DOI: https://doi.org/10.54393/pjhs.v4i12.1217

PAKISTAN JOURNAL OF HEALTH SCIENCES

https://thejas.com.pk/index.php/pjhs

Volume 4, Issue 12 (December 2023)

Original Article

The Efficacy of Bleeding Acupuncture Point UB-40 in Patients Suffering from Severe Acute Lumbago

Muhammad Waseem Hassan[1], Shahzad Anwar[2], Gull-e-Rukh Shaukat[1*] and Zulfiqar Ali[1]

[1]Iffat Anwar Medical Complex, Lahore, Pakistan
[2]School of Pain and Regenerative Medicine, The University of Lahore, Lahore, Pakistan

ARTICLE INFO

Key Words:
Acupuncture, UB-40, Pain, Disability, Lumbago

How to Cite:
Hassan, M. W., Anwar, S., Shaukat, G. e R., & Ali, Z. (2023). The Efficacy of Bleeding Acupuncture Point UB-40 in Patients Suffering from Severe Acute Lumbago : Efficacy of Bleeding Acupuncture Point UB-40 . *Pakistan Journal of Health Sciences*, 4(12), 110–114. https://doi.org/10.54393/pjhs.v4i12.1217

***Corresponding Author:**
Gull-a-Rukh Shaukat
Iffat Anwar Medical Complex, Lahore, Pakistan
grkhan526@gmail.com

Received Date: 4th December, 2023
Acceptance Date: 24th December, 2023
Published Date; 31st December, 2023

ABSTRACT

Severe acute lumbago, or lower back pain, is a common condition that can cause sudden pain and cramping that lasts for days to weeks. The UB-40 acupuncture point, also known as the Urinary Bladder 40, is a sensitive point that provides excellent relief from spinal pain. **Objective:** To evaluate the efficacy of bleeding acupuncture point UB-40 in patients suffering from severe acute lumbago. **Methods:** An experimental pre-post study was conducted on 40 participants, recruited from the emergency department (ED) of Iffat Anwar Medical Complex Lahore from January 2021 to February 2023. All the patients were treated with bleeding at UB-40 acupuncture point technique. After the treatment, the patients were followed at baseline, 1-week and 1-month intervals. The primary outcomes of the study were to determine the improvement in acute low back pain by using the visual analogue scale (VAS) and physical impairment using Oswestry low back disability index (ODI) scale. **Results:** A total of 40 patients were enrolled in the current study. The mean age of patients was 38.7±12.2. Majority of the patients were females (52%). The mean pain score (VAS) at baseline was 8.00±0.751, which reduced at 4th week with a mean pain score of 2.92±1.28. Moreover, at baseline, patients had severe disability with a mean ODI score of 55.58, but after treatment it gradually decreased to (25.55). **Conclusions:** It was concluded that acupuncture, especially with bleeding at UB-40 point, may provide an immediate significant effect in reducing the acute pain of low back and disability.

INTRODUCTION

Traditional Chinese medicine (TCM) has historically utilized acupuncture as an ancient treatment method [1]. In order to promote the body's natural healing process and reduce discomfort, thin needles are inserted into certain areas on the body. UB-40, sometimes referred to as 'Weizhong' or metaphorically 'the Middle of the Crook', is a typical acupuncture point used to alleviate lower back discomfort. The midpoint of the popliteal crease behind the knee is where it is located [2]. Severe acute lumbago, or lower back pain, is a common condition that can cause sudden pain and cramping that lasts for days to weeks. A difficult diagnosis has implications for daily life. Pain medications, muscle relaxants, therapy and rest are all forms of treatment. In severe cases, surgery or injections may be required. The effect of acupuncture varies depending on the person and condition [3]. In adults under 45 years of age, low back discomfort is a widespread problem that often limits activity. The aim of this study was to assess the characteristics and prevalence of these complaints. Workers in operating rooms reported low back pain in 74% of cases. A significant association (p 0.05) was found between low back pain, education, and marital status. This problem among operating room personnel could be reduced by training on preventive measures [4]. In another study, the prevalence of low back pain among medical students at United Medical and Dental College in Karachi was assessed. The low back pain (LBP) was most common among final year students (33.77%, n=128) and least

