



## The position of Chinese massage (Tuina) in clinical medicine

### Mesto kineske masaže (*tuina*) u kliničkoj medicini

Dejan Ilić\*, Aleksandar Djurović\*<sup>†</sup>, Zorica Brdareski\*<sup>†</sup>, Aleksandra Vukomanović\*<sup>†</sup>, Vesna Pejović\*, Mirko Grajić<sup>‡</sup>

\*Clinic for Physical Medicine and Rehabilitation, Military Medical Academy, Belgrade, Serbia; <sup>†</sup>University of Defence, Faculty of Medicine of the Military Medical Academy, Belgrade, Serbia; <sup>‡</sup>Clinic for Physical Medicine and Rehabilitation, Clinical Center of Serbia, Faculty of Medicine, University of Belgrade, Belgrade, Serbia

#### Key words:

medicine, chinese traditional; clinical medicine; massage; acupuncture therapy; combined modality therapy; health status.

#### Ključne reči:

medicina, kineska tradicionalna; medicina, klinička; masaža; lečenje akupunkturo; lečenje, kombinovano; zdravstveno stanje.

#### Introduction

Traditional Chinese Medicine (TCM) in its narrow sense refers to acupuncture, Tuina (Chinese massage), moxibustion, herbalism and diagnostics, tongue treatment and pulse palpation. Tuina is defined as a therapeutic treatment utilizing hands and/or instruments locally, at the place of pain, or distantly, *via* meridians for the treatment and management of pain and injuries<sup>1</sup>. *Tui* means to “push” and *Na* means to “grasp”<sup>2</sup>. In the period between the year 221 BC and 265 AD the first book on Tuina was written, and its principles have been utilized ever since. In the period 265–960 AD special departments for Tuina were established in the National Hospital in China intended only for emperors, ministers and officers. Tuina was being developed really fast in the period 960–1368, and the second book was written with complete instructions, techniques, first instruments and immobilization treatments. The period from 1368–1911 is considered to be the peak in the improvement of Tuina. Today, Tuina has a wide spectrum of applications worldwide, and especially in China where it is applied in almost every family<sup>3</sup>.

Tuina is an important segment of TCM, which independently or in a combination with other TCM techniques provides better results in treatment of certain diseases in comparison to Western medicine. Having knowledge of symptoms and diseases for which TCM provides a better treatment, one should rather consider Tuina, acupuncture, or moxibustion. Since 1974, World Health Organization (WHO) has considered TCM as an separate and equal branch of medicine. New textbooks on physical therapy describe techniques of classical manual massage and Tuina treatment, so in reflexology mas-

sage there are texts on periosteal massage, connective tissue massage, segment massage, acupressure, feet reflexology massage, *Shiatsu* massage (Japanese interpretation of Chinese acupressure) and manual lymphatic drainage<sup>4</sup>.

Manual massage is the most applied manner of passive kinesiotherapy. Therapeutic massage is utilized in the treatment of a number of diseases and injuries. It is divided into classical therapeutic massage, lymphatic drainage and reflexology massage. The massage principle is based on the mechanical irritation on exter-, proprio- and interoreceptors, followed by the reflex reactions of tissue and organs. Furthermore, massage also has a direct mechanical action on tissue, increasing the flow of lymphatic and venous blood, initiating the appearance of active hyperemia of arterioles and capillaries in tissue, increasing local metabolism and elimination of disintegrated metabolic products, increasing swelling resorption and diverse pathological deposits in the tissue, improving the trophic tissue, etc. Massage is analgesic and spasmolytic, it increases secretory activity of sweat and sebaceous glands, increases the turgor and elasticity of skin, reduces fatigue and improves the contractile muscle ability<sup>4</sup>.

