

Research Article

## Effect of *Dalk Layyain Kaseer* (Soft Massage) with *Roghan Sosan* (Medicated Oil) in Slowing the Progress of *Waja-ul-Zahar* (Low Back Pain)

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**Abstract** Waja-ul-Zahar (low back pain) involves many aspects of a person's life namely somatic psychological and social. It is one of the main reason for which individuals seek medical care. Its increasing prevalence is placing a huge burden on families, society health care providers and ultimately on Nations health. The main aim of the study was to assess the effect of Dalk layyain Kaseer with Roghan Sosan in low back pain. The present study was an interventional observational study with sample size 60 and was of 7 weeks duration. *Dalk layyain Kaseer* with *Roghan Sosan* was done on lower back for 15-20 minutes on alternate day in first week and twice a week, thereafter for another 2 weeks. Improvement in subjective and objective parameters were assessed on every week, at the end of the treatment and fortnightly for 1 month in follow up period. In this study three parameters were taken into account; LBP as a main complaint, tenderness and difficulty in walking as secondary. Pain was assessed by VAS grading from 0-10, tenderness and difficulty in walking were graded arbitrarily from 0-3 according to severity. Statistical analysis was done by using repeated measures analysis of variance (ANOVA). There was a highly significant improvement in both subjective and objective parameters ( $p < 0.001$ ). This study reveals that the test procedure with therapeutic oil has good response in reducing low back pain. No adverse effects were observed during and after trial. Thus, it can be concluded that *Dalk layyain Kaseer* with *Roghan Sosan* may be an effective regimen in the management of *Waja-ul-Zahar*.

**Keywords** *Dalk*; *Low back pain*; *Massage*; *Roghan Sosan*; *Unani medicine*; *Waja-ul-Zahar*

### 1. Introduction

Waja (pain) is a sudden perception of any contrary agent, which is one of the unnatural states of living body (Ibn and Abu, 2013). Pain is biopsychosocial experience, which is associated with wide spread impairment in multiple domains of functioning ranging from disruption in basic activities of daily living to disruption in psychosocial function and work reduction activities. Pain is the dominant symptom of rheumatic diseases. It is not only the main cause of suffering; but also, the main key to diagnose. Pain is however an exclusively subjective manifestation but can be appreciated in all its dimensions by the person experiencing it and is not easily verified and quantified (Da Silva and Woolf, 2010; Warrell, 2010). Low back pain (LBP) is the most common musculoskeletal symptom and

poses a major socio-economic burden. An estimated 80% of the population will experience back pain during their lifetime; 90% of these patients will have resolution of their symptoms within 4 weeks (Adebajo, 2010). Low back pain is seen most frequently in patients between the ages of 20 and 40, but it is more severe when it occurs in older patients. The sex distribution is equal. Approximately 2 to 8% of patients with low back pain develop chronic disabling pain. Risk factors include heavy lifting, twisting movements, and bodily vibrations (e.g., motor vehicle crashes), obesity, and poor conditioning. Low back pain may emanate from spinal structures, including the nerve roots, facet joints, discs, vertebral bodies, and adjacent ligaments and soft tissues (Kendall, 1993).

Waja-ul-Zahar (low back pain) involves many aspects of a person's life namely somatic psychological and social. It is one of the main reason for which individuals seek medical care. Its increasing prevalence is placing a huge burden on families, society health care providers and ultimately on nations health. As an ailment, it is second only to the common cold with 70-80% of the population experiencing low back pain at some point of time. Low back pain is the most common pain syndrome in industrial countries with the highest prevalence in persons aged 45 to 65 years. The commonest age groups affected are adults and elderlies with the incidence more among females. According to Unani concept any factors either external or internal which is imparting sue mizaj barid to the lumbosacral region is the main reason of the low back pain. By affecting person's life both at home and at work place, now it becomes a public health issue because it produces significant disability by restricting the movements. To combat the low back pain, we are following many principles of treatment like physiotherapy, exercise regimen, costly analgesics, corsets etc., but all are unsatisfactory. So, it is the need of time to look forward for better, safe and low-cost alternative management. Unani system of medicine possesses possible better, safe, and low-cost treatment for Waja-ul-Zahar. Almost all ancient Unani physicians have advocated massage in slowing the progress and relieving pain in *Waja-ul-Zahar*. Particularly, with (*Har Mizaji*) hot temperamental medicinal oils – like Roghan Sosan (Arshid Iqbal, Mudasir Khazir and Humyra Tabassum, 2014). Because of all the above factors the classical popular regimen of Unani System of medicine i.e. Dalak with therapeutic oil (Roughan Sosan) is tested in present study for its efficacy in halting the progress and relieving the lower back pain.