DOI: https://doi.org/10.54393/pjhs.v4i12.1217

common in first year students (7.12%, n=27). The United Medical & Dental College in Karachi reported having a high prevalence of low back pain among its medical students [5]. Acupuncture is a secure and efficient method of treating pain, according to the National Institutes of Health and the World Health Organization [6]. They compared the effectiveness of acupuncture with sham or placebo treatments for non-specific low back pain (NSLBP). We discovered statistically significant differences in pain reduction between acupuncture and sham or placebo therapy following the acupuncture session. There were noticeable variations in pain decrease at the follow-up. When compared to sham or placebo acupuncture, there is some evidence of acupuncture's effectiveness in terms of pain relief following treatment for non-specific low back pain (NSLBP) in both acute and chronic cases [7]. The British recommendation from studies in 2000, 90% cure was observed after six weeks. Clinically significant improvements in acute low back pain were observed in primary care settings [8, 9]. Despite suspicion of a musculoligamentous cause, the cause is often unclear. Referral for neurologic problems, ineffective conservative treatment, or unclear diagnosis were also considered. Recurrences are common, and the outlook is good. Expectations are managed by educating patients about prevention and the natural history of events [10]. Some people find that acupuncture relieves their acute lumbago, however it is not always as effective as placebos. The effectiveness of alternative remedies is controversial and needs further study. Integrative medicine integrates traditional and complementary therapies to provide comprehensive treatment that focuses on the person. Effectiveness of treatments depends on personal preferences and existing health status [11]. The UB40 acupuncture point, also known as the Urinary Bladder 40, is a sensitive point that provides excellent relief for most ranges of spinal pain. This spot on both legs can be stimulated to relieve stiffness and lower back discomfort, particularly sciatica and herniated disc symptoms. It is also helpful for reducing leg discomfort, knee stiffness, arthritis in the surrounding areas, muscle spasms, and it can aid in the body's heat release [12]. The aim of this study is to evaluate the efficacy of bleeding acupuncture at UB-40 in the treatment of severe acute lumbago. It supports the function of acupuncture in the treatment of low back pain. Pain intensity and functional limitation are the primary objectives, and patient satisfaction, while quality of life, medication use, and adverse events are the secondary outcomes. Understanding the efficacy of bleeding acupuncture at UB-40 may provide another option for the treatment of lumbago. This study raises patient and healthcare professionals' awareness of the potential benefits that can be attained through proper use of acupuncture. Therefore, the present study was conducted with the aim to evaluate the efficacy of bleeding acupuncture point UB-40 in patients suffering from severe acute lumbago.

METHODS

An experimental pre-post study was conducted on 40 participants, recruited from the emergency department (ED) at Iffat Anwar Medical Complex Lahore from January 2021 to February 2023, after getting ethical approval from the Ethics Review Committee of the School of Pain and Regenerative Medicine, University of Lahore (IRB/SPRM/2020-5). Sample size was calculated by taking 80% of test and 10% margin of error and taking expected prevalence of lumbago as 72.9%. Participants were recruited by consecutive sampling technique. All the participants (patients) received written information and thorough explanation regarding the purpose of the study, procedures, benefits, potential risks, and long-term outcomes of the study. The patients provided their informed written consent before proceeding with the treatment. All the study-enrolled patients aged between 15-50 years, both males and females. They were diagnosed with severe & acute lumber spasm (lumbago) and had a history of pain for seven days. Patients with pregnancy status, serious comorbidities, severe neurological defects, uncontrolled diabetes, and those who did not reliably communicate with the investigator were excluded from this study. After completion of the criteria of patients for this study including research design, age group, duration of symptoms and limitation of movement, the patients were ready for the procedure. The clinical trial protocol of bleeding acupuncture point UB-40 was approved by the Institute Review Board (IRB) of Iffat Anwar Medical Complex. The procedure was done in the outpatient department (OPD) setup. After proper cleaning of the back of the knee area with alcohol swabs, the UB-40 was localized. The UB-40 was acutely tender in all selected patients and there was an engorged vein in the vicinity of UB-40 (i.e., 1-3mm). These veins were punctured using the sterile disposable needle 25 g. Then the area was squeezed to draw 0.5 – 0.8 ml of blood from there. After extracting blood, the area was swelled, and alcohol aseptic strips were applied for 24 hours. All the patients were observed for 5 to 10 minutes. If any untoward effects were there the VAS Pain scores were monitored post-procedurally. After the treatment, the patients were followed at baseline, 1-week and 1-month intervals. The primary outcomes of the study were to determine the improvement in acute low back pain by using the visual analogue scale (VAS) and physical impairment by using the Oswestry low back disability index (ODI) scale. The ODI questionnaire consisted of 60 items, designed specifically for the measurement of low back disability through scores. (A score of <5 indicates no

