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“Efficacy of Therapeutic Massage (*Da/k*) with Dill Seed Oil in Management of Neck Pain.”

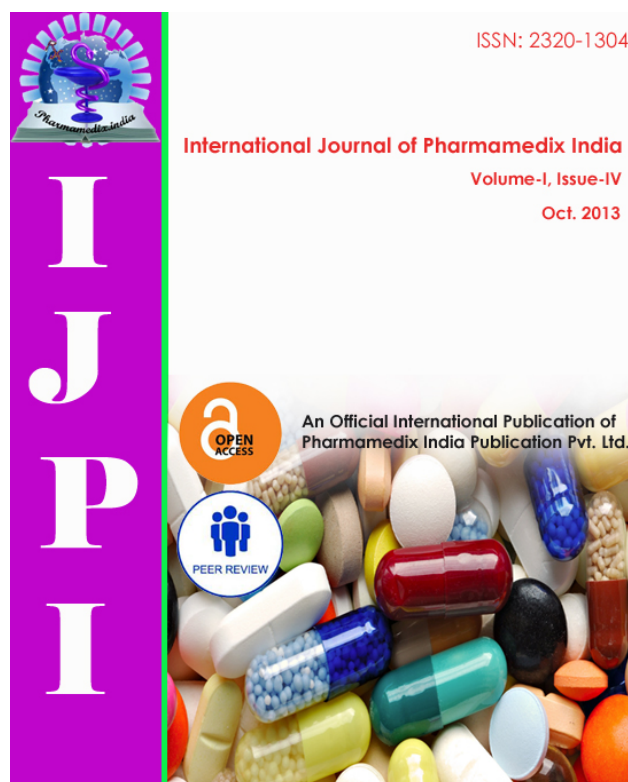
Tanwir A.M*, Zulkifle M, Ansari AH, Aisha P.

*Author for correspondence

Md Tanwir Alam,

Scholar, Dept. of Preventive and Social Medicine (TST), National Institute Of Unani Medicine (NIUM), Kottigepalya, Bangalore, Karnataka, India (560091),
Ph: 7411569807.

Email:tanveernium3133@gmail.com



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Abstract:

By affecting person's life both at home and at work place, now neck pain becomes a public health issue. It produces significant disability by restricting the neck movements. Despite tremendous advancement in medical science it still fails to explain the exact pathophysiology, effective treatment, prevention and rehabilitative measures for neck pain. Every prevailing pain relieving regimen is only short term. Because of all the above factors the classical popular regimens of *Unani System of Medicine* i.e., massage with Dill Seed Oil was tested in present study for its efficacy in halting the progress and relieving the neck pain. Present study was an observational study with a sample size of 50 and was of 3 months duration. *Dalk-layyin-kaseer* (massage with soft-hand for long duration) with Dill Seed Oil was done on neck for 20 minutes on alternate day in first week and twice a week there after for another 11 weeks. Improvement in subjective and objective parameters were assessed on every sitting, at the end of the treatment and fortnightly for 1 month in follow up period. The mean duration of neck pain, VAS score, NS grade and RNM grade at baseline were 2½ years, 5.8, 3.14 and 1.94 respectively; these were completely relieved in a mean of 9.32 sittings. Surprisingly it was observed that no patient have reported reoccurrence during follow up. This study suggests that therapeutic *massage* is safe and has clinically important benefits in alleviating the neck pains and associated symptoms.

Keyword: *Dill Seed Oil, Dalk, Lifestyle Disease, Massage, Neck Pain, Unani System of Medicine.*

Introduction

Neck Pain involves many aspect of a person's life namely somatic, psychological and social. The issue of pain treatment is an extremely urgent health and socio-economic problem. Pain, in acute, recurrent and chronic forms, is prevalent across age, cultural background, sex, and costs. The pain relief is most frequent and probably the only cause for which the sufferer pay the maximum. Hence

relief from pain is mandatory for social, psychological, economical and medical reasons. Because the worst we can expect originates from the pain. Since the pain has always been a major problem for humanity so physicians of every time have been engage in solving the problem.

