

A Review of Classical Literatures on Acupuncture Points Used for the Treatment of Low Back Pain

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Numerous patients visit Korean medical institutions for low back pain. Various acupuncture points have been suggested to treat low back pain; however, selecting the appropriate acupuncture points is challenging because their individual importance is unknown. Therefore, in this study, we aimed to investigate the effects of different acupuncture points in the treatment of low back pain. We reviewed 14 classical literatures that recorded acupuncture prescription for low back pain. We investigated the frequency of acupuncture point usage, as well as their meridians, dermatomes, and combinations. Only BL, GV, and GB were used as local acupuncture points. The BL was the most frequently used acupuncture point in all dynasties. Over time, the use of distal rather than local acupuncture points increased. The distal acupuncture points that corresponded to the L4-S1 dermatome were most used. The most frequently used acupuncture points were BL23, BL40, BL60, GV26, GB34, and ST36. When low back pain is accompanied by lower extremity symptoms, the frequency of the use of acupuncture points at the L4, L5, and S1 levels on the dermatome increased, whereas those at the L2 and S3 levels decreased. BL31-BL34, BL28-GV02, and GV26-BL40 were mainly used in combination.

Keywords: Acupuncture points; Low back pain; Review

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INTRODUCTION

Low back pain (LBP) is characterized by pain and discomfort localized between the costal margin and inferior gluteal folds, with or without referred leg pain [1]. LBP is among the most common diseases in Korea, affecting 15.8% of the population, with a lifetime prevalence rate of 63.5% [2,3]. The cause of LBP is difficult to diagnose; however, the intervertebral disc, lumbar facet joint, and sacroiliac joint have been suggested to be the main causes, with the involvement of the L4, L5, and S1 (particularly L5 and S1) [4-6]. LBP accounted for 21.9% of the total Korean Medicine medical expenses in 2021, and many patients visit Korean medical institutions because of LBP; acupuncture has been the most commonly used treatment among the Korean medical treatments [7,8].

Each acupuncture point (acupoint) has various indications, and each disease or symptom is treated using a combination of various acupoints. Therefore, selecting the appropriate acupoints is an important aspect of acupuncture treatment [9]. Acupoints are selected based on the following three classifications: 1) local acupoints that are close to the diseased area, 2) distal acupoints that are far from the diseased area but connected by meridians, and 3) acupoints that have been traditionally used depending on the symptoms. Among these, most distal acupoints are used along the meridians, although distal acupoints according to the nerve segments are also used [10]. Treating a disease using only one acupoint is possible; however, the disease can be more effectively treated using a combination of two or more acupoints. The acupoints are combined based on their locations, meridians, indications, and characteristics [11,12].

Currently, numerous acupoints are used clinically to treat LBP, and further research on acupuncture treatment for LBP is ongoing. However, because the acupoints used in each study differ and only a few studies on each acupoint have been conducted, it is difficult to select acupoints for LBP treatment [13,14]. Most existing classical literature studies on LBP treatment have investigated the causes, symptoms, meridians, and acupoints based only on traditional oriental medicine theory. However, the analyses of the changes in acupoint use over time is lacking [15-18]. Therefore, in the present study, we divided the acupoints for LBP treatment in chronological order based on the date of publication of the literatures mentioning them. Then, we compared and analyzed the time of first use, period of use, and frequency of use for each acupoint to identify the most important acupoints for LBP treatment. Acupoints that are the oldest, have the longest period of use, and have the greatest frequency of use are considered the most important acupuncture points. Therefore, the present study aimed to unveil the importance of acupoints by evaluating the changes in acupoints and meridians over time.

