijamat bila shurt on intensity of pain in waje rehm by using Visual Analogue Scale for pain. It was conducted from May 2009 to July 2010 on 25 patients in National Institute of Unani Medicine, Bangalore. Patients suffering from primary and secondary dysmenorrhoea with regular cycles, age group 12-37 years were selected. For dry cupping, two glass cup of medium size were applied below the umbilicus for 15 minutes on day 1and/or day 2 of the menstrual phase for one cycle and pain intensity was assessed by Visual Analogue Scale score for pain before and after the treatment. The Mean and Standard Error Mean for pain intensity before and after the treatment was 6.48 (0.32) and 2.12 (0.32) respectively with P<0.001, considered significant. Thus, hijamat bila shurt was effective in reducing pain intensity in dysmenorrhoea.

Key words:*Hijamat bila shurt, dry cupping, dysmenorrhoea, Unani System of Medicine, visual analogue scale for pain*

Introduction:

Usre tams or *Waje rehm* (Dysmenorrhoea) is defined as a painful menstruation.[1] It is a common gynaecological complaint[2] with severe painful cramping sensation in the lower abdomen. It is often accompanied by other associated symptoms including sweating, tachycardia, headache, nausea, vomiting and diarrhoea, all occurring before or during the menstruation.[3] It is also a major cause of absenteeism from work thus decreasing efficiency and quality of life among affected women.[4, 5] The incidence of dysmenorrhoea is affected by socioeconomic status, occupation, psychological makeup and age of the patient.[6] It is estimated that 60% of girls of 12-17 years age group complaint of dysmenorrhoea and 50% of women experienced some degree of dysmenorrhoea.[2] While 10% are incapacitated by it. It has been also estimated in some studies that up to 75% of young women will experience some dysmenorrhoea in spontaneous menstrual cycles, with 15-20% of women experiencing severe pain.[7] Despite a predilection for younger women, dysmenorrhoea can affect any women no matter what is her age, race or parity.[8]

The Unani physicians have discussed dysmenorrhoea under the headings of *waje rehm/ dard rehm/usre tams* (uterine pain).[1,9] It is caused due to different types of *sue mizaj* (distemperament), *displacement of uterus, amraze rehm sabaqa (previous diseases of uterus), qillate tams* (oligomenorrhoea), *insidade fame rehm* (cervical stenosis), *quroohe rehm*(ulcers of uterus), *sartane rehm* (uterine cancer), etc.[1] Razi mentioned that causes of *dard rehm* are *warme rehm* (inflammation of uterus), *ihtebase tams* (amenorrhoea), *sailan khoon* (menorrhagia), *sailan mani* (leucorrhoea), displacement of uterus, cervical stenosis, polyp, uterine rupture, etc.[9]

The possible etiological causes of dysmenorrhoea in conventional medicine are endocrine, myometrial, prostaglandin, vasopressin, high intrauterine tone, uterine contraction, inordinate myometrial action etc.[10] It is classified as primary and secondary dysmenorrhoea. In primary dysmenorrhoea, there is no underlying visible pelvic pathology to account for the pain where as secondary dysmenorrhoea has varying etiological factor.

Women with primary dysmenorrhoea were shown to have higher levels of endometrial and menstrual fluid prostaglandin (PG) than women without this disorder. The local actions of PG are they act directly on the uterine musculature (myometrium) to increase basal intrauterine pressure as well as the intensity and frequency of myometrial contractions. Secondly, they cause contractions of uterine arteries with subsequent tissue ischaemia and pain. Finally PGE_2 may increase the sensitivity of peripheral pain fibres.[11]

Ibn Sina said that sometimes pain is so severe like abdominal colicky pain observed in intestinal obstruction. He also said that the pain is felt in suprapubic area and radiates to thigh and legs.[1] Young women with primary dysmenorrhoea generally have typical sharp lower abdominal pain which take place during 1 to 3 days of menstruation. The signs and symptoms of secondary dysmenorrhoea are often non specific and more referable to the underlying pathophysiology.[8]

The therapeutic options for dysmenorrhoea in conventional medicine include prostaglandin synthetase inhibitors, analgesics and surgical interventions. The above said treatments have their own side effects. Hence, it is need of the hour to switch to an alternative system of medicine that is safe, cost effective, easily be availed, non surgical and has long lasting effects.

