

Effect of Myanmar Massotherapy in the Management of Neck Pain due to *Sandhigata Vata*

Wint Theingi, Thein Zaw Linn, Yin Yin Thi
University of Traditional Medicine

Introduction

- ❖ Neck pain is one of several regional pain problems affecting the musculoskeletal system.
- ❖ Neck pain due to *sandhigata vata* is a clinical condition in which structural as well as functional derangement takes place during the process of pathogenesis when the vitiated *vayu* gets localized into the cervical joints.
- ❖ It leads to distress in routine work because it causes impairment of function, severe pain and swelling due to which movement of neck is restricted.

- ❖ Due to change in life style like unsuitable sitting, sleeping, standing and looking upwards or obliquely in various professions, *sandhigata vata* has emerged in society as prominent disease (Sehgal *et al.*, 2009).
- ❖ Neck pain is very common problem and affects 30–50% of the general population annually.
- ❖ 15% of the general population will experience chronic neck pain (>3 months) at some point in their lives.

- ❖ 11–14% of the working population will annually experience activity limitations due to neck pain (IASP, 2009).
- ❖ Although it is not life-threatening, neck pain can have a negative effect on productivity and overall quality of life (Bronfort *et al.*, 2012).
- ❖ Although therapeutic massage is one of the most popular CAM therapies for neck pain, little is known about its effectiveness for this condition. (NCCAM, 2009).

- ❖ Myanmar Massotherapy was also used for the treatment of neck pain and was one of the important components in Myanmar traditional medicine (Department of Physical Medicine, 2005).
- ❖ In clinical practice of traditional medicine, therapeutic procedures of Massotherapy were used in neck pain treatment, but there was no clinical study in Traditional Medicine Teaching Hospital.
- ❖ Therefore, this study aimed to carry out effect of Myanmar massotherapy in neck pain patients.

General Objective

To study the effect of Myanmar massotherapy in the management of neck pain due to *sandhigata vata*

Specific Objectives

- ❖ To describe the clinical presentation of neck pain due to *sandhigata vata* patients before treatment (day 0)
- ❖ To assess the clinical presentation of neck pain due to *sandhigata vata* patients during treatment (day 12 and day 24)
- ❖ To determine the serial improvement of Myanmar massotherapy in the management of neck pain due to *sandhigata vata* (day 0, day 12 and day 24)

Materials and Methods

Materials

For massage : Massage table, Knee high chair

For assessment : Spatula and Goniometer
(HANS.w TOOLS)

For oral medication: TMF-24

For diagnosis : X- ray
:Stethoscope and
Sphygmomanometer

Inclusion criteria

- Patients of either sex with presenting neck pain
- Patients above 21 years and less than 70 years of age

Exclusion criteria

- Patient with co morbid disease
- Pregnant women
- Tuberculosis of spine
- Diabetes mellitus
- Severe hypertension (Systolic blood pressure ≥ 180 / diastolic blood pressure ≥ 109 mmHg)

Methods

- ❖ This study was quasi experimental study and approved by Protocol Board of University of Traditional Medicine.
- ❖ The patients were selected according to the signs and symptoms.
- ❖ Patients' consent was taken by using consent form.
- ❖ X-ray of cervical region (anteroposterior and lateral view) were carried out in patients where necessary to ascertain the diagnosis as well as the differential diagnosis.

- ❖ Registered patients of neck pain were prescribed for oral administration of TMF-24 in tablet form- (2 g) was given three times (morning, afternoon and evening) per day with lukewarm water after meal for a period of study.
- ❖ The patients were performed detailed procedure of therapeutic massage.
- ❖ The duration of the study was last for 24 days.

- ❖ The treatment was given for three consecutive days, and every 4th day was a rest.
- ❖ This schedule was repeated for six times.
- ❖ The assessment of signs and symptoms were done on day 0, day 12 and day 24.

Exclusion
criteria

Patients with neck pain due to
sandhigata vata in TMTH (Mandalay)

- Met inclusion criteria and gave consent form

Identification of demographics characteristics by pro-forma

Cervical X
ray, TMF 24

Analysis of score on day 0

Analysis of score on day 12

Analysis of score on day 24

Compared

Therapeutic procedure of Myanmar Massotherapy

1. Procedure of manipulation

(a) Selection of pressure points

- Selection of pressure points was done according to ancient texts of massotherapy and indication of pressure points.