MATERIALS AND METHODS

1. Participants

To investigate the acupoints used for LBP treatment, we reviewed the following 14 classical Chinese literatures mentioned in *Zhen Jiu Chu Fang Da Ci Dian* [19], which described acupuncture prescriptions for various diseases: (1) *Qian Jin Tao Fang*, (2) *Zhen Ji Zi Sheng Jing*, (3) *Bian Que Shen Ying Zhen Jiu Yu Long Jing*, (4) *Pu Ji Fang*, (5) *Zhen Jiu Da Quan*, (6) *Yi Xue Gang Mu*, (7) *Mi Chun Yang Jing Zhai Zhen Jiu Quan Shu*, (8) *Zhen Jiu Da Cheng*, (9) *Lei Jing Tu Yi*, (10) *Zhen Jiu Yi Xue*, (11) *Zhen Jiu Feng Yuan*, (12) *Zhen Jiu Shen Shu*, (13) *Shen Jiu Jing Lun*, and (14) *Zhen Jiu Ji Cheng*.

2. Methods

With reference to Zhong Guo Zhen Jiu Wen Xian Ti Yao [20] and Han Ying Shang Jie Zhong Yi Da Ci Dian [21], the literatures are listed in chronological order based on the date of publication. Subsequently, the symptoms, acupoints, and number of acupoints used were analyzed, including duplicates. The acupoints between the costal margin and inferior gluteal folds were categorized as local acupoints, whereas those below the elbow or knee joint, or above the trunk were categorized as distal acupoints. The local and distal acupoints were analyzed according to the meridians and frequency of use. When treating internal diseases, the acupoints are selected according to the spinal segment, such as the Beishu point [22]. To determine whether they were selected according to the spinal cord segment and which spinal cord segment was most frequently selected, the distal acupoints were also classified according to the dermatome. To determine the combination of frequently used acupoints, we analyzed the frequency with which a particular acupoint was used with another acupoint in acupuncture prescriptions.

All acupuncture prescriptions were compared with their original text records; if there were differences, they were analyzed using the original text. The acupoints were checked according to Oh's [23] study. If only one acupoint simply listed various symptoms, it was excluded, as it was considered a description of the acupoint and not an acupuncture prescription for treating LBP. Acupuncture and moxibustion medicine [24] were used as reference for the location of each acupoint, and Chapple's [25] study was utilized as reference for the dermatome.

RESULTS

1. Chronological analysis of meridians and acupoints used in the low back pain treatment

The numbers of meridians used in LBP treatment are presented in Tables 1 and 2. The 14 classical studies can be divided into different groups based on the time of their publication, such as during the Tang, Song, Yuan, Ming, and Qing dynasties. The local acupoints, including BL (n = 126), GV (n = 28), and GB (n = 14), which all belong to the Yang meridian, were used 168 times. BL was used most frequently in all dynasties, except in the Yuan dynasty (n = 1). The distal acupoints, including the Yang (n = 216) and Yin (n = 55) meridians, were used 271 times. Among the 12 meridians, excluding CV and GV, the Foot Yang meridian was used most frequently (n = 174), followed by the Foot Yin (n = 44), Hand Yang (n = 20), and Hand Yin (n = 8) meridians. Among the meridians, thr BL was most frequently used (n = 126), followed by GB (n = 25), ST (n = 23), and then GV, LR, K1, SP, L1, TE, LU, CV, S1, and HT. The BL was used most frequently in all dynasties (n = 6, 5, 3, 70, and 42 in the Tang, Song, Yuan, Ming, and Qing dynasties, repectively).

The number of local and distal acupoints in chronological order is presented in Tables 3 and 4. Among the acupoints used from the Tang and Song dynasties to the Qing dynasty, the most frequently used acupoints (those used > 10 times) included BL23, GV02, BL28, BL29, GB30, BL30, BL32, and GB34. Among the acupoints used from the Yuan and Ming dynasties to the Qing dynasty, BL40, BL60, and GV26 were the most frequently used acupoints. ST36 was also used more than 10 times from

Table 1. Number of meridians used for low back pain treatment (local acupoints)

Meridian	Number					
	Tang dynasty	Song dynasty	Yuan dynasty	Ming dynasty	Qing dynasty	Total
Bladder	10	19	1	66	30	126
Governing vessel	2	2	0	16	8	28
Gallbladder	1	3	1	8	1	14
Total	13	24	2	90	39	168

