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## Lumbar disc herniation and radiculopathy from malpractice of Thai traditional massage: a case report

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*Thai traditional massage is becoming popular and being restored by the Institute of Thai Traditional Medicine, Ministry of Public Health. While not all of the practitioners are well trained or have adequate experience, the chance to develop complications from malpractice may be increase. This report presents a case of simple low back pain patient, who had received multiple lumbar disc herniation and radiculopathy as a result of malpractice during traditional massage and manipulation. The relevant health organizations should be concerned about this problem, and start prevention by providing appropriate health education to both the practitioners and the public.*

**Key words :** *Thai traditional massage, Manipulation, Lumbar disc herniation.*

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ดวงใจ ชัยวานิชศิริ, สาลินี พลังแสงวิไล, เสก อักษรานุเคราะห์. รายงานผู้ป่วยหมอนรองกระดูกกดทับรากประสาทส่วนเอวจากการนวดผิดวิธี. จุฬาลงกรณ์เวชสาร 2545 เม.ย; 46(4): 327 - 32

การนวดไทยกำลังเป็นที่นิยมและได้รับการพัฒนาฟื้นฟูโดยสถาบันแพทย์แผนไทย กระทรวงสาธารณสุข แต่ในเชิงปฏิบัติยังไม่มีการควบคุมดูแลอย่างทั่วถึง จึงมีโอกาที่ผู้ป่วยจะได้รับอันตรายจากการนวดและดัดที่ผิดวิธี รายงานฉบับนี้นำเสนอผู้ป่วยหนึ่งรายที่มีอาการปวดหลัง แล้วได้รับการนวดและดัดจากผู้ที่ขาดความชำนาญ ทำให้เกิดภาวะหมอนรองกระดูกกดทับรากประสาทส่วนเอวเป็นผลแทรกซ้อนตามมา หน่วยงานสาธารณสุขที่เกี่ยวข้องควรตระหนักถึงปัญหาเหล่านี้ และเพิ่มมาตรการป้องกัน โดยให้ความรู้ทั้งแก่ผู้ที่ประกอบการนวด และประชาชนทั่วไปให้ทั่วถึงยิ่งขึ้น

คำสำคัญ : การนวดไทย, การดัด, หมอนรองกระดูก

Massage is defined as the therapeutic manipulation of soft tissue of the body for the purpose of normalization of those tissues.<sup>(1)</sup> It is also defined as "hand motion practiced on the body with a therapeutic goal".<sup>(2,3)</sup> This procedure is one of the oldest treatment modalities in medicine and has been used for more than 2500 years in almost every age such as in ancient China, in Ayurvedic system of India, and during the time of Hippocrates.<sup>(4,5)</sup> The physiological effects of massage are both from direct mechanical effects and remote (reflex) mechanism.<sup>(4,6,7)</sup> In recent years, the use of alternative medicine which had declined due to the modern medicine technology, has regained its popularity.<sup>(8,9)</sup> Thai traditional massage also has become popular in the past decade. Its benefits of pain relief and relaxation are well accepted.<sup>(10)</sup> However, the risks of developing soft tissue injuries and aggravation of the diseases in defective structures may increase if it is practiced by a non-skilled or non-licensed practitioner. This case report presents a patient who suffered with lumbar disc herniation and radiculopathy resulting from malpractice of Thai traditional massage.

### Case Report

A 43 year-old man presented with the chief complaint being back pain and having right leg weakness for 8 weeks. He is a government employee usually healthy with no previous history of any accident. About 12 weeks ago, he started to develop a dull aching pain in his lower back. The symptom persisted for 4 weeks, so he decided to have Thai traditional massage. In addition to deep massage, he passively stretched his back by masseur in a crossed leg sitting position, bending his trunk forward with his

arms straight out to reach the floor. When he went back home, his pain got worse, but he still continued the massage program. On the 3<sup>rd</sup> visit, while the masseur pushed his legs upward as a double straight leg-raising maneuver in a supine position, he suddenly experienced a severe pain shooting down his right leg. The pain was so bad that he could not maintain normal activities, and was suffered even in bed. This caused him to stop working and he went to a nearby hospital where he was given medication and lumbar myelogram. After a month of home rest, his pain gradually subsided to a level that he could walk without distress. But he still had weakness in his right leg and noticed that his right thigh seemed to be smaller than the left side. So he came to the Out Patient Department of Rehabilitation Medicine at King Chulalongkorn Memorial Hospital.