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In Unani medicine to relieve painful menstruation, *hijamat bila shurt* is applied below the umbilicus. It is a classical procedure of regimental therapy [12] that works on the principle of *imalae mavad* (shunting/diversion of morbid humors). [13] Though, this method of treatment dates back to ancient period, but efficacy and degree of reduction of pain intensity in dysmenorrhoea has not been measured objectively. Moreover, Validation and documentation of this treatment in dysmenorrhoea is extremely deficient. Hence, keeping the above facts in view, this preliminary study was carried to assess the efficacy of *Hijamat bila shurt* on intensity of pain by using Visual Analogue Scale for pain in *waje rehm.*

Material and Methods

This study was conducted from May 2009 to July 2010 on 25 patients in OPD and IPD of National Institute of Unani Medicine, Bangalore. The inclusion criteria were patients with primary and secondary dysmenorrhoea having regular menstrual cycle within the age group of 12 to 37 years. The exclusion criteria were patients with irregular cycles, congenital malformations of genital tract, and pelvic malignancy. Patient's history, clinical examination, routine investigations and ultrasonography of pelvis was recorded.

Hijamat bila shurt (Dry cupping): Two cups of medium size (No. 2) were applied below the umbilicus for 15 minutes on day 1 and/or day 2 of the menstrual phase for one cycle in dysmenorrhoea patients. The pain intensity was assessed by Visual Analogue Scale (VAS) score before and after application cups. [14]

The results were analyzed statistically by using Graph pad statistical software. Wilcoxon matched paired test was applied and $P<0.05$ was considered significant.

Results:

Baseline Characteristics

Age:

The highest occurrence of primary dysmenorrhoea and secondary dysmenorrhoea was observed in the age group of 17-21 years i.e., 4 (16%) and 22-26 years i.e., 5(20%) patients respectively (Table 1). It was also noticed that secondary dysmenorrhoea was more common after 21 years of age (10 patients).

Table 1: Distribution of Patients According to Age and Type of Dysmenorrhoea

Age in Years	Type of Dysmenorrhoea	
	Primary(Percentage) No. of patients	Secondary (Percentage) No. of patients
12-16	2(8)	0(0)
17-21	4(16)	3(12)
22-26	1(4)	5(20)
27-31	2(8)	2(8)
32-36	2(8)	2(8)
= 37	1(4)	1(4)
Total	**12(48)**	**13(52)**

Type of Dysmenorrhoea:

Approximately equal number of patients had primary and secondary dysmenorrhoea i.e. 12(48%) and 13(52%) respectively in present study. (Table1)

Parity:

In this study, majority of patients were married i.e., 17(68%). 7 (28%) patients of primary dysmenorrhoea were unmarried. Secondary dysmenorrhoea was noticed in 12(48%) multiparous patient. (Table 2)

Duration of Pain:

The duration of pain in 9(36%) patients was observed between 1-2 days in primary dysmenorrhoea and 7 (28%) patients of secondary dysmenorrhoea had duration of pain between 3-4 days. (Table 3)

Effect on Intensity of Pain in *Waje Rehm*:

The Mean and Standard error mean of pain intensity, calculated by visual analogue scale (VAS) before and after treatment was 6.48 (0.32) and 2.12 (0.32) respectively with $P<0.001$, considered significant. (Table 4)

Table 2: Distribution of Patients According to Parity and Type of Dysmenorrhoea

Parity	Type of Dysmenorrhoea	
	Primary(Percentage) No. of patients	Secondary (Percentage) No. of patients
Unmarried	7(28)	1(4)
Multiparous		
1-2	3(12)	6(24)
3-4	2(8)	4(16)
=5	0(0)	2(8)
Total	**12(48)**	**13(52)**

Table 3: Distribution of Patients According to Duration of Pain and Type of Dysmenorrhoea