Major pressure points from head and neck region

- (1) HN- 1 ငယ်ထိပ်ကြော
- (2) HN- 6 နားသယ်စောင်းကြော
- (3) HN- 15 လည်တိုင်ဘေးကြော
- (4) HN- 17 မောင်းဆစ်ကြော
- (5) HN- 24 အလင်းကြော
- (6) HN- 25 အုံးကြော
- (7) HN- 26 ကျောရိုးတက်ကြော
- (8) HN- 27 မောင်းဇက်ကြော
- (9) HN- 28 နံတက်ကြော



HN1



HN 6



HN 15



HN 17



HN 24



HN 25



HN 26



HN 27



HN 28

Complementary pressure points from upper limb

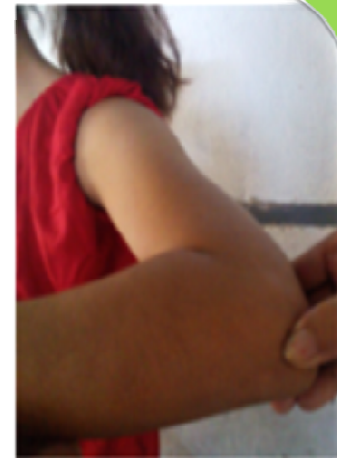
- (1) UL- 3 မောင်းဆစ်ကြော
- (2) UL- 8 အတွင်းကျဉ်ဖူကြော
- (3) UL- 9 အပြင်ကျဉ်ဖူကြော
- (4) UL- 10 လက်ဖျံလက်ခလယ်လက်ခါကြောစု
- (5) UL- 11 လက်ဖျံလက်ကုတ်ကြောစု
- (6) UL- 12 လက်မခွကြားကြော



UL 3



UL 8



UL 9



UL 10



UL 11



UL 12

(b) Types of pressure and pressure intensity

- ❖ Medium pressure was being applied in all points. Intensity ranges from (5 kg-15 kg).

(c) Period of pressure application

- ❖ Pressure application on each point lasted five seconds and the pressure is repeated five times.
- ❖ Duration of massotherapy session depended upon many factors including patient's body build, nature of disease and selected pressure points between 20 and 30 minutes is usual.

(d) Method of manipulation

- Pressing manipulation
- Kneading manipulation
- Grasping manipulation

Other manipulations

- Rotating manipulation
- Pulling manipulation
- Traction manipulation

- ❖ All or most of the pressure points for neck pain was applied by pressing and kneading manipulation.
- ❖ HN-24 and HN-25 was applied by grasping manipulation.

ROM assessment and Massotherapy



20-Jun-16



WTG

22

Data Collection and Data Analysis

- ❖ Assessment of before treatment, during treatment and after treatment (day 0, day 12 and day 24) was done.
- ❖ The analysis was performed by SPSS version 20.
- ❖ The effectiveness was statistically calculated by paired sample t-test and one way ANOVA methods.

Table-1 Assessment Criteria

Signs and symptoms	Grade 0	Grade 1	Grade 2	Grade 3
Pain (VAS)	0	1/2/3	4/5/6	7/8/9/10
Tenderness	No	Tenderness on pressure	Tenderness on movement	Doesn't allow to touch
Headache	No	Mild	Moderate	Severe
Flexion	80°	54°-79°	28°-53°	<28°
Extension	50°	34°-49°	18°-33°	<18°
Left bending	45°	30°-44°	15°-29°	<15°
Right bending	45°	30°-44°	15°-29°	<15°
Left rotation	80°	54°-79°	28°-53°	<28°
Right rotation	80°	54°-79°	28°-53°	<28°
20-Jun-16 Pain radiation	WTG Absent		24 Present	