Table 2. Number of meridians used for low back pain treatment (distal acupoints)

N A - widie w	Number					
weridian	Tang dynasty	Song dynasty	Yuan dynasty	Ming dynasty	Qing dynasty	Total
Bladder	6	5	3	70	42	126
Gallbladder	1	4	0	16	4	25
Stomach	0	2	2	18	1	23
Governing vessel	0	0	2	11	9	22
Liver	3	3	0	7	3	16
Kidney	0	0	0	10	5	15
Spleen	2	2	0	7	2	13
Large intestine	0	0	1	8	1	10
Triple energizer	0	0	0	7	1	8
Lung	0	0	0	4	3	7
Conception vessel	0	0	0	2	1	3
Small intestine	0	0	0	1	1	2
Heart	0	0	0	0	1	1
Pericardium	0	0	0	0	0	0
Total	12	16	8	161	74	271

A		Dynasty				
Acupoint	Tang	Song	Yuan	Ming	Qing	Number
BL23	0	1	1	22	17	41
GV02	2	2	0	14	5	23
BL28	2	3	0	4	2	11
BL29	1	3	0	5	2	11
GB30	0	2	1	7	1	11
BL30	1	1	0	4	4	10
BL32	1	2	0	6	1	10
BL31	1	2	0	6	0	9
BL34	1	1	0	6	1	9
BL27	2	2	0	3	0	7
BL52	1	2	0	3	1	7
GV04	0	0	0	2	3	5
BL33	0	0	0	4	0	4
BL25	0	0	0	1	2	3
GB29	1	1	0	1	0	3
BL24	0	1	0	1	0	2
BL26	0	1	0	0	0	1
BL54	0	0	0	1	0	1
Total	13	24	2	90	39	168

Table 3. Number of acupoints used for low back pain (local acupoints)

the Yuan dynasty to the Ming dynasty.

2. Analysis of the number and dermatome of acupoints used for low back pain treatment

The number of acupoints used for LBP treatment is presented in Tables 5 and 6. Regarding the local acupoints, BL23 was most frequently used (n = 41), followed by GV02 (n = 23), and then BL28, BL29, and GB30 (n = 11). Regarding the distal acupoints, BL40 was most frequently used (n = 62), followed by BL60 (n = 27), GV26 (n = 22), GB34 (n = 11), and ST36 (n = 10).

The ratios of the dermatomes used for LBP treatment are shown in Fig. 1. Regarding the local acupoints, those at the L2 level were most frequently used (33.6%), followed by those at the S3 (27.4%) and S1 (26.2%) levels. Regarding the distal acupoints, those at the S1 level were most frequently used (39.3%), followed by those at the S2 (15.4%), L5 (11.9%), CN5 (11%), and L4 (8.6%) levels.

3. Analysis of acupoints and affiliated meridians used in the treatment of low back pain accompanied by lower extremity symptoms

Regarding the acupuncture prescriptions for LBP, the number of acupoints used for treating LBP accompanied by lower extremity symptoms is presented in Table 7. Altogether, 53 acupoints were used, with 49 and 4 acupoints belonging to the Yang and Yin meridians, respectively. Among the Yang meridians, the Foot Yang meridians, including GB (n = 18), BL (n = 16), and ST (n = 10), were used 44 times. SP, Ll, GV, and LU were used less than three times. HT, Sl, Kl, PC, TE, LR, and CV were not used. Regarding the acupoints, GB30 and BL40 were the most frequently used (n = 6 each), followed by GB34 and ST39 (n = 5 each).