Duration of Pain (Days)	Type of Dysmenorrhoea		
	Primary(Percentage) No. of patients	Secondary (Percentage) No. of patients	Total
1-2	9(36)	6(24)	15(60)
3-4	3(12)	7(28)	10(40)
Total	12(48)	13(52)	25(100)

Table 4: Efficacy of Hijamat Bila Shurt on Intensity of Pain calculated by Visual analogue Scale (VAS)

Intensity of Pain (Visual Analogue Scale)	BT	AT
Mean (SEM)	6.48 (0.32)	2.12 (0.32)

Test used:

Wilcoxon Matched Paired Test, $P<0.001$, considered significant

Discussion:

This study was carried out as till date in none of studies published on dysmenorrhoea had assessed the efficacy of *hijamat bila shurt* on intensity of pain in *waje rehm* by using VAS score before and after treatment. Significant reduction in pain intensity was observed with $P<0.001$.

Effect on Intensity of Pain in *Waje Rehm*:

The Prostaglandins ($PGF_2\alpha$, PGE_2) are synthesized from the secretory endometrium under the action of progesterone in ovulatory cycles. These are produced maximally during shedding of the endometrium and causes increased myometrial contraction, contractions of uterine arteries with subsequent tissue ischaemia leading to dysmenorrhoea. It is treatable with prevention of the release of PG prior to and during menses.[15]

In one of the study, it is mentioned that the intensity of the menstrual cramps and associated symptoms of dysmenorrhoea are directly proportional to the amount of

PGF2 α released.[16] Maximum quantity of PG is released during the first two days of menstrual cycle, which parallels the time of greatest discomfort. Therefore, in this study, dry cupping was applied on first and/or second day of menstrual cycle as the duration of dysmenorrhoea usually starts few hours before the onset of menstrual flow and lasts for 48-72 hours.[3,17] It's worst on 1st and 2nd day of menstrual flow.[3]

It has been hypothesized that exercise improves dysmenorrhoea by shunting of blood flow away from the viscera, which results in less congestion in the pelvic area, suppresses the prostaglandins and release of beta endorphins providing endogenous analgesia.[18] *Hijamat bila shurt* is a type of regimenal therapy that is used to relieve pain in *waje rehm*. According to Unani physicians, the effect of relieving the menstrual pain by applying the cups below the umbilicus, works on principle of *imalae mawad* (shunting of morbid humours/blood) from the uterus.[12, 13, 19, 20 ,21] Likewise, it can be appraised that *dry cupping* had also decreased congestion, suppressed the prostaglandin and release of beta endorphins that provided endogenous analgesia by shunting of the blood (*imalae mawad*) away from the uterus towards the skin.

It is also mentioned that Aβ sensory fibres from the peripheral tactile receptors can depress the transmission of pain signals. This effect presumably results from local lateral inhibition in the spinal cord that why such simple maneuver as rubbing the skin near painful areas is often effective in relieving pain. It also probably explains why liniments are often useful for relief of pain. This mechanism psychogenic excitation of the central analgesia system is probably also basis of pain relief by acupuncture.[22] By applying and creating suction by the vacuum in the dry cupping, the above mentioned effect might be attributed in decreasing the pain intensity in dysmenorrhoea ($P<0.001$).

In this study, it was found that duration of pain in primary dysmenorrhoea was for 1 to 3 days. It is in accordance with previous study.[11, 17] It was also observed that primary dysmenorrhea was more in unmarried women than in married women showing that it improves after child birth and appears to decline with increasing age.[11,23]

Since, it was only preliminary study carried out to assess the efficacy; hence they are limitations like smaller sample size, lack of power, no randomization and no parallel controlled group. Therefore, it is recommended to conduct randomized controlled trials.

Conclusion:

We conclude that *Hijamat bila shurt* was efficacious in reducing pain intensity in dysmenorrhoea. Though cupping was applied only for one cycle, it showed good response in relieving dysmenorrhoea. Thus, further, randomized controlled clinical trials on large sample for longer duration of time are recommended.

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