On physical examination, the patient was asthenic built, good general appearance and cooperative. The systemic reviews were normal. The right thigh showed atrophy with a diameter of 1.5 centimeters less than the left side. The lumbar spine was moderately limited in motion with tightness of both hamstrings muscles. The straight leg-raising test was negative. The motor power of the right hip flexors, knee extensors, and extensor hallucis longus were of grade IV, while the others were of grade V. The sensation was intact. The deep tendon reflexes were all 2+, except for the right knee which decreased to 1+.

### Investigation

X - ray of lumbosacral spine: Straightening of the lumbar spine, normal vertebra and intervertebral disc space.

Lumbar myelogram: Anterolateral indentation of L3-4 and L4-5 levels with marked pressure effect on L4, mild degree at L5 and S1 transversing roots bilaterally. It could be due to herniated nucleus pulposus at L3-4 and L4-5 levels.

Electrodiagnosis: Signs of partial denervations were found in right tibialis anterior, right quadriceps, right extensor hallucis longus, and right L4-5 paraspinal muscles. The findings were compatible with moderate degree of R.L4-5 nerve roots degeneration.

### Management

The patient attended the rehabilitation program which included heat, pelvic traction, and therapeutic exercise. Within 10 weeks, he was symptom-free and regained his muscle bulk back to nearly normal. The follow-up electrodiagnosis showed reversed to normal EMG findings except only modest signs of denervation in right lumbar paraspinal muscles.

### Discussion and conclusion

The therapeutic effects of massage have been widely reported. The benefits are mainly concerned with musculoskeletal disorders and circulatory system.<sup>(11-14)</sup> Thai traditional massage has also been reported to reduce local pain and improve body circulation.<sup>(15,16)</sup> Serious complication from massage and manual therapy have rarely been reported. One case resulted from direct pressure on the recurrent thenar motor branch of Median nerve,<sup>(17)</sup> Another case developed hematoma from a digital massage in a patient taking anticoagulant,<sup>(18)</sup> and one case of popliteal aneurysm was complicated by massaging

on a distal femoral osteochondroma.<sup>(19)</sup> Since massage is becoming more frequently practiced, the risks of developing complications may have increased.

Thai traditional massage is usually practiced in combination with stretching or manipulation methods such as Yoga or Rusee-dadton. The maneuver themselves are of great benefit especially in management of pain originating from muscle dysfunction. But for those who have already developed degenerative joint disease, rheumatoid arthritis, or ankylosing spondylitis the maneuver may be harmful if the joints or the spines are forced into an improper position or through an abnormal range of motion.

The patient in this report had started with a simple "lower back pain" which could happen in about 80 % of a normal population. Though the plain film found no evidence of degenerative changes, he at this age, had already developed some degree of spondylosis. This could be defined as "mild degree" or "dysfunctional stage" of spondylosis, for which the x-ray findings are still normal. The massage alone was probably not able to cause serious soft tissue or nerve injury. The problem most likely developed after the back was put into a prolonged flexed position, which increased the intra-discal pressure and drove the disc to progressive bulging. In the double straight leg-raise position, the action of the hip flexors could force the patient's lumbar spine into an extended position. These were enough to encroach on the bulging disc and the adjacent spinal nerve roots.

The back-flexed position in this case is described in a handbook of Rusee-dadton as a method for treating a stiff shoulder.<sup>(20)</sup> A similar posture is used for leg cramp. Also the straight - leg raise exercise is not one of the recommended methods.

So one explanation could be that the patient was unfortunately treated by a non - experienced person.

Thai Massage Restoration Project has revised the text on Thai traditional massage, which is based on traditional medicine combined with physiology of modern medicine.<sup>(21)</sup> Also the Foundation for Restoring Thai Traditional Medicine and the College of Ayurvedic Medicine has a the program and curriculum to train personnel in traditional medicine. According to these projects, the problems of malpractice and complications from non-skilled persons will be reduced. Most of all, health education should be taught as an important priority to Thai paramedic personnel especially to Thai traditional masseurs.