4. Analysis of the dermatomes of acupoints used for treating low back pain accompanied by lower extremity symptoms

The proportions of dermatomes used in acupuncture prescriptions for total LBP, with or without lower extremity symptoms, and LBP accompanied by lower extremity symptoms are shown in Fig. 2. The S, L, T, and C levels accounted for 50.7%, 24.6%, 12.1%, and 7.1% of acupoints, respectively. The S1 level had the highest proportion of acupoints (28.6%), followed by S2 (12.2%), S3 (8.6%), L5 (6.6%), L4 (6.2%), and CN5 (5.6%) levels.

For LBP with lower extremity symptoms, the S1 level accounted for the highest proportion of acupoints (39.6%), followed by L5 (18.9%), S2 (12.3%), and L4 (10.4%). Compared with the total LBP prescriptions, the

Table 4. Number of acupoints used for low back pain treatment (dista	al acupoints)
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Agungint		Dynasty				
Acupoint	Tang	Song	Yuan	Ming	Qing	- Number
BL40	0	0	3	34	25	62
BL60	0	0	0	16	11	27
GV26	0	0	2	11	9	22
GB34	0	2	0	6	3	11
ST36	0	0	2	8	0	10
BL62	1	1	0	5	1	8
GB38	1	2	0	5	0	8
LR02	1	1	0	5	1	8
BL65	1	0	0	3	2	6
LI04	0	0	0	5	1	6
LU05	0	0	0	3	3	6
BL39	1	2	0	2	0	5
BL56	2	1	0	2	0	5
ST39	0	2	0	3	0	5
LR03	1	1	0	1	2	5
SP09	1	1	0	3	0	5
BL57	0	0	0	3	1	4
BL64	0	1	0	2	1	4
KI07	0	0	0	3	1	4
ST09	0	0	0	4	0	4
SP03	1	1	0	2	0	4
SP06	0	0	0	2	2	4
TE21	0	0	0	4	0	4
GB20	0	0	0	3	0	3
LR05	1	1	0	1	0	3
KI02	0	0	0	2	1	3
KI03	0	0	0	1	2	3
KI04	0	0	0	2	1	3
LI11	0	0	1	2	0	3
TE06	0	0	0	2	- 1	3
CV24	0	0	0	2	1	3
BL58	1	0	0	1	0	2
BL67	0	0	0	1	1	2
GB40	0	0	0	1	1	2
ST37	0	0	0	2	0	2
SI06	0	0	0	- 1	-	2
BL61	0	0	0	1	0	1
GB39	0	0	0	1	0	1
ST04	0	0	0	1	0	1
ST42	0	0	0	0	1	1
KI01	0	0	0	1	0	1
KI09	0	0	0	1	0	1
L 10	0	0	0	1	0	1
LU09	0	0	0	1	0	1
TE16	0	0	0	1	0	1
HT05	0	0	0	0	1	1
Total	12	16	8	161	74	271

 Table 5. Number of acupoints used for low back pain treatment (local acupoints)

Number	Acupoint
41	BL23
23	GV02
11	BL28, BL29, GB30
10	BL30. BL32
9	BL31, BL34
7	BL27, BL52
5	GV04
4	BL33
3	BL25, GB29
2	BL24
1	BL26, BL54

 Table 6. Number of acupoints used for low back pain treatment (distal acupoints)

Number	Acupoint (dermatome)
62	BL40
27	BL60
22	GV26
11	GB34
10	ST36
8	BL62, GB38, LR02
6	BL65, LI04, LU05
5	BL39, BL56, ST39, LR03, SP09
4	BL57, BL64, KI07, SP03, SP06, TE21
3	GB20, LR05, KI02, KI03, KI04, LI11, TE06, CV24
2	BL58, BL67, GB40, ST37, SI06
1	BL61, GB39, ST04, ST42, KI01, KI09, LI10, LU09, TE16, HT05

frequency of use of acupoints at the L2 (10.5%) and S3 (8.6%) levels decreased to 0%. Contrarily, the frequency of use of acupoints at the S1 (28.6%), L5 (6.6%), and L4 (6.2%) levels increased to 39.6%, 18.9%, and 10.4%, respectively.