Threats (in terms of disability) caused by long standing neck pain is increasing rapidly. Neck pain affects a person's life both at home and

at work place. Its ever increasing prevalence, especially in productive population results in absentees & sick leaves and increased sedentary population in society is placing a huge burden on families, society, health care providers and ultimately on nation's wealth.

It is estimated that 67% of individual suffers from neck pain at some stage of their lives. Whereas it is 10.1% for high-intensity and low-disability neck pain and 4.6% for significantly disabling neck pain.^[1] Life time prevalence of neck pain varies from 26% to 71% with a reported high rate in females (12% compared to men's 9%)^[2], in advance age, in people having more job demands and in certain professions and in cold regions or weathers.

The current (research) incidence of neck pain in Bangalore has been estimated as 35% and the median age as 27 years and it ranges between 18-52 years.^[3] Reports show that 50 million Americans suffer from chronic pain and the annual cost for the care of chronic pain in US alone is estimated as high as 100 billion. Back pain and neck pain contribute upto 60% of this expenditure.^[4]

A large population of health care practice/system is devoted to the care of neck pain, and millions of dollars are spent annually on treatment, lost wages and compensation. Despite of the magnitude, costs, and morbidity of neck pain, surprisingly little researches have evaluated treatments for patients with neck pain.^[5]

There is no satisfactory remedy for this ailment yet. Prevailing management i.e. use of NSAIDs, pain killers, muscles relaxants and soft cervical collars have their own limitations and dependency. Soft cervical collars are commonly recommended, but evidences suggest that they may delay the recovery. Soft cervical collars prevent the person from their duties by restricting the neck movements; which further worsen the condition. So there is a challenging task for the entire medical fraternity to restore the ability of a sufferer to do things that have been restricted by pain; by relieving it.

Complimentary and alternative medicine's interventions have been increasing in popularity over the past two decades due to the dissatisfaction with main stream western/allopathic medicine and desire of patients to be more actively involved in their own medical decision making.^[6]

USM is among CAM and it has effective and safe way to handle the neck pain. So a classic and popular regimen of USM i.e. massage with Dill Seed Oil was tested in present study for its efficacy in halting the progress and relieving the neck pain.

Material & Methods

Present study was conducted at Regimenal Therapy Unit (RTU) of Hospital, National Institute of Unani Medicine (NIUM), Bangalore. After getting ethical clearance clinically diagnosed cases of neck pain were

included in the study. It was an observational study with a sample size of 50 and 3 months duration. The verbal and written consent were taken before conducting the procedure. A total of 25 massage sittings were designed in 12 week / 3 months study duration. Massage with Dill Seed Oil was done on neck for 20 minutes on alternate day in first week and twice a week thereafter for another 11 weeks. Massage was performed with the fingers and palms of both the hands. Approximately 20 ml oil was consumed per sitting. Patients were made to sit on the chair with erect back. The area to be massaged was exposed properly. Female masseurs were asked to do massage for female patients. Improvement in subjective and objective parameters were assessed on every sitting, at the end of the treatment and fortnightly for 1 month in follow up period. This study stretched from January 2011 to May 2011.

Procedure for oil preparation:

The test drug i.e. Dill Seed Oil (*Roghane shibbat*) was prepared in NIUM pharmacy. Chamomile oil (*Roghane baboona*) was used as base oil in a ratio of 4:1 with dill seeds. Oil was prepared according to Classical Unani method i.e. in the above said ratio the dill seeds were boiled in Chamomile oil approximately for 20 minutes, until the colour of dill seeds changed to brownish black or seeds split into two parts. These two indicate that the oil has been released from the tukhm into base oil.

Dill seeds were purchased from the market and were identified by the Unani expert before the above process. After preparing the oil it was kept in dried and clean plastic bottles. A sample of procured dill seeds was kept for future reference.