If one compares classical manual massage and Tuina, one can observe great similarities regarding techniques, indications and contraindications. The names of the pain points to be treated are diverse. In classical manual massage these are maximal “painful” points, in Tuina these are acupunctural and *Ashi* points (*ashi* = painful). The main differences are in the concept of treatment, where Western medicine treats the disorder of organs or organ systems, while TCM treats energy balance disorder in the entire body. Tuina is practiced in Serbia at the Military Medical Academy, Belgrade (and in just a

several private clinics), although there are no literary information on its clinical efficiency in this region.

The aim of the paper was to present the physiological and therapeutic action of Tuina with a special insight in its clinical efficiency.

### Tuina: traditional concept of physiological basic and therapeutic effects

#### Physiological approach

The main principles of Tuina are regulation of *Zang* and *Fu* organs, regulation of *Yin/Yang* balance, and meridian and collateral activation. Tuina promotes the circulation of *Qi* and activates blood, normalizes blood flow and repairs synovial structures and ligaments<sup>1,3</sup>.

In the oldest known medical book in China, the Inner Canon of the Yellow Emperor (475-221 BC) the following is written: “*Yin* is inside the person and it is the material basis for *Yang*. *Yang* is on the outside as a function, a manifestation of *Yin*”. This was said 4 500 years ago, and written 2 500 years ago. The disease appears when there is the excess of *Yin* or *Yang*, or the deficit of *Yin* or *Yang*, ie, when the circular flow of energy is in any kind of disarrangement. *Qi* is commonly translated as bioenergy, a special vital energy. *Qi* circulates through acupuncture channels, and has its transformations in acupuncture points: *Qi* is *Yang*. *Xue* is its *Yin*, whose best translation is blood, though it is not blood in the classical sense of the word. Even though it also circulates through acupuncture channels, it is actually a body fluid<sup>5</sup>.

sympathetic. The consequence is the relaxation of the heart and muscles. Opposite to gentle touch, strong massage differs action, since it inhibits the parasympathetic and stimulates the sympathetic, which is then reflected in the stimulation of the central nervous system and in the inhibition of the peripheral nervous system, as well as in the increase of muscle tension. After 10–15 minutes, relaxation and sedation occur. Tuina acts on the circular system in such a manner as to dilate capillaries and promote reconstruction of the blood network, increase elasticity of blood vessels, activate bloodstream and reduce blood viscosity. Tuina acts on the digestive system in such a manner as to regulate muscle movements, their work and tension by abdomen massage. It results in better digestion. Tuina acts on the urinary system by inducing sphincter contraction and promoting urination. Tuina acts on the immune system by stimulating it. Thus, Tuina is utilized in the prevention of diverse diseases, especially by foot massage. It has been proved that the action of Tuina on the endocrine system promotes insulin secretion in patients with diabetes. Tuina also regulates menstrual problems.

Tuina acts on the locomotion system by activating blood flow after muscle movement. Tuina repairs traumatic lesions and removes tendon adhesion. It also corrects the anatomic dislocations and influences the resorption of edemas and hematomas. The essence of Tuina is the action of an external force. Force is a stimulating factor that activates the channel system and modifies their function<sup>8</sup>. Hence, this is the manner in which the rehabilitation is explained (Figure 1).

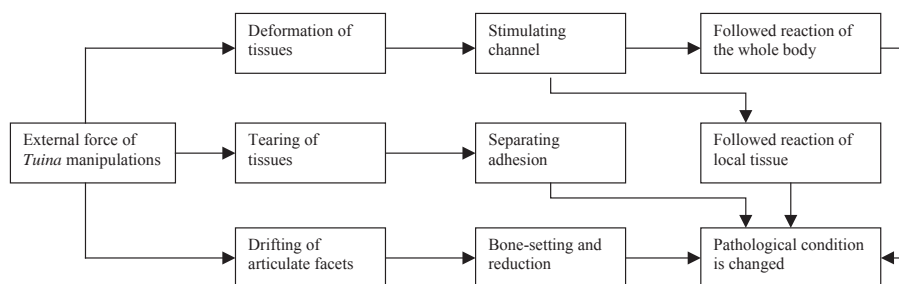


Fig. 1 – Illustrations of Tuina Manipulations<sup>8</sup>

The fundamental physical and therapeutic approach of Tuina is to treat primary causes, and then the consequences. In exceptional cases the *vice versa* principle is applied (for example, if the cause is coma, first the points *Du* 26 and *Ki* 1 are stimulated). Tuina stimulates vital *Qi* and eliminates a pathological factor; it regulates *Yin* and *Yang* by reducing excess syndromes and stimulating the deficit ones. The therapeutic treatment of Tuina is also in the fact that the treatment is planned in accordance with the season, as well as mental and individual abilities<sup>6,7</sup>.