5. Analysis of frequently used acupoint combinations

The combinations of acupoints used for LBP treatment are shown in Figs. 3 and 4. Regarding the local acupoints, the most frequently used combination was BL31– BL34 (77.8%), followed by BL28–GV02 (72.7%) and GV02–BL23 (60.9%). Regarding the distal acupoints, GV26–BL40 (83.4%) was the most frequently used combination, followed by GB34–BL60 (63.6%) and BL60– BL40 (63.6%).



Fig. 1. Proportion of dermatomes used in the acupuncture prescriptions for low back pain.

 Table 7. Number of acupoints used for the treatment of low back pain

 accompanied by lower extremity symptoms

Meridian	Acupoint (n)	Total
GB	GB30 (6), GB34 (5), GB27 (3), GB38 (2), GB31 (1), GB39 (1)	18
BL	BL40 (6), BL60 (3), BL31 (2), BL32 (1), BL53 (1), BL56 (1), BL57 (1), BL62 (1)	16
ST	ST39 (5), ST37 (2), ST33 (2), ST04 (1)	10
SP	SP06 (3)	3
LI	LI11 (2), LI05 (1)	3
GV	GV02 (2)	2
LU	LU09 (1)	1

6. Symptoms accompanying low back pain

The symptoms accompanying LBP are presented in Table 8. Difficulty with standing or walking was the most common symptom (n = 24), followed by difficulty in back movements, including extension (n = 20), rotation (n = 14), and bending (n = 13). Pain below the knee accompanying LBP was reported 15 times; pain in the but-



Fig. 2. Proportion of dermatomes used in the acupuncture prescriptions for low back pain and low back pain accompanied by lower extremity symptoms. LBP, low back pain.



Fig. 3. Combination of frequently used acupoints for low back pain treatment (local acupoints). Combination rate (%) = number of used row acupoint with column acupoint \div number of used row acupoint × 100.



Fig. 4. Combination of frequently used acupoints for Low back pain treatment (distal acupoints). Combination rate (%) = number of used row acupoint with column acupoint \div number of used row acupoint x 100.

Table 8. Symptoms accompanying low back pain

Accompanied symptoms	Number
Difficulty with standing or walking	24
Impossible to back extension	20
Pain below knee	15
Impossible to back rotation	14
Impossible to back bending	13
Pain in buttock, groin, or thigh	12
Pain in rib	5
Fever	4
Chilling	3
Indigestion	2
Cough	1
Intestinal intonation	1

tock, groin, or thigh, 12 times; and pain in the ribs, 5 times. Fever, chilling, indigestion, cough, and intestinal intonation accompanying LBP were each reported less than five times.

DISCUSSION

Numerous studies on acupuncture treatment for LBP have been published, and various acupoint combinations have been proposed. However, only a few studies on each acupoint used for LBP exist, making the selection of acupoints difficult. Therefore, the present study was conducted to help select the appropriate acupoints. The results of the analysis of classical acupuncture prescriptions for LBP are described below.

Only the Yang meridians were used as local acupoints, which may be because the lower back belongs to the Yang, and the routes of other meridians do not pass between the costal margin and inferior gluteal folds [24,26]. The Foot Yang meridian and GV were mainly used as the distal acupoints. This finding is consistent with Kim et al.'s [27] study. The BL was the most frequently used meridian in all dynasties, possibly due to the following reasons. First, because the BL passes through the lower back, it can improve myofascial dysfunction through intramuscular stimulation, promote tissue healing by improving local blood flow, and stimulate the nerves responsible for the lower back sensations [28,29]. Second, although the lower back is considered to belong to the kidneys in traditional Korean Medicine, the kidneys and bladder have an exterior-interior relationship [30]. Therefore, the lower back has a close relationship with the BL. Finally, in the "Hippocrates Corpus," the first pair of blood vessels, which passes through the back of the head, neck, either side of the backbone, legs, popliteal spaces, and lateral malleolus region, treat LBP [31,32]. Considering a similar concept in Western medicine, targeting the BL is considered empirically effective for treating LBP. It is believed that the most important acupoints in LBP treatment have been used earlier, for a longer time period, and more frequently. Therefore, we analyzed the most frequently used acupoints in chronological order. When analyzing the acupoints used more than 10 times, the use of local acupoints was relatively high during the Tang and Song dynasties. However, the proportion of distal rather than local acupoints used in the Yuan and Ming dynasties gradually increased. Most of the distal acupoints used until the Qing dynasty, including ST36, corresponded to the L4-S1 dermatome, and although ST36 had no record in the Qing dynasty, it is one of the acupoints frequently used in modern studies. This suggests that the perspective of the nerve segment become more recognized in the later dynasties. Accordingly, the nerve segment may be considered when selecting a new acupoint for treating LBP in the future.