Outcome assessment:

The main aims in the management of neck pain are to alleviate symptoms and to return the person to their pre-pain level of functioning. The assessment of outcome was carried out by the following parameters.

- Clinical assessments (subjective parameter)
- Visual Analogue Scale/VAS (objective parameter)

The clinical assessment was done before starting the massage procedure and then on every sitting till the end of the study protocol duration. The clinical assessment was based on the fluctuation in severity of sign and symptoms. The clinical assessments included neck pain (as a main), stiffness of neck muscles and restriction in movements of neck. Assessment of the severity of pain was recorded with the help of internationally accepted and best objective scale i.e., VAS.^[7]

Visual Analogue Scale:

At every visit, pain was assessed by VAS. Patients after initial training in reading VAS scale, were verbally asked to mark (by finger) on the colour pattern (arranged from lighter to dark colour) of the scale. Lighter colour corresponds to the lowest and darkest one to

the highest magnitude of the pain. As the colour patterns gradually become darker; the pain magnitude increases accordingly. Apart from colour pattern / shade numerical numbers 1 to 7 was also marked on the scale. Gradually increasing number (1-7) on scale represents the increase in magnitude of pain as well. Where 1 represents no pain and 7 represents worst imaginable pain.

As all the other parameters of clinical assessment differ in severity from subject to subject hence an arbitrary grading of these parameters was improvised for appropriate assessment and statistical evaluation of various symptoms so that efficacy of the procedure at every sitting and at the end of the study could be evaluated.

Neck Stiffness:

Sensation of stiffness is also a vital point; often complaint by the patient of neck pain. Four grades were designed to assess the severity.

1 = barely perceptible

2 = mild

3 = moderate

4 = severe

Restriction of Neck movements:

This is one of the chief complaints associated with the neck pain which hinders the routine activity and occupational duties. Four grades were designed to assess the restriction

1 = partial active movement

2 = passive range of full movement

3 = passive range of partial movements

4 = no movement at all (either active or passive)

Follow up:

Once the patients relieved of the pain completely; he/she was asked for follow up fortnightly for 1 month. Same pain assessment technique i.e. VAS was used to assess the pain throughout the follow up duration of 1 month as per protocol. Regular assessment of pain scores and of vital signs are essential for effective and safe pain management

X rays cervical spine:

Both the views i.e. X-ray cervical spine – Antero-posterior (AP) and lateral (Lat) were advised to exclude the suspected cases of cervical trauma, fracture and dislocation.

Data management:

Analysis:

Data were analyzed statistically. Only the patients completed the full duration of the study and followed the protocol were included in statistical analysis. Z test was used to test the statistical strength of the results.

Adverse effects documentation:

No adverse effect or reaction was reported during or after the procedure of massage throughout the whole study period by any patient.

Recurrence:

No recurrence of neck pain was reported by any patient during follow up period.

Documentation:

The consent form and CRF were submitted into the of Preventive and Social Medicine (*Tahaffuzi Wa Samaji Tib*), NIUM, Bangalore, after completion of study.

Results

Total 50 patients were enrolled in this study; Out of which 43 were male and 7 were female. All the patients were from the Bangalore city especially from areas in the vicinity of NIUM hospital. In this study three parameters were taken in to account; neck pain as a main complaint, stiffness of neck and restriction in neck movement as secondary. Pain was assessed by VAS grading from 0-7, NS and RNM were graded arbitrarily from 1-4 according to severity (there grades are given in material and methods). In present study recruited patients were with a varying duration of complaints of neck pain, NS, and RNM. The mean duration of neck pain of 50 patients were 2½ years. Similarly the mean grade of VAS score were 5.8(≈6), the mean grade of neck stiffness were 3.14(≈3) and the mean grade of restriction neck movement were 1.94(≈2) respectively. All the above three symptoms namely neck pain, NS and RNM completely relieved in a mean of 9.32(≈9) massage sittings. Surprisingly it was observed that no patient have reported reoccurrence during follow up.