#### Therapeutic effect

Therapeutic effect of Tuina has been an issue of investigation of modern medicine, mostly in France, and the Chinese are very proud of that fact. The most investigated technique is rubbing. Tuina acts on the nervous system by gentle skin touch, activating the parasympathetic and inhibiting the

Tuina induces both, central and local analgesia. Central analgesia occurs by reducing the brain stimulus, while local analgesia occurs due to better regulation and *via* the trigger point (points where the pain “disperses”).

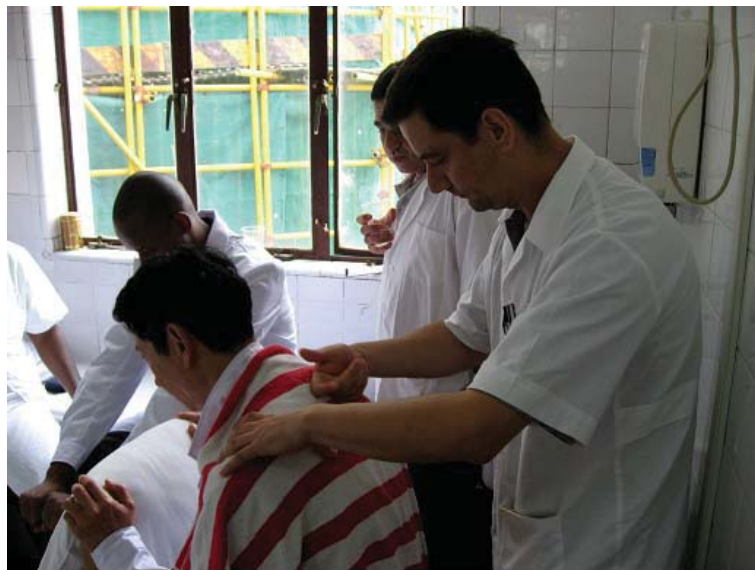
#### Application techniques

The main Tuina techniques are as follows: scraping, pressure, patting, shaking, rolling (Figure 2 a, b and c), rotating, and wave techniques, as well as compound techniques which are the combinations of the listed or those specially designed for children. They are introduced as surface and deep manipulation; they act along the meridian movement or opposite to it, locally or on acupunctural points, or alternating pressure – relaxation.

The doctor performing treatment by Tuina has to have clean hands, no jewelry, has to heat the hands before the

treatment during the winter season and has to cover the patient with a towel (Figure 2 c), which is opposite to classical massage in Western medicine where the therapist has a direct contact with a patient's skin or *via* a medium in the form of oil or the like. It is necessary for the doctor to follow a patient's reaction, and if needed, to make alterations in the therapy. Chinese massage should not be applied if the patient is too hungry or too full, nor when they are too tired (*eg* after practicing sports). The entire body is divided into six zones: face and head, neck and shoulders, chest and abdomen, lumbar spine, hands, legs, and almost every point utilized in acupuncture can be utilized here<sup>9</sup>.

lateral position. Medical examination is based on inspection and deduction, following the teaching of Daoists<sup>10</sup>. The diagnosis is set both based on the pulse palpation<sup>11</sup> and tongue check<sup>12</sup>. Applying the fundamental manipulations, the doctor persistently and constantly utilizes fingers, thumb, hands, elbows, and feet, acts on the body surface and stimulates the points. When fine pressure is achieved by placing a finger on an acupunctural point (AP), a completely the same effect is obtained as in classical acupuncture. In clinical practice, individual manipulations of Tuina are rare; rather, combined manipulations are applied. There are more than 110 diverse manipulations, though only 20–30



