

COMPARISON OF THE EFFECTIVENESS OF CONVENTIONAL WESTERN MEDICINE AND TRADITIONAL CHINESE MEDICINE METHODS IN THE TREATMENT OF LUMBAGO

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Abstract: The Statistical data regarding musculo-skeletal complaints, shows that lower back pain is the most common. By "lower" back pain is meant ache anywhere in the back region (including the buttocks) below the lower border of the rib cage. There are many types of lower back pain of which the most commonly mentioned in practice are: Acute lumbar sprain, Lumbago, Sciatica and Discus hernia.

Lower backache and lumbago can be discussed together as they share similar etiology, pathology and treatment.

In this study, a special attention will be devoted to lumbago as one of the most frequently reported complaints, which affects quality of life and reduces social and economic efficacy.

Purpose of the research in this study is to compare the effects achieved with the conventional Western medicine methods and the traditional Chinese medicine methods in patients with lumbago.

Meaning of the research is to assess and prove the benefits and advantage of acupuncture versus Conventional Western medicine in the treatment of lumbago.

Material and Methods

Research was conducted in the Republic of Macedonia, at the Public Institution "Center for Traditional Chinese Medicine" and in the Department of Applied Physical Medicine and Kinesitherapy at the University "Goce Delcev" in Stip.

General data

The study include 59 patients with diagnosed sciatica (35 men and 24 women), aged from 22 to 74 years.

The mean age of patients is 54.6 years.

Respondents are divided into two groups: Control Group - A and Experimental Group B;

Participants in the control group was applied a conservative treatment Participants in the experimental group were treated with traditional Chinese medicine methods, including acupuncture, moxibustion, capping therapy and tuina massage.

Special emphasis is placed on acupuncture treatment.

Treatment Methods

Conservative treatment include medication therapy, physical therapy and kinesitherapy.

Traditional Chinese Medicine methods include acupuncture, moxibustion, capping therapy and tuina massage.

Results

The Visual Analog Scale of pain in Table 1 shows that, patients in the control group at the end of the treatment achieved a 50% reduction in pain compared to the start of treatment at 80%. A pain relief has been achieved by 30%.

From the Visual Analog Scale of pain presented in Table 2, it can be noticed that at the end of treatment in patients in the experimental group, pain relief was achieved at 30% compared to 80% at the start of treatment. A pain relief has been achieved by 50%.

It can be concluded that the two groups of examinees achieved a significant reduction in pain, which is more pronounced in the experimental group.

Conclusion: Western medical treatments for lumbago includes medications, physical therapy and exercise, which is a long-term process with short-term effects and often recurrence of symptoms.

For these reasons, more and more patients are interested for alternative methods of treatment of lumbago pain, and the most attractive is TCM and acupuncture. Lumbago can be treated perfectly, adequately and successfully according to the Chinese diagnosis and treatment, without any reference to Western medicine.

Acupuncture can be extremely effective in the treatment of both acute and chronic backache, more so than Western medical treatments. It produces extraordinary results when there are severe structural imbalances in the spine. Many cases of very chronic backache, over years' duration are cleared in a few sessions. Acute attacks from sprain or invasion of Damp-Cold can be cleared in a few treatments, sometimes even only one. If the acute attack is a recurrence of a chronic problem, the treatment will take longer, usually about 10-15 sessions.

INTRODUCTION

Each year, millions of patients consult their doctor for lumbago. It is estimated that at least 50% of people in Western industrialized countries have suffered from back pain at some time of their life. Several million working days are lost each year because of lower back pain. From a Western medical perspective, the pathology of lumbar pain is not well understood, and there are many cases when the pathogenesis of lumbago is not clear.

According to Traditional Chinese medicine, the lower back area is strongly influenced by the Bladder and Kidney channels. The "General Treatise on the etiology and Symptomatology of Diseases" and The "Essential Methods of Dan Xi", describes five causes of lower backache: Kidney deficiency, Wind-Cold invading the back, Damp-Heat, stasis of Blood, contusion and Phlegm.

Lumbago is one of the most frequently reported complaints, which affects quality of life and reduces social and economic life style.

Lumbago is due to disturbance in Qi and blood movement in the meridians and channels in the lumbar region, so that the channels go into spasm or the region loses adequate nourishment. This may result from attack by exogenous pathogenic evil, from traumatic injury or from insufficiency of the kidney [7].

Among the external evils, Dampness most readily impedes or obstructs the lumbar meridians and channels because of its turbid nature. Traumatic injury acts primarily through blood stasis. The lumbar region is the home of the kidney. All six of the Foot-Meridians and all eight of the Irregular Meridians are connected with the kidney and the lumbar vertebrae. Because of this, all internal injuries causing lumbago do so through the mechanism of kidney insufficiency. Thus, the location of illness in lumbago is the kidney and the meridians and channels of the lumbar region.