Findings

Table-2 Clinical presentation in day 0, day 12 and day 24

Clinical presentations		Day 0		Day 12		Day 24	
		Frequency	%	Frequency	%	Frequency	%
Pain	Nil	0	0.0	3	6.8	34	77.3
	Mild	1	2.3	27	61.4	8	18.2
	Moderate	22	50.0	13	29.5	1	2.3
	Severe	21	47.7	1	2.3	1	2.3
Radiation of pain	Absent	1	2.3	27	61.4	42	95.5
	Present	43	97.7	17	38.6	2	4.5
Tenderness	Grade 0	1	2.3	6	13.6	22	50.0
	Grade 1	0	0.0	28	63.6	21	47.7
	Grade 2	28	63.6	10	22.7	1	2.3
	Grade 3	15	34.1	0	0.0	0	0.0

Clinical presentations		Day 0		Day 12		Day 24	
		Frequency	%	Frequency	%	Frequency	%
Headache	Grade 0	11	25.0	32	72.7	38	86.4
	Grade 1	15	34.1	10	22.7	4	9.1
	Grade 2	10	22.7	2	4.5	2	4.5
	Grade 3	8	18.2	0	0.0	0	0.0
Flexion	Grade 0	0	0.0	7	15.9	27	61.4
	Grade 1	1	2.3	24	54.5	17	38.6
	Grade 2	20	45.5	13	29.5	0	0.0
	Grade 3	23	52.2	0	0.0	0	0.0
Extension	Grade 0	0	0.0	21	47.7	39	88.6
	Grade 1	2	4.5	21	47.7	5	11.4
	Grade 2	32	72.7	2	4.5	0	0.0
	Grade 3	10	22.8	0	0.0	0	0.0

Clinical presentations		Day 0		Day 12		Day 24	
		Frequency	%	Frequency	%	Frequency	%
Left bending	Grade 0	0	0.0	23	52.3	43	97.7
	Grade 1	5	11.3	20	45.5	0	0.0
	Grade 2	30	68.2	1	2.3	1	2.3
	Grade 3	9	20.5	0	0.0	0	0.0
Right bending	Grade 0	0	0.0	19	43.2	42	95.5
	Grade 1	3	6.8	23	52.3	2	4.5
	Grade 2	28	63.6	2	4.5	0	0.0
	Grade 3	13	29.6	0	0.0	0	0.0
Left rotation	Grade 0	0	0.0	23	52.3	42	95.5
	Grade 1	8	18.2	21	47.7	2	4.5
	Grade 2	35	79.5	0	0.0	0	0.0
	Grade 3	1	2.3	0	0.0	0	0.0
Right rotation	Grade 0	0	0.0	26	59.1	43	97.7
	Grade 1	11	25.0	18	40.9	1	2.3
	Grade 2	32	72.7	0	0.0	0	0.0
	Grade 3	1	2.3	0	0.0	0	0.0

Table 3. Serial improvement of signs and symptoms

Signs and symptoms	Duration	Mean	Std. Error	95% Confidence Interval		P
				Lower Bound	Upper Bound	
Pain	Day 0	6.95	.256	6.438	7.471	.000
	Day 12	2.84	.205	2.427	3.255	
	Day 24	0.48	.194	0.087	0.868	
Radiation of pain	Day 0	1.98	.023	1.931	2.023	.000
	Day 12	1.39	.074	1.237	1.536	
	Day 24	1.05	.032	0.981	1.110	
Tenderness	Day 0	3.30	.090	3.115	3.476	.000
	Day 12	2.09	.091	1.908	2.274	
	Day 24	1.52	.083	1.356	1.690	
Headache	Day 0	2.34	.159	2.020	2.662	.000
	Day 12	1.32	.085	1.148	1.489	
	Day 24	1.18	.075	1.031	1.332	
Flexion	Day 0	3.50	.083	3.333	3.667	.000
	Day 12	2.14	.101	1.933	2.339	
	Day 24	1.38	.074	1.237	1.536	

Signs and symptoms	Duration	Mean	Std. Error	95% Confidence Interval		P
				Lower Bound	Upper Bound	
Extension	Day 0	3.18	.075	3.031	3.332	.000
	Day 12	1.56	.088	1.390	1.747	
	Day 24	1.11	.048	1.016	1.211	
Left bending	Day 0	3.09	.085	2.920	3.262	.000
	Day 12	1.50	.083	1.333	1.667	
	Day 24	1.04	.045	0.954	1.137	
Right bending	Day 0	3.23	.085	3.055	3.399	.000
	Day 12	1.61	.087	1.438	1.790	
	Day 24	1.05	.032	0.981	1.110	
Left rotation	Day 0	2.84	.065	2.711	2.971	.000
	Day 12	1.48	.076	1.324	1.631	
	Day 24	1.05	.032	0.981	1.110	
Right rotation	Day 0	2.77	.072	2.628	2.917	.000
	Day 12	1.41	.075	1.258	1.56	
	Day 24	1.02	.023	0.977	1.069	