## 2. Materials and Methods

The present study was a before and after without control study, conducted on 60 patients of LBP selected from Z.V.M Unani Medical college and hospital, Pune, after obtaining ethical clearance from Institutional ethics committee and also approved by MUHS, Nashik over a period January 2015 to June 2015. Patients were selected on the basis of clinical diagnosis. A total of 60 patients of either sex, above the 20 years and below 50 years of age, giving the history of low back pain were selected from OPD/IPD and evaluated for the consideration as a research subjects. Every subject was completely informed of the experimental procedures and had signed an informed consent statement before joining in the trial (Arshid Iqbal, Mudasir Khazir and Humyra Tabassum, 2014). Certain investigations were carried out with an aim to exclude the patients with pathological conditions mentioned under exclusion criteria like: Patients with diabetes, gout and RA, Patients having malignancy, local wounds or severe skin infection, traumatic (fracture or severe dislocation at lumbar region) patients or patients with severe systemic illness. Massage sittings were kept on alternate days in first week and twice a week in rest of the 6 weeks. Massage was done on lower back for 15- 20 minutes on alternate day in first week and twice a week there after for another 6 weeks, performed with the fingers and palms of both hands. Approximately 20 ml of oil was used in every sitting. Patients were made to lie in prone position on the massage table, with the area to be massaged was exposed properly. The treatment period was scheduled as 7 weeks (4 sittings). The assessment of efficacy of treatment in relieving low back pain, relief in tenderness and difficulty in walking were

carried out on basis of a reliable and valid scale i.e. VAS, and arbitrary scale for tenderness and difficulty in walking (both graded from 0-3) respectively. The assessment of parameters was done before starting the treatment and on 15<sup>th</sup>, 30<sup>th</sup>, 45<sup>th</sup> day. Once the patients eased of the pain totally; they were asked for follow up fortnightly for 1 month. Same pain assessment technique i.e. VAS was used to assess the pain. Statistical analysis was restricted to those patients who completed the full duration of protocol of the study. Repeated measures analysis of variance (ANOVA) was used to analyze the efficacy of the procedure. The confidence level was set to be at  $p < 0.05$  for significant results of treatment (Arshid Iqbal, Mudasir Khazir and Humyra Tabassum, 2014).

### 3. Results and Discussion

Among the 60 subjects studied, males outnumbered the females (78%). There mean age was 34.7 (SD $\pm$ 8.9). Majority of them were found in the age group of 30-39 years (41.7%). Majority of patients (51.3%) belongs to such occupation in which lower back is under continuous strain. e.g., driver, mechanic, carpenter, field worker etc. The Mean  $\pm$  SD score of pain, tenderness and difficulty in walking before starting the treatment, at 15<sup>th</sup>, 30<sup>th</sup> day and at the end of treatment are summarized in Table 2. When the mean  $\pm$  SD scores of Low-back pain, Tenderness and Difficulty in Walking were compared from baseline statistically using repeated measures analysis of variance (ANOVA) for within group pair wise comparisons (Arshid Iqbal, Mudasir Khazir and Humyra Tabassum, 2014). It was found that the average VA Score is significantly higher at visit 1 (day) compared to visit 2 (day 15) visit 3 (day 30) and visit 4 (day 45) VA scores ( $p$  value  $< 0.001$  for all).

The average improvement in VA score at visit 2 (day 15) visit 3 (day 30) visit 4 (day 45) was 20.8%, 45.0% and 70.9 % respectively ( $p$  value  $< 0.001$  for all) Significantly higher proportion of cases had mild or moderate tenderness at visit 2 (day 15), visit 3 (day 30) and visit 4 (day 45) Post-op follow-ups compared to the tenderness at visit 1 (day 0) ( $p$ -value $<0.001$  for all). Significantly higher proportion of cases had mild or moderate difficulties at visit 2 (day 15), visit 3 (day 30), and visit 4 (day 45) post-op follow-ups compared to the difficulties at visit 1 (day 0) ( $p$ -value $<0.001$  for all).