**Fig. 2 – One of the main Tuina techniques – rolling**  
a) beginning position, b) ending position, c) rolling treatment using the towel

For chronic diseases, Tuina is applied every second day, and for acute diseases every day or even twice a day. The therapy usually lasts for seven to ten, or even fourteen days. There is a possibility of the occurrence of side-effects to the therapy in the form of pain or a complete body weariness. In that case, the patient is given a rest for a few days. If side-effects are repeated, the therapy should be altered. The main patients' positions are supination, lying and sitting, and pronation, as well lying and sitting, and the

are the most common ones in practice<sup>13</sup>. Warm compresses and ventuses are also included in Tuina as supplementary mediums and supplementary methods. Various mediums like oils, powder or fat reduce skin irritation. If a medication is the medium, it increases the therapeutic effect. Mediums like garlic, ginger and medicament in the form of fat heat up the channel and remove cold. Cold water is also a good medium for Tuina since it decreases temperature, the same as sesame oil and egg white<sup>14</sup>.

### Indications and contraindications

Main indications of Tuina are: injuries; rheumatic, cardiac, gynecologic, otolaryngologic, ophthalmic, pediatric diseases; special entities such as insomnia, neurasthenia, headache, epigastric pain, diarrhea, constipation, hemiplegia, facial nerve palsy, stiff neck, shoulder pain (frozen shoulder), general obesity, muscular torticollis, etc.<sup>15</sup> Contraindication are: acute infective diseases, fractures in early stages, malignant tumors, strong intern diseases, mental diseases, pregnancy and menstruation, hemorrhage and inclination to hemorrhage, etc. With the stated diseases, one can apply traditional Chinese medicine and proscriptio one<sup>16</sup>.

### Tuina: clinical efficiency

The paper utilized databases as follows: PubMed, Medline, and eCAM with the key words: Tuina, massage, acu-

with Tuina. Likewise, results are better if Tuina is combined with other traditional Chinese medicine methods, like *Qi Gong*, moxibustion, Chinese herbal medicine, etc.

As an example, four studies compare a combined therapy of acupuncture and other methods of traditional Chinese medicine, including injections into the acupuncture points<sup>22</sup>, intravenous injections of purified Chinese herbs<sup>23</sup> and Tuina<sup>24, 25</sup> in comparison to Western medicine methods. Lu and Yan<sup>25</sup> combine acupuncture with Chinese Tuina, providing a comparison with indometacin (25 mg twice a day for 30 days), a standard drug for migraine, and obtaining better results. Acupuncture and adequate traditional Chinese medicine methods have presented significantly better results in the treatment of migraine in relation to the control group treated with Western medicine<sup>26</sup>. With inflammatory diseases (arthritis, colitis), the acupuncture is more successful in the early stage of diseases; however, in medium and late disease stadium, Tuina provides better results<sup>27</sup> (Table 1).

Table 1

Response	Gansu Chinese Medicine (Gan Su Zhong Yi) <sup>27</sup>			
	Treatment			
	Acupuncture		Tuina	
	early stage (n = 24)	late & middle stage (n = 66)	early stage (n = 15)	late & middle stage (n = 35)
Excellent (n)	20	8	2	8
Good (n)	2	21	3	20
Satisfactory (n)	2	2	7	5
Poor (n)	0	9	3	2
Total (%)	100	86	80	94
Excellent & good (%)	91	43	33	80

puncture, Tuina for infants, Tuina for adults. Data on application of Tuina as one of the basic TCM methods, the representation of application within diverse pathological states, and the degree of rehabilitation efficiency have been obtained on the basis of data published in the world-known periodicals on traditional Chinese medicine (Journal of Acupuncture and Tuina Science and Journal of Traditional Chinese Medicine) in the period from August 2003 – December 2009.