Clinical Manifestation

Lumbar pain may be one-sided or both-sided. It also presents a variety of patterns and quality. The pain may be lingering with intermittent aggravation by overstrain. It may be fixed in location and distending in quality. It may be stabbing in quality and worsened by pressure. It may be cold in quality, with amelioration by pressure and warmth. It may be tearing in quality, with aggravation by warmth.

Key Points of Analysis

Deficiency versus Strength. Lumbago due to attack by exogenous pathogenic evil or trauma develops rapidly and is often manifested as blood stasis obstructing the channels. It is a condition of strength. Lumbago due to senescence, overstrain or internal injury mainly manifests as kidney insufficiency with loss of nourishment of the lumbar region. It is a condition of deficiency. Most cases of chronic lumbago are a mixture of strength and deficiency, with deficiency of kidney-essence or Qi and blood as the root and blockage of channels by evil Qi as the appearance.

Quality of Pain

Intermittent aching weakness of the waist that is aggravated by strain is mostly due to depletion of kidney-essence and poor nourishment of the lumbar region.

Stabbing pain in a fixed location, accompanied by a gray complexion and a bluish tongue, is mostly due to Qi stagnation and blood stasis.

Lumbago that is burning in quality and aggravated by warmth, accompanied by a yellow and greasy tongue coating and a rapid pulse, is mostly due to Dampness-Heat gelling and impeding Qi movement.

Lumbago that is cold in quality and is worse on rainy or overcast days is mostly due to Cold-Dampness attacking the lumbar region and blocking the meridians and channels.

MATERIAL AND METHODS

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The study include 59 patients (35 men and 24 women), aged from 22 to 74 years.

The mean age of patients is 54.6 years.

Respondents were divided into two groups: Control Group - A and Experimental Group B;

Control group – A, includes 31 patients (20 men and 13 women), and

Experimental group – B, is composed of 28 patients (17 men and 11 women);

Participants in the control group was applied a conservative treatment, which includes medication therapy, physical therapy and kinesitherapy. The program for treating patients from the control group was done individually for each patient, depending on the general condition of the patient, the underlying symptoms, stato-dynamic disorders in the lumbar area, the stage and duration of the symptoms.

Participants in the experimental group were treated with traditional Chinese medicine methods, including acupuncture, moxibustion, capping therapy and tuina massage. Special emphasis is placed on acupuncture treatment. The treatment program for patients from the experimental group is made individually for each patient, depending on the Differentiation of sciatic pain according to traditional Chinese medicine.

Including criteria

Patients with diagnosed lumbago. Diagnosis is based on medical history, neurological examination, functional tests and examinations, and radiological methods.

Excluding criteria

Additional (accompanying) illnesses such as severe heart decompensation, severe vascular and respiratory disturbances, malignant diseases, the presence of a metal or pacemaker in the body are absolute contraindication for the application of physical therapy.

Paraparesis: the weakened muscular strength of both legs, increased tetive reflexes, fasciculations and the positive sign of Babinsky require urgent neurological and neurosurgical assessment. Medial disc herniation is an indication for surgical treatment.

EVALUATION SCALES

In order to determine the efficacy of the treatment and to see the differences obtained before and after the treatment, was used the Visual Analogue Scale (VAS) .

- Each patient completed the VAS/Pain Scale table before the beginning and at the end of the rehabilitation, rounding the degrees of pain at a different position or movement - from 1 to 8.
- For each of the 6 parameters in the questionnaire from the pain scale, the mean value was calculated. Then the sum of the mean values of all 6 parameters was determined, and the resulting final value was calculated according to the following formula and expressed in percentages:

$$(\text{The sum of all values} / 50) \times 100 = \underline{\hspace{1cm}} \%$$
- The results obtained are presented in Tables.

With the VAS / Pain Scale table the following parameters were tested:

1. The severity of pain when tilting the body forward and backward (flexion and extension)
2. The severity of pain when raising a stretched leg
3. The severity of pain during walking
4. The severity of pain during sitting
5. The severity of pain when sneezing and coughing
6. The severity of pain during at night

The following functional and neurological tests were made before and after the treatment:

- Lasègue's sign
- which is considered positive if pain in the distribution of the sciatic nerve is reproduced with passive flexion of the straight leg between 30 and 70 degrees [11].
- Manual muscle testing of paravertebral and abdominal muscles
- The muscle strength of the lower extremities is also examined:
- The strength of flexors and extensors of the foot and the thumb of the scalp (L5 root)
- Walking on the heels (L5 root) and foot flexor (S1 root)
- Reflexes of the tendons:
- Tendon of patella (L4 root)
- Achilles tendon (S1 root)
- Surface sensitivity:
- Sense of touch of the thumb feet

TREATMENT METHODS FOR THE PATIENTS IN THE CONTROL GROUP - A:

In an acute phase, urgent treatment is necessary because pain is unbearable. The suggested medication therapy is injections of analgesics, corticosteroids, muscle relaxants with sedative effect, and vitamins B1, B6 and B12.