**Table 1: Base line demographic profile of subjects**

Age in years	Number of patients	%
<30.0	18	30.0
30.0 – 39.0	25	41.7
40.0 – 49.0	17	28.3
Total	60	100.0
Mean $\pm$ SD: 34.7 $\pm$ 8.9		
Gender	Number of patients	%
Male	47	78.3
Female	13	21.7
Total	60	100.0
Occupation	Number of patients	%
Skilled	14	23.3
Unskilled	14	23.3
Business	11	18.3
House wife	11	18.3
Student	10	16.8
Total	60	100.0

It is evident from the above results that *dalk layyain* with *roghan sosan* have a good efficacy in relieving the pain, tenderness and difficulty in walking in *Waja- ul- zahar*. Almost all ancient Unani

physicians have advocated massage in slowing the progress and relieving pain in *Waja-ul-zahar*. Particularly, with (*Har Mizaji*) hot temperamental medicinal oils. The pain and tenderness arises from internal and external muscles, ligaments surrounding the lumbar and lumbosacral region due to *sue mizaj barid* (cold ill temperament) and accumulation of raw *phlegm* (*kham balgham*). Difficulty in movement (walking) may be directly related to pain and stiffness in the lower back. Stiffness may be due to spasm in the joint structures like tendons, capsules etc. due to *baroodat* (excessive cold). *Dalk* has a unique property to expel highly viscid and sticky matter (*ghaleez aur lasdar madah*), remove excessive cold (*buroodat munjamidah*). *Roghan sosan* possess *Musakkin Alam* (analgesic) and *Mohallil Auram* (ant inflammatory) properties. Also, *Advia musakhinah* (temperamentally hot drugs), counter the cold directly (Arshid Iqbal, Mudasir Khazir and Humyra Tabassum, 2014).

**Table 2:** The comparison of improvement in objective parameter studied (n=60)

Parameter	Visit 1 (Day 0)	Visit 2 (Day 15)	Visit 3 (Day 30)	Visit 4 (Day 45)	P-values [Intra-Group comparisons]		
					Visit 1 v Visit 2	Visit 1 v Visit 3	Visit 1 v Visit 4
VA Score	6.05 ± 1.1	4.77 ± 1.0	3.32 ± 1.0	1.75 ± 0.7	0.001***	0.001***	0.001***
% Change	0%	20.8%	45.0%	70.9%			

Values are Mean ± Standard deviation (SD). P-values by Repeated measures analysis of variance (ANOVA). P-value less than 0.05 is considered to be statistically significant. \*\*\*P-value<0.001 (Highly Significant).

**Table 3:** The comparison of improvement subjective parameters studied (n=60)

Parameter	Grade	Visit 1 (Day 0)	Visit 2 (Day 15)	Visit 3 (Day 30)	Visit 4 (Day 45)	P-values [Intra-Group comparisons]		
						Visit 1 v Visit 2	Visit 1 v Visit 3	Visit 1 v Visit 4
Tenderness	Severe	60 (100.0)	0	0	0	0.001***	0.001***	0.001***
	Moderate	0	60 (100.0)	0	0			
	Mild	0	0	60 (100.0)	60 (100.0)			
Difficulty in walking	Severe	60 (100.0)	0	0	0	0.001***	0.001***	0.001***
	Moderate	0	60 (100.0)	0	0			
	Mild	0	0	60 (100.0)	60 (100.0)			
Pain	Severe	60 (100.0)	0	0	0	0.001***	0.001***	0.001***
	Moderate	0	60 (100.0)	0	0			
	Mild	0	0	60 (100.0)	60 (100.0)			

Values are n (%). P-values by Chi-square test (Within Group pair-wise comparisons of qualitative parameters). P-value less than 0.05 is considered to be statistically significant. \*\*\*P-value<0.001 (Highly Significant).

#### 4. Conclusion

The effect of Dalak layyein Kaseer with roghan sosan was found highly significant both statistically and clinically in relieving low back pain and associated symptoms. It seems reasonable that this regimen has clear cut edge over other regimens and would save the patients of Low back pain from

adverse effects of analgesics and NSAIDS, no clinically significant side effects were observed and overall compliance to the treatment procedure was excellent.

On the basis of the results it can be provisionally concluded that Dalak Layyain Kaseer with Roghan Sosan is safe and effective in the management of low back pain. However large and controlled studies are required to reach a final conclusion.

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