DOI: https://doi.org/10.54393/pjhs.v4i12.1217

disability, 05-14 (mild disability), 15-24 (moderate disability), 25-34 (severe disability) and 35-50 (completely disabled). The data were entered and analyzed by using SPSS 25.0. The quantitative variables were presented in the form of Mean SD and qualitative by using frequency and percentages. The pre-post difference in the VAS and ODI scores was compared by the Analysis of Variance (ANOVA) test. P-values lower than 0.05 were considered significant.

RESULTS

A total of 40 patients were enrolled in the current study. The mean age of patients was 38.7±12.2. The majority of the patients were females (52%). In Table 1, Figure 1 and 2, the severity of acute low back pain was evaluated by the comparison of pain scores and ODIs at baseline and at 4 weeks' follow-up.

Table 1: Comparison of mean change in different time points

Variables	Time	Mean	SD	95% Confidence Interval for Mean		p-value
				Lower Bound	Upper Bound	
Pain score (VAS)	Baseline	8.00	0.751	7.76	8.24	0.000
	15 Minutes	5.00	1.132	4.64	5.36	
	60 Minutes	2.35	1.075	2.01	2.69	
	1st Week	3.68	1.248	3.28	4.07	
	4th Week	2.92	1.289	2.51	3.34	
	Total	4.39	2.299	4.06	4.71	
ODI	Baseline	55.85	13.970	51.38	60.32	0.000
	1st Week	37.15	7.91	34.62	39.68	
	4th Week	25.55	5.74	23.71	27.39	
	Total	39.52	15.89	36.64	42.39	

One-way ANOVA, p-value < 0.05***

Visual analogue scale (VAS), Oswestry disability index (ODI)

Pain scores of patients were assessed at baseline, 15 Minutes, 60 minutes and after treatment at 1st and 4th week. However, ODIs were assessed at baseline, and after treatment 1st and 4th week. Results showed a significant difference in mean scores among patients before and after treatment follow-up. The mean pain score (VAS) at baseline was 8.00±0.751, which is reduced at 4th week with a mean pain score of 2.92±1.28. At baseline, patients had severe low back pain but after treatment, it subsided gradually (Figure 1).

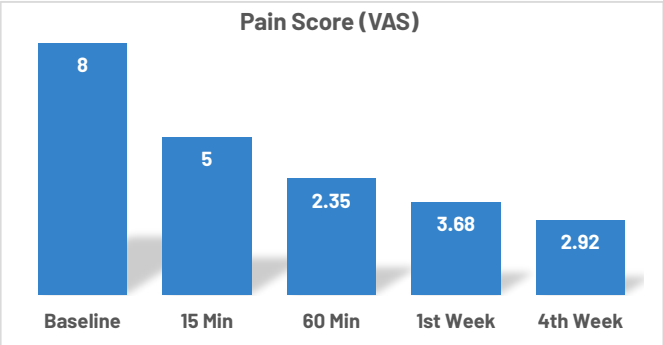

Figure 1: Pain Score (VAS)

