

"A RANDOMISED CLINICAL TRIAL TO EVALUATE EFFECT OF MASURADHI MANTHA IN MOTION SICKNESS"

Ajit. N. B¹, V.A. Chate², Shreevathsa³, Suma patil⁴

^{1&4}PG Scholar, ²Reader, ³Professor and Head department of Samhita and Siddhanta, GAMC, Mysuru.

Abstract

Motion sickness is common problem faced by most people while travelling by bus, car, train, airplaine and boats. It starts with restlessness and later leads to dizziness, nausea and vomiting. It has synonyms like air Sickness, Car Sickness, Sea Sickness, Travel Sickness and Vomiting. To treat motion sickness mainly antihistamines like scopolamine, promethazine etc drugs are used. In long term usage of these drugs, it produces extra pyramidal signs so it is necessary that, to treat motion sickness without producing un toward effect and to give strength to the patient such one medicine in Masuradhi mantha. Masuradhi is the prepartion made up of masurdal, Madhu and Dadima phala rasa. So in the present article clinical study is conducted in the 80 individuals with motion sickness symptoms.

Key words

Motion sickness, Masuradhdi mantha, Simulator sickness, questionnaire nausea

INTRODUCTION:

In this fast moving world, everyone is busy in making their life to move fast forward. Everyone is travelling one place to another to fulfil their desires, to work, and to achieve. Most of the persons choose buses, cars and other

vehicles. During travelling in bus, car or boat some get travelling sickness or motion sickness. Motion sickness is not a serious illness, but one habituates to such environment regularly it will become a serious illness.

It produces symptoms like,

- Nausea,
- Vomiting,
- Dizziness and
- cold sweat.

Anti- histamine drugs like scopolamine, promethazine etc. drugs are used. But these anti histamines produce side effects like drowsiness, extra pyramidal signs¹. It is better to use food rather than using medicine for the treatment of motion sickness, because food acts as both vyadhi hara and swastya sthapaka. Masuradhi mantha is a preparation, which is used in tridoshajanya chardi². In motion sickness, vomiting is the prime symptom; hence in the present article a randomised clinical trial is done on 80 individuals with motion sickness symptoms.

Aims and objectives

To evaluate the effect of Mauradhi mantha in motion sickness.

Materials and Methods

A minimum of 80 individuals fulfilling inclusion criteria approaching the inpatient and outpatient department of Government Ayurveda medical college and hospital Mysore and the special camps conducted in and around the Mysore were selected and patients

fulfilling the diagnostic criteria, respective of age, irrespective sex, religion and socioeconomic status were selected. To create motion sickness mechanically, rotation chair was prepared.

Inclusion criteria

- Individuals fulfilling the diagnostic criteria for the respective disease.
- The patients coming under the age group of 18-60 years were selected.
- The healthy volunteers willing to take the medicine were selected for the study.

Exclusion Criteria:

- Patients suffering from head injuries, recent infections and other diseases of the ear and neurological system are excluded.
- Pregnant and lactating women are excluded and
- Patients suffering from other systemic diseases are excluded.

Protocol

- The study protocol was approved by the ethical committee of GAMC Mysore. Participants gave written informed consent prior to inclusion, and complete disclosure of the study purpose was offered to all participants before the study procedure.

Rotation Procedure:

Instructions to the participant before starting the rotation procedure.

1. The rotation procedure consists of 5 min of rotation at a constant speed of 120 degrees/sec (20 rounds per min).

2. The participant hear a beep every 10 sec. During rotations, the participant was instructed to move his/her head up and down when he/she heard the beep tone.

3. Participants should not vomit during the procedure and can skip head movements or tell the experimenter to stop the rotation in time.

However, the runs can be interrupted immediately, or the entire procedure can be stopped if necessary.

3. During the rotation procedure, note the actually done head movements and the rotation time.

4. After rotation procedure the participants were asked to rate the Simulator Sickness Questionnaire (SSQ).

Diagnostic Criteria:

As per ICD 10 symptoms of motion sickness are

- cold sweat
- Nausea
- Vomiting
- Dizziness

- Patients exhibiting all or any of the above symptoms are to be considered for the study.

Assessment criteria:

The pre and post test assessment of motion sickness will be done by using "Simulator Sickness Questionnaire" (SSQ).

Grouping of Patients

The study design will be randomised clinical trial with a pre and post test assessment. Patients were categorized into single group.

Statistical Methods:

1. Descriptive statistics.
2. Chi square test,
3. Contingency table analysis and
4. Repeated measure ANOVA by using windows SPSS soft ware.

Observations and Results

Specific observations made on 80 subjects are,

a .Nausea

In the present study 50(62.5%) were presents with nausea and 30(37.5%) were not had the nausea.

b. Vomiting

In the study 54(67.5%) were not felt with vomiting and 26(32.5%) had suffered from vomiting.

c. Dizziness

In the study 67(83.8%) were not had the symptom and 13(16.3%) were had the symptoms.

