

## CASE REPORT

# Is single-point acupuncture effective in treating acute low back pain?

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**Abstract**

Acupuncture is often used for acute and chronic low back pain; however, its efficacy is controversial, primarily for acute low back pain (ALBP). An acupuncture point, GV-26, could be used as an analgesic acupoint to treat acute low back pain. Our study suggests that single acupuncture could relieve ALBP within a short time without any adverse events. Acupuncture can be integrated with allopathic (western) medicine and used in the hospital's emergency department to treat acute painful conditions.

**KEYWORDS**

acupuncture, acute pain, emergency, low back pain, single acupuncture, traditional Chinese medicine

## 1 | BACKGROUND

Low back pain (LBP) affects nearly everyone at some point in their lives, and it is the primary cause of disability globally.<sup>1</sup> ALBP is defined as back pain that lasts for <4 weeks and affects the spine and adjacent structures without a known cause. This prevalent symptom affects people of all ages and produces substantial lower back discomfort, limited spinal activity, and avoidance; it could be the onset of the transformation from acute to chronic LBP and to avoid the persistence of pain, disability, medical costs, and socioeconomic stress beyond the acute period, ALBP patients require adequate treatment.

NSAIDs and myorelaxants are often used in the early phases of ALBP treatment for symptomatic alleviation.<sup>1-3</sup> In acute situations, however, the effective rate is limited due to the former agent's delayed onset of action and modest analgesic strength. Many researchers also feel that when NSAIDs are recommended to patients, they are a double-edged sword with various risks and that the risk may outweigh the benefit, which has yet to be satisfactorily established.<sup>1-4</sup> Furthermore, according to some studies, pharmaceutical treatment for any painful ailment has long-term implications that may affect a person's prognosis and health. NSAIDs have been linked to gastrointestinal bleeding, myocardial infarction, stroke, thrombotic

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events, nephrotic syndrome, chronic kidney disease, and other health problems.<sup>3,4</sup> As a result, despite the availability of a wide range of traditional therapy choices for ALBP, patients are frequently dissatisfied with their current pharmacological treatment and seek non-pharmacological treatment to relieve their symptoms.

Acupuncture is one of the most widely employed alternative medicines globally, and it is most commonly used to relieve pain. Acupuncture is the insertion of a solid needle into a specific point/part of the human body to treat, prevent, or maintain health. The Governing Vessel (GV) and the hand/foot hanging meridian cross at acupuncture point GV 26 (Figure 1), according to traditional Chinese medicine, and this acupoint has long been used in clinical practice to treat acute neurological diseases with acute symptoms, such as acute low back strain.<sup>5,6</sup> However, acupuncture for acute low back pain with single acupuncture is very limited and has not been studied widely. As per our knowledge, our study would be the first case report to use a single acupuncture point (GV-26) to treat ALBP. This study intends to describe the benefits of using a single acupuncture point in case of emergency health conditions, particularly acute low back pain, so that hospitals could give better care to the patients by providing integrative medicine with minimum adverse events.

## 2 | CASE PRESENTATION

A 22-year-old woman had a sudden onset of pain over the right lower back for two days. Her vital signs were normal, and she reported pain intensity as eight on the 10-point numeric pain rating. Her physical examination revealed a lumbar paraspinal muscle spasm, with a limited range of motion of the back and hips. She also reported that ibuprofen (400 mg) was ineffective, so she sought acupuncture to relieve her discomfort. After 40 min of acupuncture at the GV-26 acupoint, the patient reported pain at a 3 of 10 intensity. The patient could bend, touch her toes, and walk without assistance. The patient reported a pain score of 1 out of 10 on a 5-day phone follow-up without using any oral analgesic medicine.

## 3 | DISCUSSION

Recently, as complementary treatment modalities provide beneficial effects with minimum adverse events, an increasing number of patients are seeking complementary therapies in many disorders.<sup>7-9</sup> According to the National Institute of Health and the World Health Organization, acupuncture is a safe and effective