The Oswestry disability index difference from baseline to 4 weeks is shown in Figure 2. The patients showed the effect of disability reduction after receiving acupuncture therapy with bleeding of the UB-40 acupuncture point. At baseline, patients had severe disability with a mean ODI score of 55.58 but after treatment, it gradually decreased. At 4 weeks' follow-up, the mean ODI score among participants was 25.55, which shows that bleeding at Acupuncture point UB-40 has a significant effect in patients with severe acute lumbago. Patients showed a long-term effect in terms of pain reduction and no disability was seen after acupuncture therapy at UB-40 acupuncture point. At the beginning of treatment, patients had acute severe back pain and disability, which gradually reduced post-treatment (Figure 2).

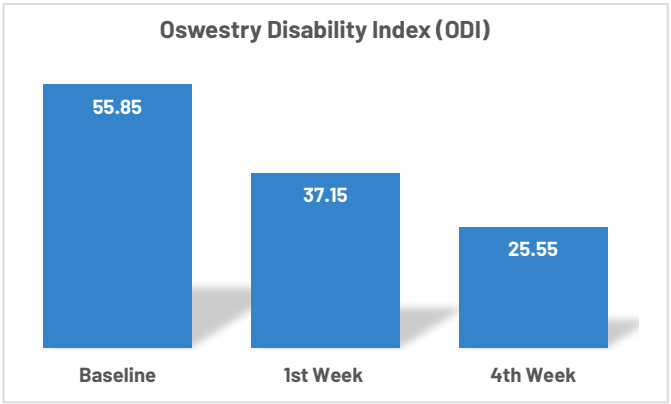

Figure 2: Oswestry Disability Index Score

DISCUSSION

Acupuncture techniques were not limited; both Western medical acupuncture (such as dry needling) and Traditional Chinese Medicine (TCM) acupuncture that followed classical energetic philosophical theory were acceptable [11]. Acupuncture is the most frequently used area of Traditional Chinese Medicine. It entails inserting tiny acupuncture needles through the skin at specific locations on the body. Acupuncturists also employ additional complementary techniques, including herbal medicines, acupressure, cupping, Chinese Tuina massage, moxibustion, electro stimulation, and more [12]. The patients recruited for our study were from the emergency department (ED) at Iffat Anwar Medical Complex, Lahore. The results of our study are the average rate of these variables; Age, Pain Baseline (9-7 min.), Pain (15 min.) 7-4, Pain (60 min.) 4-1, Pain (1 Week), Pain (4 Week till 3 months) are 38.050 ± 12.21, 8.0 ± .751, 5.0 ± 1.132, 2.35 ± 1.08, 3.67 ± 1.24, 2.92 ± 1.28. On further analysis, the results of Visual Analogue Scale (VAS) at pain level (baseline, 15 minutes, 60 min., 1 week, 4 weeks till 3 months) and Oswestry Disability Index (ODI) at different scores (no disability, mild, moderate, severe, completely) are statistically significant