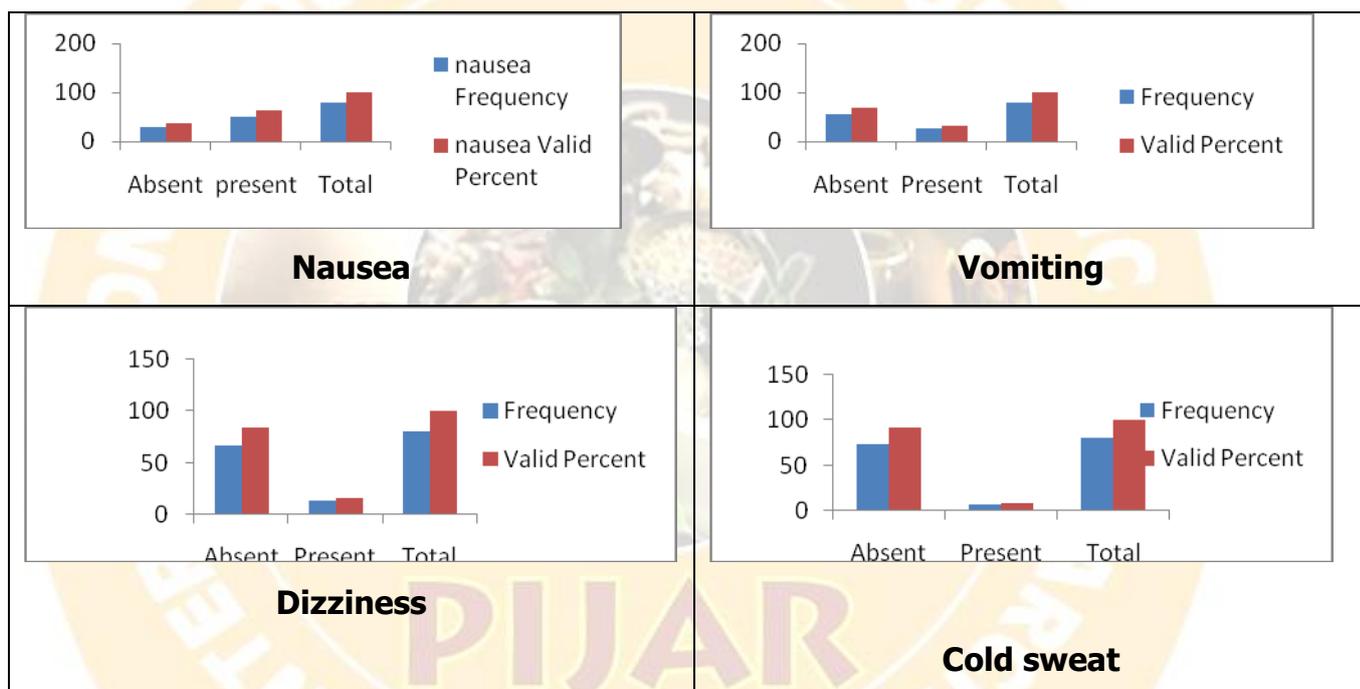
d. Cold Sweat

In the study, 73(91.3%) not had the symptom and 7(8.8%) had this symptom.

e. Head Ache

In the study 45(56.3%) not felt with headache and 35(43.8%) felt with headache.

Graph no. 1 showing the classical symptoms of motion sickness observed in travelling.



Results

Results obtained from clinical study are,

Table no 1 showing the para meters of the motion sickness and its p value.

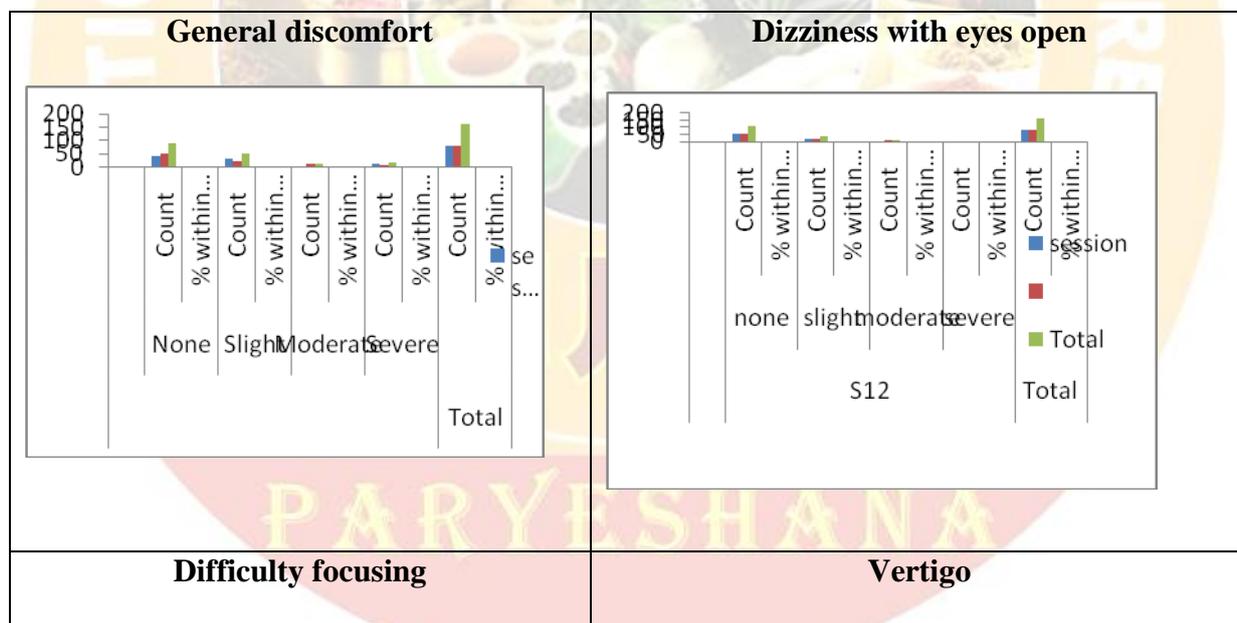
SI .no	Motion Sickness Parameters	P value
1	General discomfort	.001.
2	Fatigue	0.672
3	Headache	0.648
4	Eye Strain	0.220
5	Difficulty In Focusing	0.024
6	Salivation increasing	0.398