There are studies stating that massage utilizing acupressure reduces pain better than the classical massage, though it provides worse results in comparison to transcutaneous electrical nerve stimulation<sup>17</sup>. When considering soft tissue injuries, Tuina in combination with acupuncture provides much better results than Western medicine<sup>18</sup>. The channels are the ones to connect the body surface with the organs inside. Tuina acts in a manner as to regulate the inner organs via meridians<sup>19</sup> eg successful treatment of multiple sclerosis (MS) and rigidity within Parkinson's disease utilizing Tuina, without medicaments, where the author, the neurologist, has also been the patient with MS<sup>20, 21</sup>.

A large number of papers present that acupuncture provides better results in the treatment of neurological, rheumatic and traumatic diseases than Western medicine. Acupuncture and Tuina together offer better results in comparison to monotherapy with acupuncture or monotherapy

In the treatment of 18 cases with chronic prostatitis, the efficiency of acupuncture and Tuina was 94.4%<sup>28</sup>. In the therapy of primary dysmenorrhea (30 cases), acupuncture in combination with Tuina presented the efficiency of 93.3% in relation to the control group treated only with acupuncture, where the efficiency was 73.3%<sup>29</sup>. The insomnia occurring due to joint deficit of the heart and spleen, treated with acupuncture, moxibustion and Chinese Tuina (92 cases), provided significantly better results than in the patients treated only with acupuncture and moxibustion<sup>30</sup>. The effects of acupuncture and Tuina on the patients having stroke, presented better results in comparison to Western medicine treatment, especially in the rehabilitation of hemiplegia, facial nerve palsy and dysphagia<sup>31</sup>.

The treatment of 120 cases with rigidity syndrome ligament Nuchae with acupuncture and Tuina was successful in 95.8% of cases<sup>32</sup>. With 42 cases with stiff neck, after acupuncture, Tuina was applied in the zone of pain and muscle spasm. After 1–3 treatments, all patients were cured<sup>33</sup>. Acupuncture plus Tuina with cervical spondylosis provides better results (92.1%) than monotherapy with acupuncture (68.4%) or with Tuina (65.8%)<sup>34</sup>. With the protrusion of cervical intervertebral disk (8 cases), all symptoms disappeared and the full mobility in this segment returned after the treatment of Tuina and acupuncture<sup>35</sup>. The therapy of musculus supraspinatus tendinitis (100 patients) was 96% successful in the group

treated with acupuncture and Tuina in comparison to the control group (74% efficiency) treated only with acupuncture<sup>36</sup>. Clinical study utilizing warm needles, moxibustion and Tuina with peri-arthritis humero-scapular joint (80 cases) was efficient in 95% of cases in comparison to the control group treated only with Tuina (85% efficiency) in removing pain<sup>37</sup>. Headache induced by cervical syndrome (80 cases) was significantly better treated with acupuncture and Tuina together than with individual therapies<sup>38</sup>.

Therapeutic effects of acupuncture and Tuina in the treatment of sprains and strains of joints in fists and feet (metacarpophalangeal and metatarsophalangeal joints) provided better results (93.4% efficiency) in comparison to monotherapy with acupuncture (70%) and Tuina (73.3%) (90 patients were treated)<sup>39</sup>.

Tuina manipulation is successfully applied in lumbal intervertebral disk herniation<sup>40</sup>. Cervical spondylosis inducing compression on artery vertebralis treated only with Tuina (157 cases) presented excellent results in 86.6% cases<sup>41</sup>. Application of Tuina in clinical observation study with 47 patients with vertigo treated them with massage of the triple heater meridian (sanjiao) and gallbladder meridian on the head. The results presented a complete healing in 36 cases and significant improvement in 11 cases. The efficiency of the therapy was 100%<sup>42</sup>.

Tuina applied in 37 cases with postoperative urinary retention led to the healing of 36 patients<sup>43</sup>. Research has proven that Tuina acts on postpartum milk secretion, considering the initial lactation time, serum prolactin level, and lactation volume<sup>44</sup> and is recommended for the treatment of postpartum hypolactation<sup>45</sup>.