#### References

1. Rechten JJ, Andary M, Holmes TG, Wieting M. Manipulation, massage, and traction. In: DeLisa JA, ed. Rehabilitation Medicine, Principle and Practice. 3<sup>rd</sup> ed. Philadelphia: Lippincott-Raven, 1998: 521 - 52
2. Atchison JW, Stoll ST, Gilliar WG. Manipulation, traction, and massage. In: Braddom RL, ed. Physical Medicine & Rehabilitation. Philadelphia: WB. Saunders company, 1996: 421 - 8
3. ประไพ พัวพันธ์. การนวด การดึง การดัด. ใน: เสก อักษรานุเคราะห์, บรรณารักษ์. ตำราเวชศาสตร์ฟื้นฟู. พิมพ์ครั้งที่ 3. กรุงเทพฯ : โรงพิมพ์เทคนิค 19, 2539: 191 - 5
4. Braverman DL, Schulman RA. Massage techniques in rehabilitation medicine. Phys Med Rehabil Clin N Am 1999 Aug; 10(3): 631 - 49, ix
5. Kanemetz HL. History of massage. In: Basmajian JV, ed. Manipulation, Traction and Massage. 3<sup>rd</sup> ed. Baltimore: Williams & Wilkins, 1985: 1 - 44
6. Goats GC. Massage—the scientific basis of an ancient art: Part 2. Physiological and therapeutic effects. Br J Sports Med 1994 Sep; 28(3): 153 - 6
7. Walkin KG. Physiologic effects of massage. In: Basmajian JV, ed. Manipulation, Traction and Massage. 3<sup>rd</sup> ed. Baltimore: Williams & Wilkins, 1985 : 45 - 50
8. Stewart D, Weeks J, Bent S. Utilization, patient satisfaction, and cost implications of acupuncture, massage, and naturopathic medicine offered as covered health benefits: a comparison of two delivery models. Altern Ther Health Med 2001 Jul-Aug; 7(4): 66 - 70
9. Ramsey SD, Spencer AC, Topolski TD, Belza B, Patrick DL. Use of alternative therapies by older adults with osteoarthritis. Arthritis Rheum 2001 Jun; 45(3): 222 - 7
10. Disayavanish C, Disayavanish P. Introduction of the treatment method of Thai traditional medicine: its validity and future perspectives. Psychiatry Clin Neurosci 1998 Dec; 52 Suppl: S334 - 7
11. Gross AR, Aker PD, Quartly C. Manual therapy in the treatment of neck pain. Rheum Dis Clin North Am 1996 Aug; 22(3): 579 - 98
12. Cherkin DC, Eisenberg D, Sherman KJ, Barlow W, Kaptchuk TJ, Street J, Deyo RA. Randomized trial comparing traditional Chinese medical acupuncture, therapeutic massage, and self-care education for chronic low back pain. Arch Intern Med 2001 Apr 23; 161(8): 1081 - 8
13. Kirshbaum M. Using massage in the relief of lymphoedema. Prof Nurse 1996 Jan; 11(4): 230 - 2

14. Callaghan MJ. The role of massage in the management of the athlete: a review. *Br J Sports Med* 1993 Mar; 27(1): 28 - 33
15. กรุงไกร เจนพาณิชย์, ประเสริฐศักดิ์ ตู๋จินดา. Effect of Thai traditional massage on the circulatory system. *สารศิริราช* 2524 ก.ย; 33(9): 575 - 81
16. วิชัย อึ้งพินิจพงศ์, สมทรง ศุภศิลป์ ณ นคร. Thai traditional massage and manipulation: good things that should be developed. *วารสารเทคนิคการแพทย์และกายภาพบำบัด* 2534 พ.ค.- ส.ค; 3(2): 11 - 7
17. Herskovitz S, Strauch B, Gordon MJV. Shiatsu-induced injury of the median recurrent motor branch. *Muscle Nerve* 1992 Oct; 15(10): 1215
18. Yeo TC, Choo MH, Tay MB. Massive hematoma from digital massage in an anticoagulated patient: a case report *Singapore Med J* 1994 Jun; 35(3): 319 - 20
19. Kalinga MJ, Lo NN, Tan SK. Popliteal artery pseudoaneurysm caused by an osteochondroma -- a traditional medicine massage sequelae. *Singapore Med J* 1996 Aug; 37(4): 443 - 5
20. พิติษฐ เบญจมงคลวารี. โครงการฟื้นฟูการนวดไทย มุลินธิสาธารณสุขกับการพัฒนาและคณะ. 21 ท่า ดัดตน. กรุงเทพฯ : สำนักพิมพ์หมอชาวบ้าน, 2543.
21. โครงการฟื้นฟูการนวดไทย. คู่มือการนวดไทยในการสาธารณสุขมูลฐาน, กรุงเทพฯ: โครงการฟื้นฟูการนวดไทย, 2537.