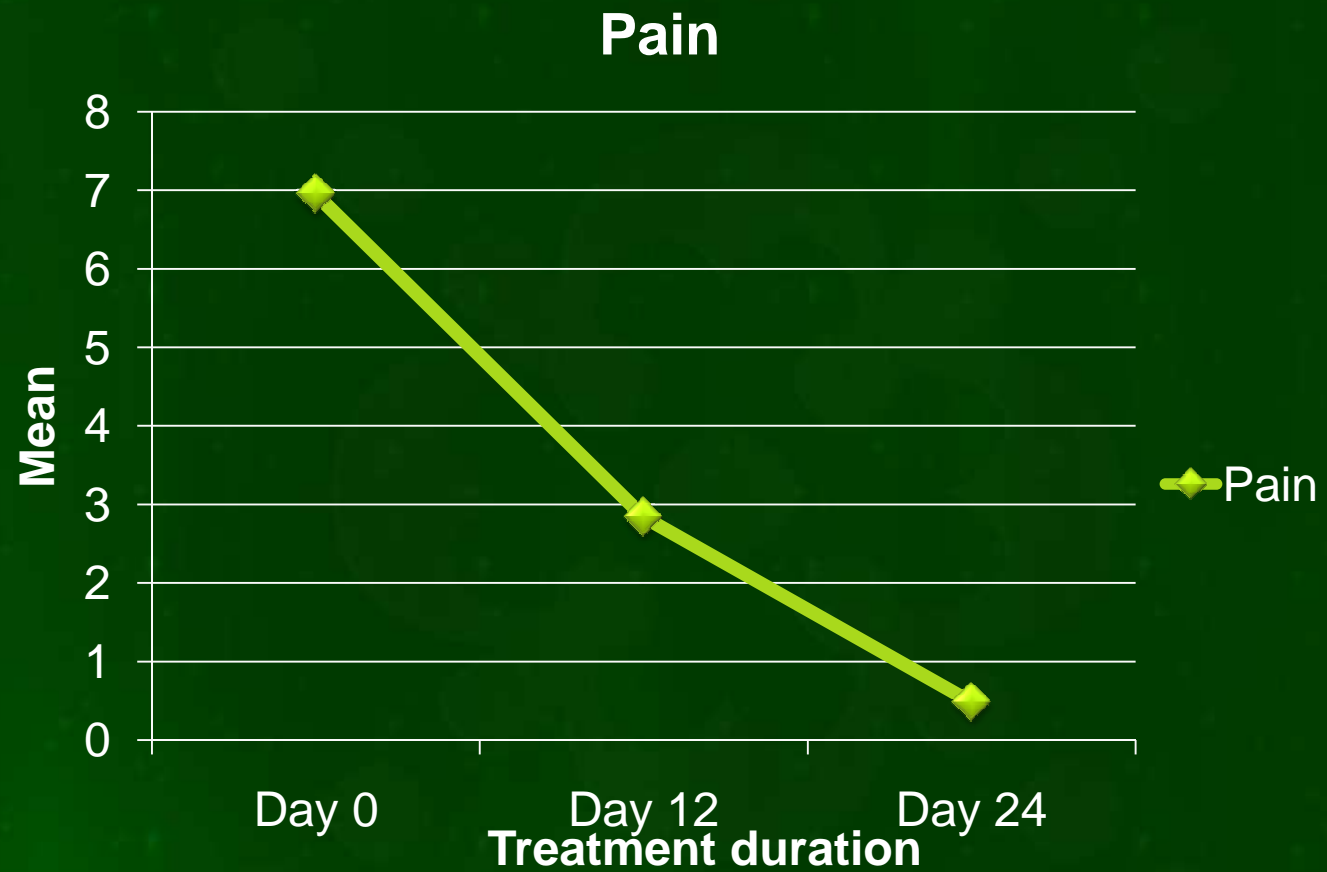


Figure 1. Serial improvement of pain

Radiation of pain

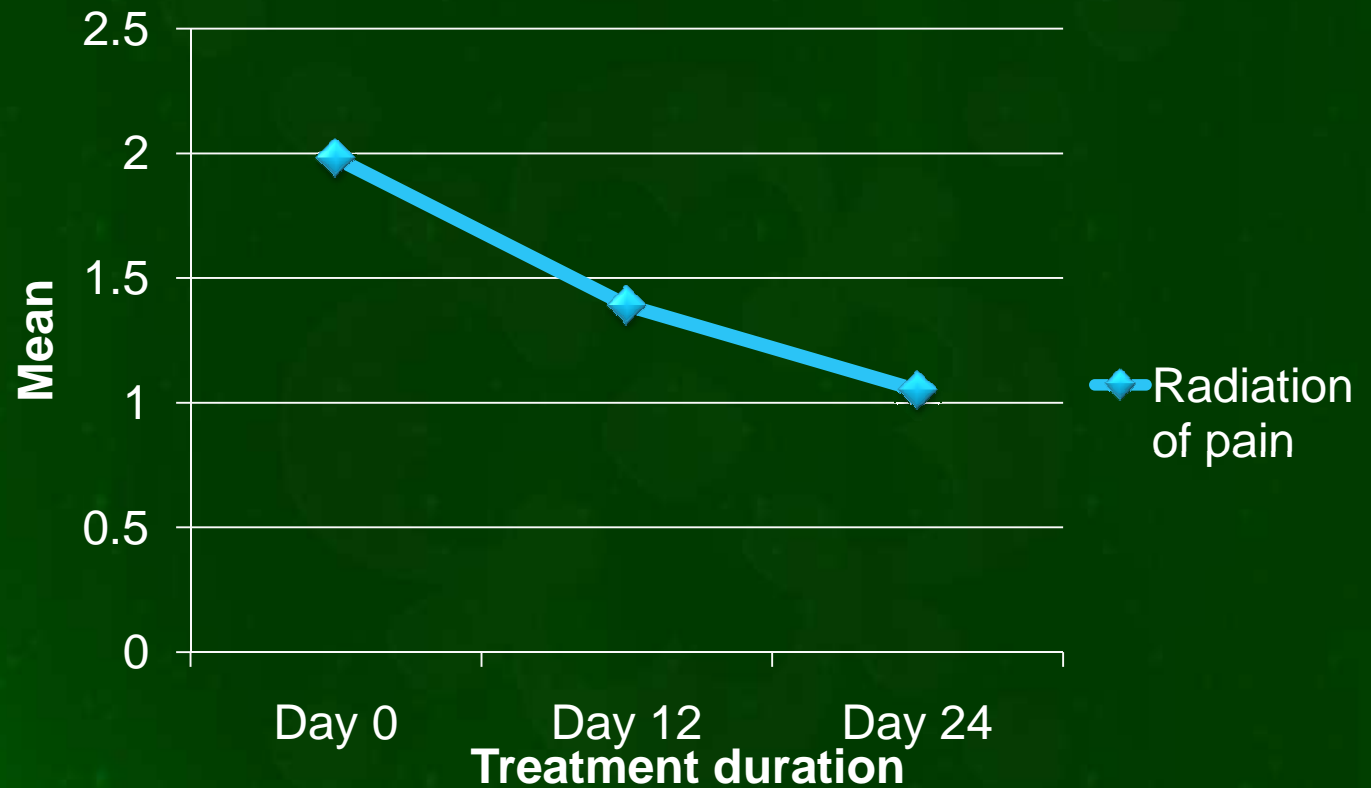


Figure 2. Serial improvement of radiation of pain

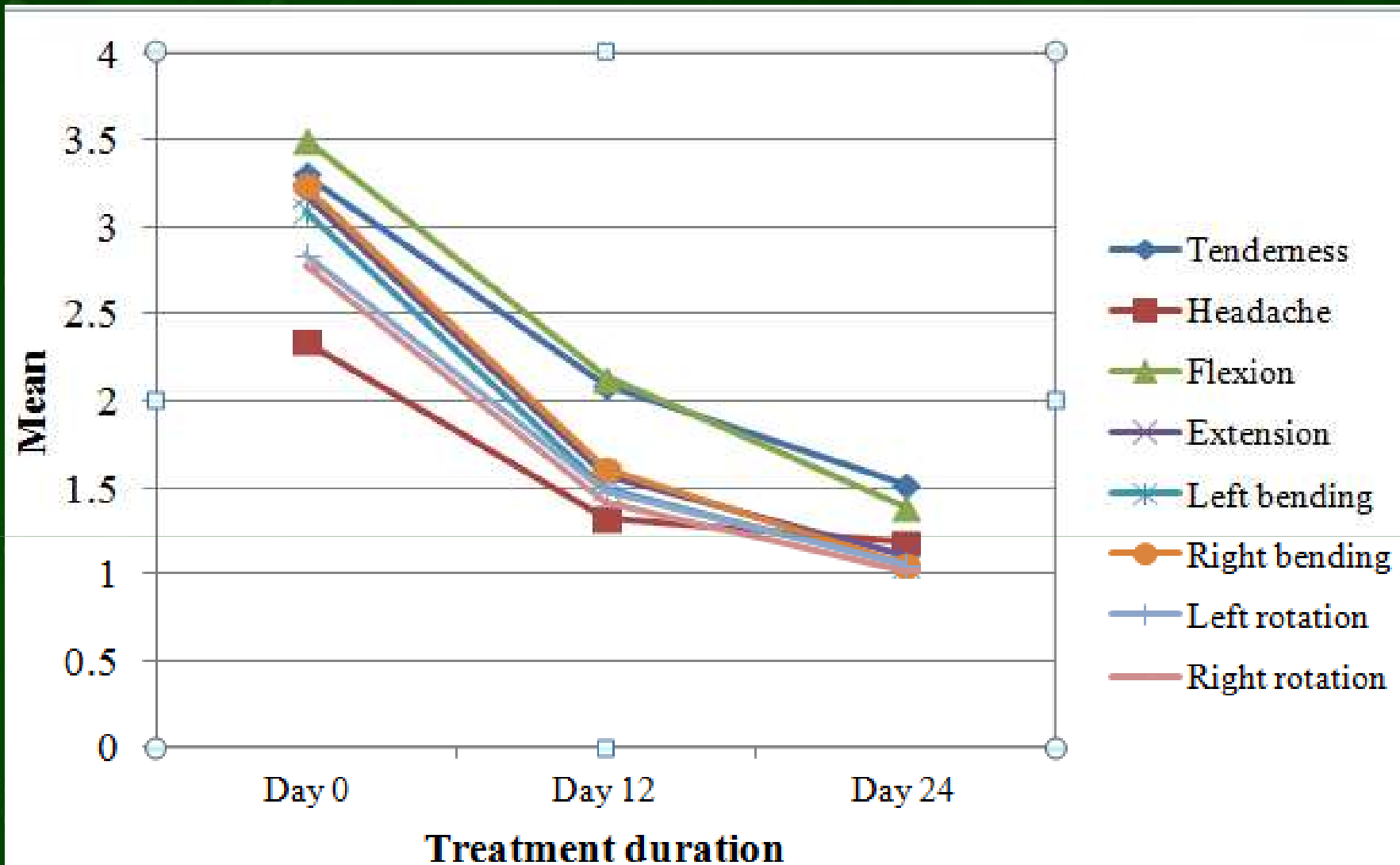


Figure 3. Serial improvement of signs and symptoms

Table 4. Effect of Myanmar massotherapy on neck pain

No	Signs and Symptoms	Mean Percent (%) Improvement	Percent (%) of Relief on Signs and Symptoms
1	Pain	93.1	77.3
2	Radiation of pain	47.0	95.5
3	Tenderness	54.0	50.0
4	Headache	49.6	86.4
5	Flexion	60.6	61.4
6	Extension	65.1	88.6
7	Left bending	66.3	97.7
8	Right bending	67.5	95.5
9	Left rotation	63.0	95.5
10	Right rotation	63.2	97.7

- ❖ In One-Sample Statistics of this study, percent improvement after day 12 was 47.41% ($p < 0.000$), between day 12 and day 24 was 36.04% ($p < 0.000$).
- ❖ The overall effect of Myanmar massotherapy on neck pain patients was 66.95% after day 24 and it is statistically highly significant ($p < 0.000$).