Tuina in pediatrics is an important component of traditional Tuina therapy, whose unique manner of treatment was formed during the Ming and Qing dynasty. The aim of Tuina in pediatrics is to unblock meridians and collaterals, to start *Qi* and activate blood, to balance *Yin* and *Yang*, to harmonize *Zang* and *Fu* organs and to increase the organism resistance to diseases<sup>46</sup>.

Traditionally, in the therapy with Tuina there is a difference in treatment according to the infantile sex (*Yin* and *Yang* presentation). In the therapy prescription, the points and channels of the right arm are stimulated for girls and of the left arm for boys, while other points and channels are stimulated bilaterally<sup>47</sup>. Even though Tuina as an independent method provides good results in infantile treatments, especially when considering injuries brachial plexus (99.3%<sup>48</sup>), anorexia (96.1%<sup>49</sup>), and constipation (96.5%<sup>50</sup>), a combination of acupuncture and Tuina has proven to be more efficient with infantile torticollis (95.8%<sup>51</sup>), the application of moxibustion, ginger and Tuina presented the efficiency of 100% with diarrhea<sup>52</sup>, while the application of acupuncture injections (injections of diverse medicine in acupunctural points), functional exercises, Tuina and acupuncture provide best results in the therapy of cerebral paralysis<sup>53</sup>.

### Conclusion

Tuina is a type of massage. It is used as an independent method and as an additional method to traditional and Western methods of treatment. Review of the literature shows that it has been successfully applied to the states after injuries, rheumatic, neurological and other diseases.

In published studies, the synergistic effect of Tuina with acupuncture and other methods of TCM is emphasized. Effects alone and in combination with TCM therapy are better compared to Western medicine. Future studies, planned in the Department of Physical Medicine and Rehabilitation, will compare the effect of Tuina and acupuncture with conventional massage and ultrasound massage, as well as with other agents in physical and rehabilitative medicine.

Classical massage is similar to Tuina, and following the historical line, it emerged from it. If they are applied together, the indication area is expanded. In the novel literature, it is justifiable to utilize the term "integrative medicine" instead of the term "alternative medicine". It is all one medicine.

### REFERENCES

1. *Yanfu Z.* Chinese Tuina (massage). Shanghai: Publishing House of Shanghai of Traditional Chinese Medicine; 2002.
2. *Bullock RR.* Essential Traditional Chinese Medicine. London: Caxton Editions; 2002.
3. *Yanfu Z.* Basic Theory of Traditional Chinese Medicine. Shanghai: Publishing House of Shanghai of Traditional Chinese Medicine; 2002.
4. *Mihajlović V.* Physiotherapy Rijeka Crnojevića: Obodsko slovo; 2002. (Serbian)
5. Essentials of Chinese Acupuncture. Shanghai: Beijing College of Traditional Chinese Medicine; 2002.
6. The Miracle of Acupuncture. Beijing: Foreign Languages Press, 1993.
7. *Gongwang L.* Clinical Acupuncture and Moxibustion. China, Shanghai: Huaxia Publishing House. 2006.
8. *Guoquan S, Juntao Y.* Illustrations of Tuina Manipulations. Shanghai: Shanghai Scientific and Technical Publishers; 2003.
9. *Yanfu Z.* Chinese Acupuncture and Moxibustion. Shanghai: Publishing House of Shanghai University of Traditional Chinese Medicine; 2002.
10. *Gongwang L.* Fundamentals of Acupuncture and Moxibustion. China, Shanghai: Huaxia Publishing House; 2006.
11. *Yanfu Z.* Diagnostics of Traditional Chinese Medicine. Shanghai: Publishing House of Shanghai University of Traditional Chinese Medicine; 2002.
12. *Ying X, Xiaozhen G.* Tongue Diagnosis (Chinese-English). Shanghai: Traditional Chinese Medicine; 2006.
13. *Xiangcai X.* Chinese Tui Na Massage. Boston, MA, USA: YMMA Publication Center; 2002.
14. *Yanfu Z.* Science of Chinese Material Medica. Shanghai: Publishing House of Shanghai University of Traditional Chinese Medicine; 2002.
15. *Wen ZX.* Atlas of Chinese Massage Therapy. Shanghai: Shanghai University of T.C.M. Press; 2006.
16. *Yanfu Z.* Science of Prescriptions. Shanghai: Publishing House of Shanghai University of Traditional Chinese Medicine; 2002.
17. *Tsao JC.* Effectiveness of massage therapy for chronic, non-malignant pain: a review. Evid Based Complement Alternat Med 2007; 4(2): 165-79.