Among the local acupoints, except GV02, the Beishu points have been widely used for LBP treatment, as reported in other classical literature studies [15-18]. The Beishu points are where qi flows and gathers, and they are used for disease diagnosis and treatment [33]. BL23 and BL28 are primarily used because the kidneys and bladder are associated with the lower back [30]. Discogenic pain is mediated by the sinuvertebral nerves, and the rami communicantes reach the L2 spinal ganglion. By needling at BL23, the L2 posterior ramus of the spinal nerve can stimulate the L2 spinal ganglion and affect the sinuvertebral nerves [34,35].

BL40, GB34, and ST36 were mainly used as distal acupoints, belonging to the He point of the Foot Yang meridian. Considering the He point is where the gi originating from the extremities of the limbs merges, it is the acupoint used for regulating qi. In traditional Korean Medicine, pain occurs when the gi flow is obstructed. Therefore, BL40, GB34, and ST36 were used to facilitate circulation in the lumbar region [36]. On the dermatome, BL40, BL60, GB34, and ST36 belong to the L4, L5, and S1 levels [25]. When needle stimulation produces a specific sensation, such as soreness, numbness, heaviness, and distension, the nerve fibers are activated. These activated fibers affect the transmission of pain signals to the ascending pathway at the segmental level. According to the gate control theory, the acupuncture signals from the same spinal segment block pain signals from the pathological tissue to provide analgesia [37-39]. BL40, BL60, and GV26 were also widely used in other classical literature studies [15-18]. According to a literature review by Lee et al. [13], GB34 and Kl03 were also widely used as distal acupuncture points. The current review identified that K103 was not used often; nonetheless, considering it corresponds to L4 on the dermatome, it can be deemed an important acupoint. Unlike other frequently used distal acupoints, GV26 does not belong to the lumbar or sacral level on the dermatome [25]. GV26 has been reported to have analgesic effects even when used alone [40]. Given that the area near the nose and mouth, where GV26 is located, is one of the most effective areas for evoking noxious stimuli, which are transmitted by peripheral Aδ and C-fibers and inhibit wide dynamic range neurons in the dorsal horn, GV26 is involved in suppressing pain signals [41-44].

GB, BL, and ST, which are the same meridians used for sciatica [45], were mainly used when the LBP is accompanied by lower extremity symptoms. This is because the acupoints below the knee joint corresponding to the L5 and S1 levels mainly belong to the GB, BL, and ST [25]. GB30, BL40, and GB34 exert functional recovery effects on sciatic nerve injury. GB30 also has an anatomical correlation with the piriformis muscle, the main cause of non-discogenic sciatic entrapment [46-49]; therefore, it is mainly used for treating LBP accompanied by lower extremity symptoms.

Regarding the acupuncture prescriptions for LBP ac-

companied by lower extremity symptoms, the frequency of use of acupoints at the L2 and S3 levels decreased as compared with that of total LBP prescriptions. However, the frequency of use of acupoints at the L4, L5, and S1 levels increased. In Western medicine, the levels most affected by LBP with radiculopathy are the L3–L4, L4–L5, and L5–S1 levels [50,51]. Therefore, the frequency of use of acupoints corresponding to the L4, L5, and S1 dermatomes may have increased.