DOI: https://doi.org/10.54393/pjhs.v4i12.1217

(.000<0.05 level of significance or 95% CI) in Acute low back pain patients. According to the previous research study, the emergency department (ED) at Iffat Anwar Medical Complex Lahore commonly sees patients with acute low back pain (ALBP). In this study, the efficacy and safety of acupuncture as a treatment for acute low back pain in the emergency department was evaluated. The experimental group, which received acupuncture for 15 minutes, exhibited a significant reduction in discomfort levels according to the Visual Analog Scale (VAS) (<0.001). However, there was no notable disparity in the heart rate variability (HRV) between the two groups. Importantly, no adverse events were reported. Acupuncture offers a prompt and safe pain relief option for individuals with acute lower back pain (ALBP) [13]. In the comparative study with other results, the researchers have discussed that the Visual Analogue Scale (VAS) is frequently employed in investigations of low back pain because compared to other patient-reported outcome measures like the short pain inventory, its measurement capabilities are superior. Depending on the study, the minimal clinically significant difference used in Visual Analogue Scale studies (0-100m) series between 14 to 20mm [14-16]. A representative sample of individuals with acute low back pain was selected for another study from the primary care environment, and it sought to offer a thorough profile of these patients. Finding out if patient traits are related to pain severity or impairment during the initial session was the secondary goal. 75.7% of patients said they had previously had low back pain, and 76.7% said the current episode started suddenly. Only 14.3% of participants reported compensable back discomfort. The connection between pain severity and disability was significantly correlated with present low back pain history, psychological features, and pain intensity (P < 0.01). The study concluded that the profile only contained a limited percentage of individuals with compensable low back pain in cases of acute low back pain in primary care. At the initial appointment, psychological and other patient variables were linked to the degree of pain and level of impairment [17]. The effect size of the association (r) between the Oswestry disability index-U and the Visual Analogue Scale for both pain and disability was sensible (r = 0.49 and 0.51 respectively). It was discovered that the effect magnitude of the connection between the ODI-U and VAS pain (r = 0.49) was comparable earlier research [18]. In another study, the researchers have showed substantial correlation between the visual analogue scale pain score and the Oswestry disability index (ODI), which support the idea that these two measures can be used simultaneously to confirm one another's findings and learn more about several types of pain. A recent meta-analysis's key finding was that there was "little correlation between the Visual Analogue Scale pain score and Oswestry Disability Index," hence additional research was advised to further examine the relationship between these two measurements [19]. The Oswestry Disability Index purposefully avoided discussing the psychological effects of acute or persistent pain in favor of physical exercises. The Oswestry Impairment Index was used to assess back-related impairment. Studies of low back pain frequently use the ODI, a condition-specific measure of deficiency that has proven validity and reliability in this setting [20].

CONCLUSIONS

Based on the investigation in this study, we conclude that acupuncture, especially with bleeding at point UB-40, may provide an immediate, significant effect in reducing the acute pain of the lower back. The outcomes of the study show through Visual Analogue Scales (VAS), which are pain level scales, and Oswestry Disability Scale (ODI), which measured disability scores, that conducting bleeding treatment at the acupuncture point UB-40 had a significant pain-lowering effect on acute low back patients.

Authors Contribution

Conceptualization: MWH
Methodology: MWH, SA
Formal analysis: GARS
Writing-review and editing: SA
All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

Source of Funding

All authors have read and agreed to the published version of the manuscript.

REFERENCES

[1] Li L, Yao H, Wang J, Li Y, Wang Q. The role of Chi-nese medicine in health maintenance and disease prevention: application of constitution theory. The American Journal of Chinese Medicine. 2019 Apr; 47(03): 495-506. doi: 10.1142/S0192415X19500253.

[2] Yuan W. Self Acupressure for Low Back Pain. Acupu - ncture Ottawa TCM tcmworks; 2019. [Last cited: 24th Aug 2023]. Available at: https://tcmworks.com /self-acupressure-for-low-back-pain/.

[3] MedlinePlus Medical Encyclopedia. Low back pain - acute. [Last cited: 24th Aug 2023]. Available at: htt ps://medlineplus.gov/ency/article/007425.htm#:~:t ext=Acute%20low%20back%20pain%20is.

[4] Fayzi R, Karimi A, Fereidouni A, Salavatian A, Imani B, Tavakkol R. Prevalence and Clinical Characteristics of Low Back Pain among Operating Room Personnel:

DOI: https://doi.org/10.54393/pjhs.v4i12.1217

A Cross-Sectional Study in South of Iran. Frontiers in Surgery. 2022 May; 9: 841339. doi: 10.3389/fsurg.2022.841339.

[5] Pal S, Ali K, Khaqan MB, Gul H, Javed S. Prevalence of Low Back Pain in Medical Students of United Medical and Dental College Karachi. Journal of Pakistan Orthopaedic Association. 2022 Jun; 34(02): 61-4.