18. *Li YM, Sheng ZX.* Treatment of Soft Tissue Injury with Chinese Tuina Therapy. Beijing: China. Publishing House of Traditional Chinese Medicine and Pharmacology; 1993.
19. *Yu DF.* Science of Chinese Massage. Shanghai: Shanghai Publishing House of Science and Technology; 1996.
20. *Chen M, Logan K, Zhang L.* Tuina Therapy as Novel Therapeutic Strategy for Neurodegenerative Diseases. Sporadic Neurodegeneration Symposium. 2008 July 31-August 01; Boston, Massachusetts, USA. 2008.
21. *Brown P.* Pathophysiology of spasticity. *J Neurol Neurosurg Psychiatry.* 1994; 57(7): 773-7.
22. *Liu y, Zhang xP, Chen JL.* Observation on curative effect of acupuncture on migraine. *Shanghai J Acupunct Moxibustion* 2002; 21(2): 24-5.
23. *Wang JL, Gao XL.* Clinical trial of combined acupuncture and medicine in treating migraine. *Shanxi J Tradit Chin Med* 2004; 25(6): 549-50.
24. *Shao Y, Yan B, Zhang QW, Peng XM.* Clinical Observation of Combined Acupuncture and Tuina in Treating Migraine. *New J Tradit Chin Med* 2005; 37(9): 56-7.
25. *Lu ZQ, Yan SG.* Clinical Trial of Combined Acupuncture and Medicine in Treating Migraine. *Chin J Curr Tradit West Med* 2004; 2(6): 538-9.
26. *Wang YY, Zheng Z, Xue CCL.* Acupuncture for migraine. *Austral J Acupunct Chin Med* 2008; 3(1): 1-16.
27. *Hai-Ying MA.* A Report on the Treatment of 20 Cases of Chronic Colitis with Spirit Damp Illumination Combined with Electro-acupuncture. *Gan Su Zhong Yi* 2004; 9: 37.
28. *An-fu Y, Jing LV, Fen-Ying LI.* Treatment of 18 Cases of Chronic Prostatitis by Acupuncture Plus Tuina Therapy. *J Acupunct Tuina Sci* 2005; 3(6): 11-2.
29. *Guo A, Meng Q.* Acupuncture combined with spinal tui na for treatment of primary dysmenorrhea in 30 cases. *J Tradit Chin Med* 2008; 28(1): 7-9.
30. *Guo A, Meng Q.* Acupuncture combined with spinal tui na for treatment of primary dysmenorrhea in 30 cases. *J Tradit Chin Med* 2008; 28(1): 10-2.
31. *Jin-su W.* Effect of acupuncture and tuina on stroke. *J Acupunct Tuina Sci* 2005; 3(1): 31-2.
32. *Yun L, Xiao-li K.* Treatment of 120 Cases of Nuchal Ligament Strain by Acupuncture and Tuina. *J Acupunct Tuina Sci* 2007; 5(4): 250-1.
33. *Yong C.* Treatment of 42 Cases of Stiff Neck by Relaxing Needling plus Tuina. *J Acupunct Tuina Sci* 2005; 3(6): 32.
34. *Yang C.* Therapeutic Effect of Acupuncture plus Tuina on cervical Spondilosis. *J Acupunct Tuina Sci* 2008; 6(6): 344-6.
35. *Xiao C.* Treatment of Protrusion of Cervical Intervertebral Disc with Tuina Therapy plus Acupuncture. *J Acupunct Tuina Sci* 2003; 1(4): 41-2.