Regarding the local acupoints, the combination of BL31–BL34 was used most frequently, as these acupoints are located in the posterior sacral foramen, where the posterior branch of the sacral nerve runs. Considering this branch innervates the sacroiliac joint ligament [52,53], it is thought to be targeted for the treatment of LBP caused by the sacroiliac joint.

The combination of GV26–BL40 was the most frequently used distal acupoints. GV26–BL40 was used to treat LBP caused by sprain or kidney deficiency in *Dong Ui Bo Gam*. GB34–BL60 and BL40–BL60 have also been used for sprain-induced LBP [54].

The cause of LBP is confirmed through the accompanying symptoms described in classical acupuncture prescriptions. The six most frequently mentioned accompanying symptoms suggest that the LBP mentioned in classical literatures mainly corresponds to musculoskeletal pain [55-57]. Indigestion, cough, and intestinal intonation also correspond to visceral LBP. Fever and chilling also demonstrated an involvement in the LBP etiology. Therefore, it appears that acupuncture prescriptions for almost all causes of LBP have been described.

The present study has some limitations. First, we did not analyze all the studies containing acupuncture prescriptions; therefore, some prescriptions may have been missing. However, because Zhen Jiu Chu Fang Da Ci Dian is a compilation of 56 volumes of classical Chinese literatures, it was thought to contain a sufficient number of classical acupuncture prescriptions. Second, classical literatures from countries other than China were not analyzed. However, most literatures on Traditional Medicine in Korea and Japan originate from China; therefore, there considerable differences are unlikely. Despite the abovementioned limitations, all prescriptions in Zhen Jiu Chu Fang Da Ci Dian were compared in the current study, and the missing or inaccurate contents of the original texts were corrected, with only the accurate contents recorded. Based on the identification of the frequency of use, dermatome, and combination of acupuncture points, our study data will contribute to the selection of optimal acupoints for LBP treatment.

CONCLUSION

In classical literatures, only BL, GV, and GB have been used as local acupoints for LBP treatment. The Foot Yang meridian and GV were mainly used as distal acupoints for LBP treatment. Notably, the BL was most frequently used in all dynasties as both local and distal acupoints. When evaluating the most frequently used acupoints in LBP treatment, the use of distal acupuncture points gradually exceeded that of the local acupoints, and most of the distal acupoints corresponded to the L4–S1 dermatome.

For the LBP treatment, BL23 and GV02 were mainly used as local acupoints, whereas BL40, BL60, and GV26 were mainly used as distal acupoints. Regarding the local acupoints, the L2, S3, and S1 levels on the dermatome were mainly used. Regarding the distal acupoints, the S1 level was mainly used.

For the LBP treatment accompanied by lower extremity symptoms, GB, BL, and ST were the mainly used meridians, whereas GB30, BL40, GB34, and ST39 were the mainly used acupoints.

Compared with the total LBP acupuncture prescriptions, when LBP was accompanied by lower extremity symptoms, the frequency of use of acupoints corresponding to the L4, L5, and S1 levels on the dermatome increased. Regarding the acupoint combinations, BL31– BL34 and GV26–BL40 were used most frequently as local and distal acupoint combinations, respectively. The LBP mentioned in classical literature is most commonly due to musculoskeletal diseases; however, from a modern perspective, visceral LBP and red flag LBP are also indicated.

AUTHOR CONTRIBUTIONS

Conceptualization: SHP, JEJ, SDL. Data curation: SHP, SDL. Formal analysis: SHP, SDL. Investigation: SHP, YJH. Methodology: SHP, JEJ. Project administration: KHK, SDL. Supervision: KHK, SDL. Validation: KHK, SDL. Visualization: SHP. Writing – original draft: SHP. Writing – review & editing: SHP, YJH, JEJ, KHK, SDL.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

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ETHICAL STATEMENT

This research did not involve any human or animal experiments.

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