Discussion

50 patients of either sex were recruited, 25 sittings of massage were scheduled over three months. For the first week sitting schedule was on alternate day and twice a week for subsequent 11 weeks. In the Unani literature, principles of the massage process are not described precisely, so in the present study one motive was to standardize the practice. For this purpose timing and pressure imparted were arbitrarily chosen. The time was kept 20 minutes in each sitting.

According to USM philosophy any condition or factors which lead to sue mizaj barid is one of the leading cause of the neck pain. It may be due to direct exposure to cold (living in cold climate or region), due to consumption of *barid ghiza / barid dawa* (temperamentally cold food stuff /drugs) or due to cold regimens of treatment. Certain life styles or job that require to hold neck and shoulders in one position for long periods produce *buroodat* by accumulating the *barid mawad* locally, similarly the age (elderly people considered as *barid mizaj* than young) and sex (women are considered relatively more *barid mizaj* than men) contribute to *buroodat*.^[8]

Continuous exposure to cold weaken the *quwate ghazia* of neck and it fails to covert the *ghiza* (blood) into *Jauhare uzwi*, rather it is converted into *Balgham kham*. If this process continues for the long time then *Balgham kham* become *ghair tabaie* which produces pain by deviating the *mizaj* of

organs and nerves nurtured with *Ghair tabaie Balgham or Balgham kham*.

Similarly Urban lifestyle (sleeping pattern, stressful life, various job demands, dietary habits) leads to the *sue mizaj barid* of the neck, are becoming the main culprits behind neck pain. These all factors by restricting the normal movement of neck favour the accumulation of *barid Balghami mawad* which is said to be the sole cause of neck pain.^[8-11]

Here restriction in the normal movement of the neck leads to *sue mizaj barid* of the neck. This reduction in movements weakens the *quwa* and *hararate ghareezia* which ultimately hinders *hazme uzwi / arba'h / akheer*; results in production and accumulation of *Balghami / barid mawad* at neck region which causes pain in the neck.

In the present study main emphasis was to evaluate the effects of massage with Dill Seed Oil in alleviating the neck pain and its associated symptoms. Only neck stiffness and restriction of movements with neck pain were considered particularly and other associated symptoms were taken into consideration as supplementary or secondary.

In chronic neck pain management several alternate regimens are in vogue. On Meta analysis it was found that no regimen is better than placebo on long term basis and for acute pain. Some Meta analysis finding reports shows no conclusive benefits of any therapy on neck pain. Some studies have documented

statistically significant but no clinically significant effect of any therapy has been observed in relieving neck pain.^[6,12-18]

Medical practitioners are becoming gradually aware of the potential of massage in successfully treating and in significantly benefiting the patients with pain & associated problems coming to them. In this study it was observed that, the present regimen not only relieved the neck pain but also associated symptoms. Surprisingly it was observed that no patient have reported reoccurrence during a follow up of one month. The present regimen was found highly significant both statistically ($p < 0.0005$) and clinically in relieving neck pain and associated symptoms. It surely have both preventive as well as curative role in management of chronic and acute neck pain.

This study suggests that massage with Dill Seed Oil has clinically important benefits in alleviating the pain for the subject with acute or chronic neck pain. Conducting further consolidating studies on the subject it may be given its due place in the management of acute and chronic neck pain. It seems reasonable that this regimen has clear cut edge over other regimens and would save the patients of neck pain from adverse effects of analgesics and NSAIDs on long as well as on short term basis.

Conclusion and Interpretation

The results of this study revealed an advantage of massage with Dill Seed Oil and

was found highly safe and significant both statistically ($p < 0.0005$) and clinically in relieving neck pain and associated symptoms. It has both preventive as well as curative role in management of chronic and acute neck pains. Further more study on larger sample size may be done to maximize and rationalize the result on large scale.