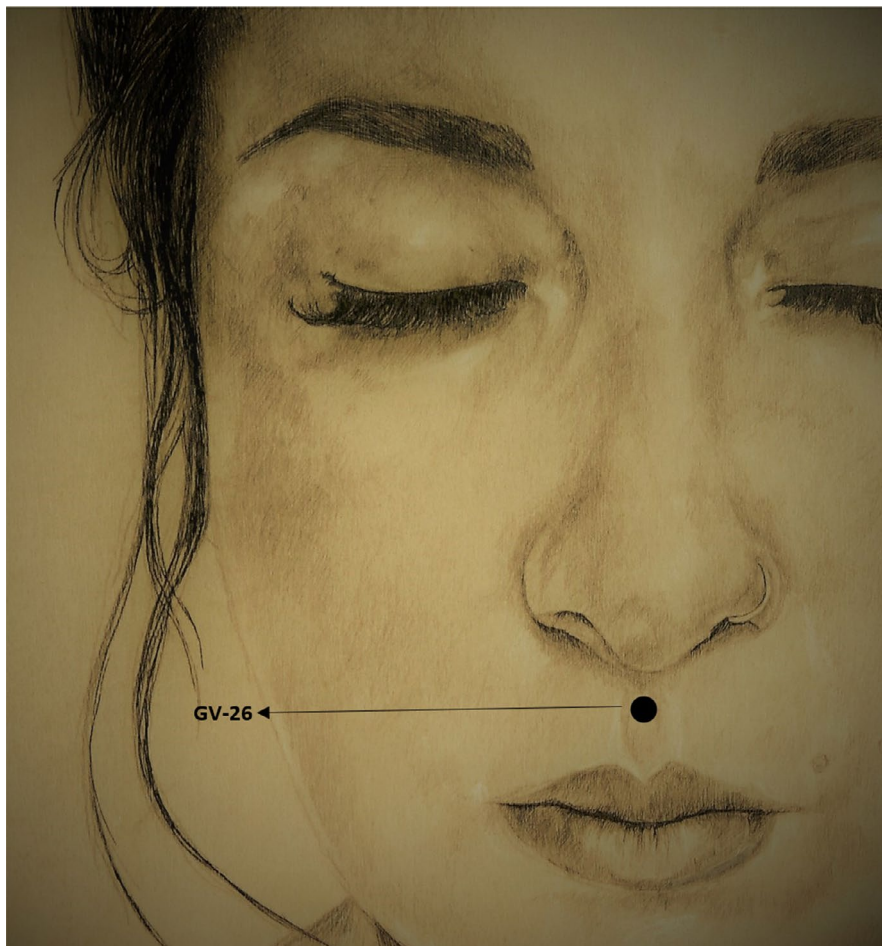


FIGURE 1 GV-26 acupuncture point location

treatment for pain.<sup>10</sup> Our study employed a single acupuncture needling technique to mitigate acute low back pain in one session. We employed the following acupuncture method in our study: a quick oblique insertion of acupuncture needle toward the direction of the nasal septum, the needle was rotated half round; then bird pecking technique was employed until moist eyes (tears). As per our knowledge, this case report is the first in the world to evaluate the immediate effect of a single effective analgesic acupoint, GV-26, in the treatment of ALBP.

We noticed that the patient's pain intensity was significantly reduced after just one 40-min acupuncture session. It could be due to the acupuncturist's intensive manipulation of the acupoint to achieve a DeQi or vital energy effect. The deformation of connective tissue alters the structure of fibroblasts, and micro-injury generated by puncturing the skin with an acupuncture needle results in the inactivation of the inhibitory brainstem system and the release of ATP.<sup>11–16</sup> Adenosine and other purines are formed when ATP is broken down further. Antinociception agents such as ATP and adenosine suppress pain signals by binding to purinergic receptors. As a result, DeQi's arrival could have been critical in achieving an immediate analgesic impact in a short period of time.<sup>14–16</sup> Later, when the DeQi experience fades from the body, there will be a slow transit of impulses via afferent fiber. Thus, all these mechanisms might have resulted in a significant reduction in pain severity. However, the reason behind it is still in a nascent stage.

Even previously done studies also support our result, in which, with minimum or without any adverse events reported, acupuncture has shown outstanding results by getting immediate results in acutely painful conditions.<sup>17–19</sup> Nowadays, many clinical studies of acupuncture are being registered and conducted for immediate effect and have been found to have a better result than sham acupuncture and pharmacological intervention. A recently published article by Grissa et al.; in the American Journal of Emergency medicine argues that acupuncture treatment in acute or emergency conditions in the hospital is better than the conventional treatment method of pain, that is, morphine.<sup>20</sup> In this research, they have given acupuncture for many acute painful conditions, including acute back pain, and reported that acupuncture outweighs the morphine injection, mainly given on painful acute conditions in an emergency setting of the hospital.

However, many adverse events have been reported in acupuncture intervention for many diseases though none was reported in our case. We believe that if well-trained and experienced acupuncture physicians employ acupuncture to the patients; then, minimum adverse events

can be seen. We believe that adverse events in acupuncture result from a lack of proper training, knowledge, and experience. So, to avoid such events, acupuncture practice should be well regulated within the government regulation.

## 4 | CONCLUSION

Especially in today's progressively complicated and poly-medicated patients, to avoid harmful drug responses/reactions, acupuncture should be adequately evaluated in large-scale clinical studies and incorporated in many hospitals to treat acute painful conditions such as acute low back pain.

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## CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

## AUTHOR CONTRIBUTIONS

All Authors involved in Conception and design, administrative support, provision of study materials, collection, assembly, and interpretation of data, manuscript writing, revision, and final approval of the manuscript.

## ETHICAL APPROVAL

Ethics approval is not required, and written informed consent was obtained from the patients for participation in this study.

## CONSENT

Written informed consent was obtained from the patients for the publication of this study.

## DATA AVAILABILITY STATEMENT

Not available.

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