36. *Gao Y.* Observations of Efficacy of Acupuncture plus Tuina in Treating Supraspinatus Tendinitis. *J Acupunct Tuina Sci* 2009; 7(2): 94-7.
37. *Shui-rong H.* Clinical Study of Warming Needle Moxibustion plus Tuina for Shoulder Periarthritis. *J Acupunct Tuina Sci* 2008; 6(1): 39-41.
38. *Wei-qiong H, Si-wei X, Li-wei Z.* Observations on the Effect of Tuina plus Acupuncture for Cervical Migraine *J Acupunct Tuina Sci* 2004; 2(4): 50-2.
39. *Cui M, Jian-you J.* Observation on Therapeutic Effects of Acupuncture and Tuina in Treatment of Sprains and Strains of Minor Joints at our Extremities *J Acupunct Tuina Sci* 2009; 7(4): 228-30.
40. *Huang SR, Shi YY, Shi GT.* Pathogenic Factors of Blood Circulation Disturbance in Lumbar Intervertebral Disc Herniation and Mechanism of Tuina Manipulation in Promoting Circulation. *J Chin Integrat Med* 2003; 1(4): 255-8.
41. *Yan-min G.* Treatment of 157 Cases of Cervical Spondylosis of Vertebral Artery Type by Tuina Therapy. *J Acupunct Tuina Sci* 2009; 7(2): 113-5.
42. *Wen-zhong G.* Clinical Observation of Tuina Therapy in Treating 47 Cases of Vertigo. *J Acupunct Tuina Sci* 2008; 6(1): 49-51.
43. *Li-di K.* Tuina Treatment for 37 Cases of Postoperative Urinary Retention. *J Acupunct Tuina Sci* 2009; 7(2): 116-7.
44. *Ping L, Juan-Juan Z, Yi Z, Jia-qi C.* Research Advance on Tuina and Postpartum Milk Secretion. *J Acupunct Tuina Sci* 2009; 7(6): 375-8.
45. *Zheng JJ, Lu P, Zhao Y.* Research on Tuina treatment for postpartum hypolactation. *Zhongguo Zhen Jiu* 2009; 29(6): 501-3. (Chinese)
46. *Wei Z.* Introduction to Infantile Tuina. *J Acupunct Tuina Sci* 2004; 2(5): 8-10
47. *Rossi E.* Pediatric Tuina and Acupuncture: The Xiaoxiao Clinic in Milan. *J Chin Med* 2007; 85: 59-60.
48. *Shi-chun H.* Treatment of 150 Cases of Infantile Brachial Plexus Injury by Tuina. *J Acupunct Tuina Sci* 2005; 3(2): 39-40.
49. *Xiao-yu Z.* Clinical Observation of Tuina in Treating Anorexia in 78 Children. *J Acupunct Tuina Sci* 2004; 2(6): 43-4.
50. *Yong-mei W, Chun-lan S.* Observation on Therapeutic Results in Tuina Treatment of 56 cases of Infantile Constipation. *J Acupunct Tuina Sci* 2004; 2(5): 22-3.
51. *Jian-zhong L.* Tuina Manipulation on Infantile Myogenic Torticollis. *J Acupunct Tuina Sci* 2004; 2(5): 24-5.
52. *Xiao-feng L.* Treatment of Child Diarrhea by Ginger-Partitioned Moxibustion plus Tuina. *J Acupunct Tuina Sci* 2003; 1(6): 20-1.
53. *Wei-guon Z.* Treatment of Infantile Cerebral Palsy Mainly by Acupoint-Pressing and Tuina. *J Acupunct Tuina Sci* 2005; 3(1): 48-50.

Received on January 4, 2011.

Revised on May 16, 2011.

Accepted on May 27, 2011.

OnLine-first, April, 2012.