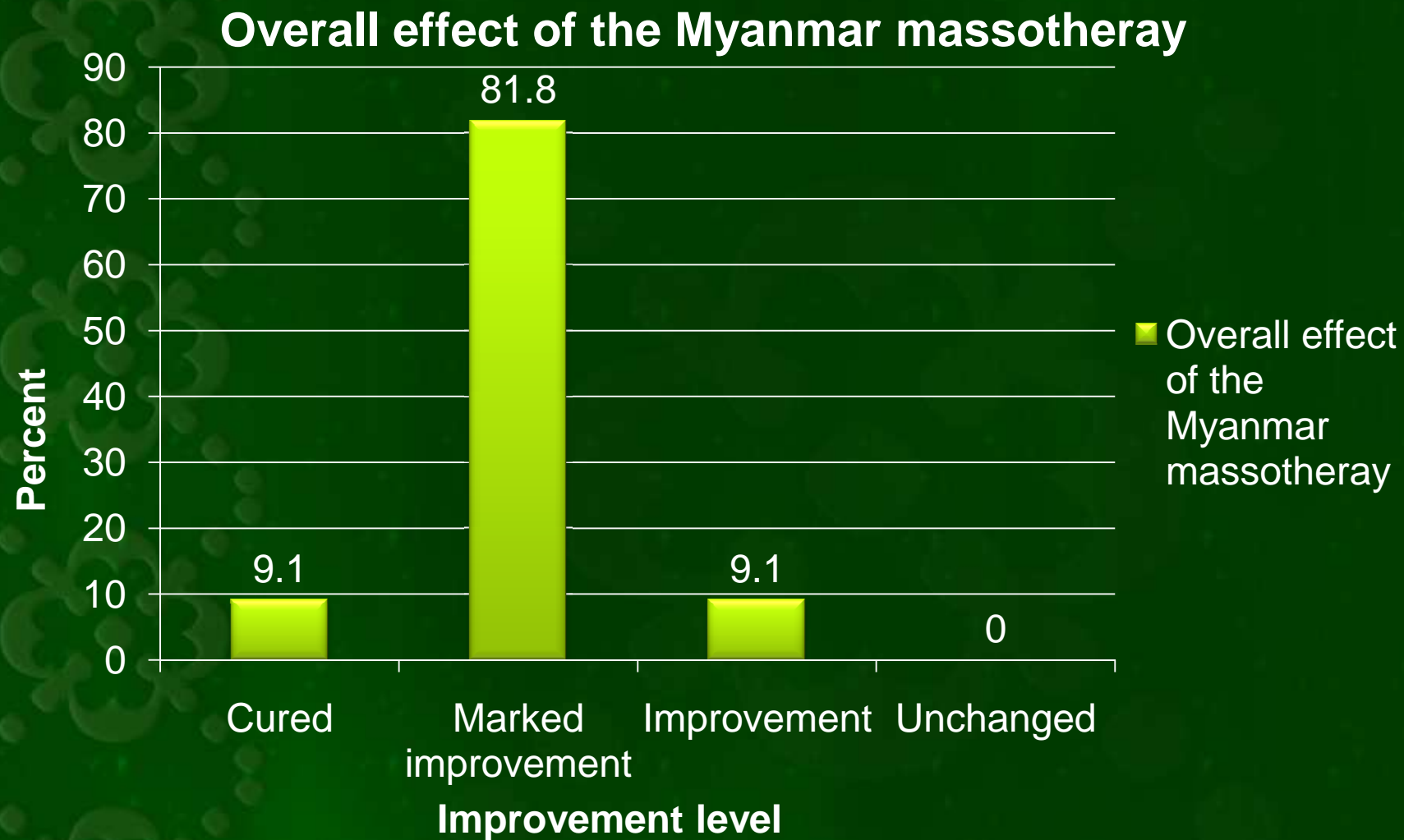


Figure 4. Overall effect of the Myanmar massotherapy

Discussion

- Overall effects of Myanmar massotherapy on neck pain patients are showing results with marked improvement of (66.95%) which is statistically highly significant ($p < 0.000$).
- Effectiveness in individual signs and symptoms such as VAS scale, radiation of pain, tenderness, headache, flexion, extension, left bending, right bending, left rotation and right rotation is also highly significant in this study.