In the acute phase are recommended:

- Treatment with a position (so-called Williams position): the patient lies on the back, the thighs are placed in a vertical position, while the calves are placed in a horizontal position.
- To reduce pain in the acute stage it is recommended electrophoresis with novocaine or lidocaine;
- Ultra violet radiation is applied in three fields: in the lumbar area, the posterior part of the thigh and the back and lateral area of the calf, with 3 to 5 bioses.
- Manual mobilization and manipulation in diagnosed functional blockages in intervertebral joints. The manual therapy is absolutely contraindicated in the medial disc herniation, osteoporosis and fractures of the spine.

After calming pain, is applied the following physical therapy:

- Diadynamic currents in the lumbar section with a change in the modality; Interferent currents, Low frequency impulse magnetic fields, Cryotherapy, Ultrasound with intensity of 0.3 - 0.5 W/cm² - for relaxation of paravertebral muscles, Laser therapy and Electro massage
- In case of impaired sensitivity and motor activity, is applied electro stimulation of the damaged nerves and muscles that are injected from them. It is applied after precise electrodiagnostics, which specifies the parameters for electrostimulation (for example, 1 to 5 Hz with impulse duration 50-100-200 ms and 2-4 times longer pause).
- Electrophoresis with nilavin (+) in combination with potassium iodide (-) is applied to facilitate conduction in the field of synapse. The anode is placed in the area of the parietic muscles, and the cathode in the area of the problematic segment of the spinal column.

Along with physiotherapy will be applied Kinesiotherapy which includes:

- Massage, PNMF techniques, post isometric relaxation,
- Exercises for extension, analytical gymnastics, complex of exercises for strengthening paravertebral muscles and abdominal muscles.

Treatments with physical therapy and kinesiotherapy are repeated 3 times a week for a duration of 1 hour and 30 minutes.

TREATMENT METHODS FOR THE PATIENTS IN THE EXPERIMENTAL GROUP - B:

Acupuncture is the most commonly used method, and acts an essential role in treating lumbago pain.

Acute Conditions: These are due either to Damp-Cold or to stagnation of Qi and Blood in the area.

Distal Points

In acute cases distal points are particularly important. They are inserted first and manipulated for some time before inserting the local points.

The choice of distal points depends on the location of the pain. The main ones are:

BL₄₀ (Weizhong) if the pain is in the lower part of the back, just above the buttock whether unilateral or bilateral.

Du₂₆ (Renzhong) if the pain is on the midline or starting from the midline and spreading out.

BL₁₀ (Tianzhu), same as above. The needling sensation should preferably radiate downwards along the Bladder channel.

SI₃ (Houxi) if the pain is unilateral and slightly higher, roughly level with the umbilicus.

Yaotongxue extra point if the pain is unilateral and in the middle part of the back, higher than the level of the umbilicus.

BL₅₈ (Feiyang) if there is a pain in the leg between the Bladder and Gall-Bladder channel (i.e. not clearly in one channel or the other).

BL₆₂ (Shenmai) if the pain is unilateral and radiates down to one leg.

BL₅₉ (Fuyang) if walking is difficult. From this point one should obtain a needling sensation that radiates upwards along the Bladder channel.

The technique used is to insert the distal point or points first, obtain the needling sensation and then manipulate the needle quite vigorously with reducing method while the patient gently flexes and turns the waist. If a third person is available, he or she could help the patient to effect these movements. In most cases this procedure is best carried out while the patient is standing. This is the only example of treatment given while the patient stands. The distal needles

are retained for about 15 minutes during which time they can be manipulated at intervals.

After this, the distal needles are removed and the patient lies down for the local points to be needed.

Local Points

These are selected according to tenderness on pressure. It is therefore very important to press and try various points systematically. The local points are needled with reducing method and the needles are then left in place for about 20 minutes during which time they can be manipulated at intervals. An effective way of reducing the points is to adopt the "clock technique", i.e. lifting and thrusting the needle with a circular movement like the hour-hand round the face of a clock. The local points which are most likely to be tender have been mentioned above.