[6] Tsai SL, Fox LM, Murakami M, Tsung JW. Auricular acu-puncture in emergency department treatment of acute pain. Annals of Emergency Medicine. 2016 Nov; 68(5): 583-5. doi: 10.1016/j.annemergmed.2016.05.006.

[7] Xiang Y, He JY, Tian HH, Cao BY, Li R. Evidence of efficacy of acupuncture in the management of low back pain: a systematic review and meta-analysis of randomised placebo-or sham-controlled trials. Acupuncture in Medicine. 2020 Feb; 38(1): 15-24. doi: 10.1136/acupmed-2017-011445.

[8] Waddell G and Burton AK. Occupational health guidelines for the management of low back pain at work: evidence review. Occupational Medicine. 2001 Mar; 51(2): 124-35. doi: 10.1093/occmed/51.2.124.

[9] Atlas SJ and Deyo RA. Evaluating and managing acute low back pain in the primary care setting. Journal of General Internal Medicine. 2001 Feb; 16: 120-31. doi: 10.1111/j.1525-1497.2001.91141.x.

[10] Henschke N, Maher CG, Refshauge KM, Herbert RD, Cumming RG, Bleasel J, et al. Characteristics of patients with acute low back pain presenting to primary care in Australia. The Clinical Journal of Pain. 2009 Jan; 25(1): 5-11. doi: 10.1097/AJP.0b013e3181817a8d.

[11] Manheimer E, White A, Berman B, Forys K, Ernst E. Meta-analysis: acupuncture for low back pain. Annals of Internal Medicine. 2005 Apr; 142(8): 651-63. doi: 10.7326/0003-4819-142-8-200504190-00014.

[12] Mindbodygreen. Acupressure Techniques to Relieve Lower Back Pain. 2018. [Last cited: 24th Aug 2023]. Available at: https://www.mindbodygreen.com/articles/acupressure-for-lower-back-pain.

[13] DeVine J, Norvell DC, Ecker E, Fourney DR, Vaccaro A, Wang J, et al. Evaluating the correlation and responsiveness of patient-reported pain with function and quality-of-life outcomes after spine surgery. Spine. 2011 Oct; 36: S69-74. doi: 10.1097/BRS.0b013e31822ef6de.

[14] Fairbank JC and Pynsent PB. The Oswestry disability index. Spine. 2000 Nov; 25(22): 2940-53. doi: 10.1097/00007632-200011150-00017.

[15] Fairbank JC. Oswestry disability index. Journal of Neurosurgery: Spine. 2014 Feb; 20(2): 239-42. doi: 10.3171/2013.7.SPINE13288.

[16] Henschke N, Maher CG, Refshauge KM, Herbert RD, Cumming RG, Bleasel J, et al. Prognosis in patients with recent onset low back pain in Australian primary care: inception cohort study. BMJ. 2008 Jul; 337: a171. doi: 10.1136/bmj.a171.

[17] Costa LD, Maher CG, Hancock MJ, McAuley JH, Herbert RD, Costa LO. The prognosis of acute and persistent low-back pain: a meta-analysis. CMAJ. 2012 Aug; 184(11): E613-24. doi: 10.1503/cmaj.111271.

[18] da Silva T, Mills K, Brown BT, Pocovi N, de Campos T, Maher C, et al. Recurrence of low back pain is common: a prospective inception cohort study. Journal of Physiotherapy. 2019 Jul; 65(3): 159-65. doi: 10.1016/j.jphys.2019.04.010.

[19] Macedo LG, Maher CG, Latimer J, McAuley JH, Hodges PW, Rogers WT. Nature and determinants of the course of chronic low back pain over a 12-month period: a cluster analysis. Physical Therapy. 2014 Feb; 94(2): 210-21. doi: 10.2522/ptj.20120416.

[20] Ostelo RW and de Vet HC. Clinically important outcomes in low back pain. Best Practice & Research Clinical Rheumatology. 2005 Aug; 19(4): 593-607. doi: 10.1016/j.berh.2005.03.003.