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Conflict of Interest: Nil

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References

1. Cote P, Cassidy J.D, Carroll L; "The prevalence of neck pain and related disability in Saskatchewan adults-A Survey". *Spine* 1998 **(23)** 15:1689-98.
2. Peloso P.M.J, Gross A, Haines T, Trinh K, Goldsmith C.H. *et al*; "Medicinal and injection therapies for mechanical neck pain- Cochrane Review". The Cochrane Library, the Cochrane Collaboration, John Wiley & Sons Ltd. 2011.
3. Sharan D; "A prevalence study of neck disorder in Bangalore". *Deccan Herald* 2004-2005 **(2)** 3;23-35. www.deepaksharan.com/toicolumn.html.
4. Piedrahita H, Oksa J, Malm C, Rintamaki H; "Health problem related to working in extreme conditions indoor". *International journal of circumpolar Health* 2008 **(67)** 2-3:279-87.
5. Bronfort G, Evans R, Nelson B, Aker P.D, Goldsmith C.H, Vernon H; "A Randomized Clinical Trial of Exercise and Spinal Manipulation for Patients with Chronic Neck Pain". *Spine* 2001 **(26)** 7:788-799.
6. Fundukian L.J; "*Gale encyclopaedia of alternative medicine*". 3rd edi. Gale Cengage Learning; China 2009 1584-86, 1683-1686.
7. Grant S, Aitchison T, Henderson E, Christie J, Zare S, *et al*; "A comparison of the reproducibility and the sensitivity to change of visual analogue scales, Borg scales Lickert scales in normal subjects during sub maximal exercise". *Chest* 1999 **(116)** 1208-1217.
8. Ibn Zohar Abu Marwan Abdul Malik; "*Kitabut Taisir fil Madawa wat Tadbir*". (Urdu translation by CCRUM). New Delhi: CCRUM 1986 79,83-84,88.
9. Ibn Rushd Abdul Walid; "*Kitabul Kulliyat*". (Urdu translation by CCRUM,

- literary research unit, Lucknow). New Delhi. CCRUM 1987 129,263,345-346,350-351.
10. Baghdadi Ibn Hubal; "*Kitab Al-Mukhtarat fit-Tib*". (Urdu translation by CCRUM). Part 2nd. New Delhi: CCRUM; 2004 112,267.
 11. Tabri Raban Abul Hasan Ali bin Sahl; "*Firdausul Hikmat*". (Urdu translation by Hakeem Rasheed Ashraf Nadvi). New Delhi: CCRUM 2010 217-218,405.
 12. Jonsson E; "Summary and conclusion: Back pain neck pain - An evidence based review". SBU- The Swedish Council on Technology Assessment in Health Care. 2000 **(145)** 5-27.
 13. Majoosi Ali Ibn Abbas; "*Kamilus Sanaa'h*". (Urdu translation by Hakeen Ghulam Hasnain Kintoori). Part 1.. New Delhi: CCRUM 2010 **(2)** 217,267.
 14. Ibn Sina Abu Ali; "*Al-Qanoon fit-Tib*". (English translation by department of Islamic studies Jamia Hamdard). Book I. New Delhi: Hamdard University 1983 181.
 15. Baghdadi Ibn Hubal; "*Kitab Al-Mukhtarat fit-Tib*". (Urdu translation by CCRUM). Part 3rd. New Delhi: CCRUM 2004 58-59.
 16. Rand S.S; "Therapeutic modalities in the management of nonspecific neck pain". Physical Medicine and Rehabilitation Clinic of North America 2003 **(14)** 605-627.
 17. Anonymous: "A Guide for Clinicians". Australian Acute Musculoskeletal Pain Guidelines Group. Publishers for the behavioural sciences. Australian Academic Press Pvt. Ltd. [Internet] cited 2012 January 10. Available from: www.australianacademicpress.com. Au
 18. White P, Lewith G, Berman B; "Reviews of acupuncture for chronic neck pain: pitfalls in conducting systemic reviews". *Rheumatology* 2002 **(41)** 1224-1231.