Apart from the Ah Shi points, there are local points which can be needled irrespective of tenderness. These are:

Du₃ (Yaoyangguan): it strengthens the back and legs. It is especially used if the pain radiates to the leg. To make the needling sensation radiate downwards is difficult, but if it radiates outwards from the point that should be sufficient.

Du₄ (Mingmen): it tonifies Kidney-Yang and strengthens the back.

Du₈ (Jinsuo): it relaxes the sinews and relieves stiffness and contraction.

Shiqizhuixia: this is an extremely effective extra point for backache in the centre of the lower part of the back.

BL₃₂ (Ciliao): this point is used if the pain is over the sacrum. The needling sensation should radiate outwards.

DETAILS OF NEEDLING.

Depth of insertion: 1.5 inches, 2 inches, 3~4 inches, depending on the choice of the acupuncture point;

Needle stimulation: Manual / Electrical

Needle type: 0.30 x 40-50mm, 0.30 x 60-75mm sterile disposable needles, depending on the acupuncture point and patient's body constitution. Brand: Wuxi Jiajian Medical Instrument Co.

Retention time: 30 min

Number of needles: 20 - 30 needles

TREATMENT REGIMEN

Number of treatment sessions: 12 times per course

Frequency: once a day, three times per week, four weeks

RESULTS

Table 1. Demographic characteristics of the respondents

Total number of respondents	Female	Male	Mean age of respondents
(n=59)	(n=24)	(n=35)	54,6 years

Table 2. Classification of examinees according to groups and type of rehabilitation

Groups of respondents	Total number of respondents (n)	Female (n)	Male (n)	Type of conducted rehabilitation
Control group	(n=31)	(n=13)	(n=18)	Conservative treatment with medications, physical therapy and kinesitherapy.
Experimental group	(n=28)	(n=11)	(n=17)	TCM treatment with acupuncture, moxibustion, capping and Tuina massage

Table 3. Visual Analog Scale of pain in patients of the control group before and after treatment

Tested parameters (The severity of pain from 1 to 8)	Before the beginning of the treatment	After the completion of the treatment
The severity of pain when tilting the body forward and backward (flexion and extension)	8	5
The severity of pain when raising a stretched leg	5	3

The severity of pain during walking	8	6
The severity of pain during sitting	7	5
The severity of pain when sneezing and coughing	6	3
The severity of pain during at night	6	3

Total points (40 / 50) x 100 = 80 % (Before the beginning of the rehabilitation)

Total points (25 / 50) x 100 = 50 % (After the completion of the rehabilitation)

The Visual Analog Scale of pain in Table 1 shows that, patients in the control group at the end of the treatment achieved a 50% reduction in pain compared to the start of treatment at 80%. A pain relief has been achieved by 30%.

Table 4. Visual Analog Scale of pain in patients of the experimental group before and after treatment

Tested parameters (The severity of pain from 1 to 8)	Before the beginning of the treatment	After the completion of the treatment
The severity of pain when tilting the body forward and backward (flexion and extension)	8	2
The severity of pain when raising a stretched leg	5	2
The severity of pain during walking	8	4
The severity of pain during sitting	7	3
The severity of pain when sneezing and coughing	6	3
The severity of pain during at night	6	1

Total points (40 / 50) x 100 = 80 % (Before the beginning of the rehabilitation)

Total points (15 / 50) x 100 = 30 % (After the completion of the rehabilitation)

From the Visual Analog Scale of pain presented in Table 2, it can be noticed that at the end of treatment in patients in the experimental group, pain relief was achieved at 30% compared to 80% at the start of treatment. A pain relief has been achieved by 50%.

It can be concluded that the two groups of examinees achieved a significant reduction in pain, which is more pronounced in the experimental group.

CONCLUSION

Western medical treatments for lumbago includes medications, physical therapy and exercise, which is a long-term process with short-term effects and often recurrence of symptoms.

For these reasons, more and more patients are interested for alternative methods of treatment of lumbago pain, and the most attractive is TCM and acupuncture. Lumbago can be treated perfectly, adequately and successfully according to the Chinese diagnosis and treatment, without any reference to Western medicine.

Acupuncture can be extremely effective in the treatment of both acute and chronic backache, more so than Western medical treatments. It produces extraordinary results when there are severe structural imbalances in the spine. The duration of the complaint seems to be less relevant in backache than in other diseases: many cases of very chronic backache, over years' duration are cleared in a few sessions. Acute attacks from sprain or invasion of Damp-Cold can be cleared in a few treatments, sometimes even only one. If the acute attack is a recurrence of a chronic problem, the treatment will take longer, usually about 10-15 sessions.

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