- IASP (2009) stated that prevalence of neck pain peaks at middle age and women are more often affected than men and the results of present study were similar to the previous statement.
- Ronald (2010) stated that cervical spondylosis is easily the most common affecting the neck X ray results of present study were similar to the previous statement.

- Treatment outcome of neck pain was associated with the respective occupations according to statistical report in this study.
- Myanmar massotherapy treatment is very well accepted by the patients and no side effects were reported in any of the patients registered for the trial.

Conclusion and Suggestion

- ➡ Highly significant result was found in pain, radiation of pain, tenderness, headache and ROM (range of movements).
- ➡ It can be concluded that Myanmar massotherapy is safe and effective traditional treatment modality in the management of neck pain due to *sandhigata vata*.
- ➡ This study suggested that traditional treatment needs clinical trials to evaluate certain treatment regimen as well as to carry out evidenced based traditional medicine.

- ➡ Based on the results this treatment can be prescribed rationally on the basis of signs and symptoms of neck pain due to *sandhigata vata* within 24 days course without any side effects.
- ➡ According to the results, Myanmar massotherapy is safe and has benefits for neck pain, at least in the short term.
- ➡ It can be recommended studies to determine optimal massage treatment, as well as larger, more comprehensive studies to follow the patients.

Acknowledgement

➡ The authors would like to thank Rector (Retired), Prof. Dr Than Maung, Pro-Rector (Academic) U Kyaw Thein Htay, Prof. Maung Maung Thet, Head of Physical Medicine Department, Associate Professor U Win Myint, Head (Retired), University of Traditional Medicine, Mandalay, Dr Theim Kyaw ,Director (Admin), Department of Traditional Medicine, Dr. San San Nwet (Rector UOP, Yangon), Associate Professor Dr. Hla Moe, University of Medicine, Mandalay for their support, encouragement and invaluable guidance on this research.

- ➡ Regarding statistics, I am deeply grateful to Dr. Kyaw Oo (Director of Socio-Medical Research, Department of Medical Research, Upper Myanmar), Prof. Dr San San Htay, University of Medicine, Mandalay for their invaluable and enthusiastic advice on the analysis of statistical data.
- ➡ Next the authors express deep gratitude to U Maung Maung Oo, Managing Director of Great Wall Traditional Medicine Manufacturing Co., Ltd. for his kind support.

➡ I express my gratitude and cordial thanks to U Win Naing (Assistant Lecturer), my junior colleagues and all patients for their cooperation in this study.

References

1. Brenda L. (2003). Massage Therapy Has a Role in Pain Management. *Practical pain management magazine*. American Massage Therapy Association. 1, 2
2. Bronfort G., Evans R., Alfred V., Kenneth H., Bracha Y and Richard H. (2012). Simple manipulation, medication, or home exercises with advice for acute and subacute neck pain: A randomized trial. American College of Physicians. Volume 156. No.1, Part 1.
3. Department of Physical Medicine. (2005). Massotherapy. Curriculum committee, University of Traditional Medicine, Mandalay.

4. IASP (International Association of the Study of Pain). (2009). Global year against musculoskeletal pain, Neck Pain. [http://www.Neckpain-final\(2\)pdf-AdobeReader](http://www.Neckpain-final(2)pdf-AdobeReader)
5. NCCAM (National Center for Complementary and Alternative Medicine). (2009). Study finds benefits of therapeutic massage for chronic neck pain.
6. Ronald McRae. (2010). Clinical orthopaedic examination. 6th Edition, Churchill Livingstone, China.

34

7. Sehgal U., Rajagopala M., Dwivedi R. and Bavalatti N. (2009). Role of *Agnikarma* and *Ajamodadivati* in the management of *Sandhigata Vata*, *AYU*-volume.30, Institute for post graduate teaching and research in Ayurveda, Gujarat Ayurved University, Jamnagar. 345-349

Thank You For Your Attention