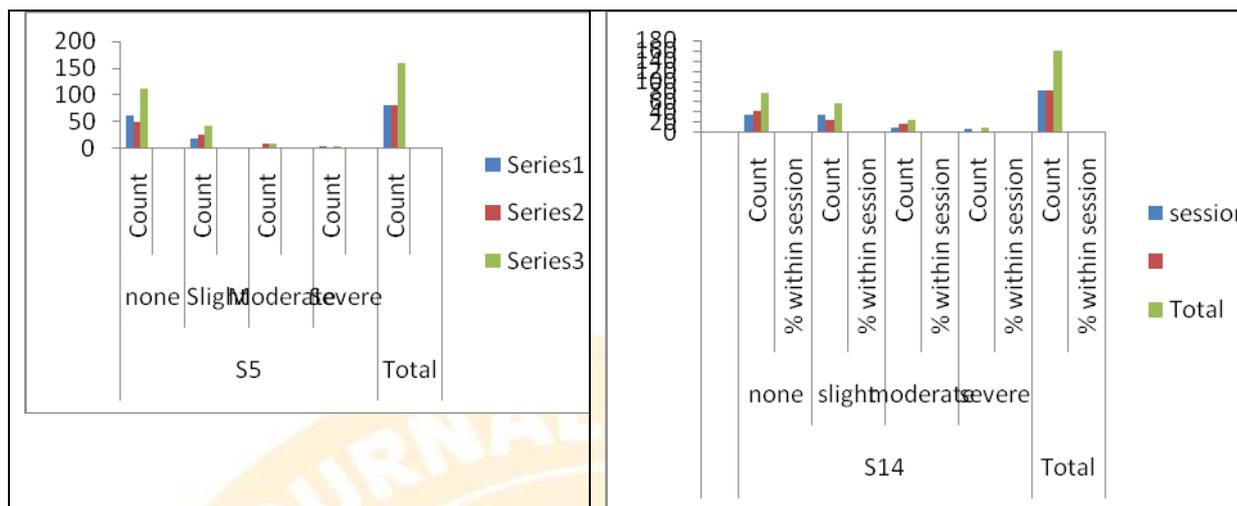
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7	Sweating	0.082
8	Nausea	0.114
9	Difficulty concentrating	0.797
10	Fullness of head	0.741
11	Blurred vision	0.06
12	Dizziness with eyes open	0.009
13	Dizziness with eyes closed	0.07
14	Vertigo	0.05
15	Stomach awareness	0.659
16	Burping	0.076

From the above results it states that, Masuradhi mantha is showed statistically significant results in controlling, general discomfort (0.001), difficulty in focusing (0.024), and difficulty with eyes open (0.009), vertigo (0.05) and burping (0.076).

Graph no.2 showing effect of Masuradhi mantha on general discomfort, dizziness with eyes open, difficulty focusing and vertigo.





Discussion;

Discussion on methods:

1. **Rotation chair:** Rotation chair was used to induce or simulate the symptoms of motion sickness in the study subjects.

Procedure of simulation -The rotation procedure consists of 5 min of rotation at a constant speed of 120 degrees/sec (20 rounds per min). During rotations, the participant hears a beep at every 10 second. The participants were instructed to move head up and down when beep tone was heard. They were instructed to do so, to induce the "Coriolis effect" (the experience of an illusionary tumbling movement that leads to symptoms of nausea).

2. The instruments like BP apparatus and pulse oxymeter was used in the study to check the blood pressure, pulse rate

and oxygen saturation in the study patients.

Discussion on inclusion criteria

Individuals full filling the diagnostic criteria were selected for the study, individuals who come under the age group between 18- 60 were selected because motion sickness is common in this age group and also individuals who wishes to take medicine voluntarily with the motion sickness symptoms was to be selected for the study.

Discussion on Exclusion criteria

Patients with any other systemic disorders, head injuries & recent infections are excluded interference in the action of the drug and also to avoid complications. The presence of these conditions could possibly trigger or aggravate Motion sickness like symptoms when simulated by the

rotation and also would aggravate the symptoms.

Discussion on Simulator Sickness Questionnaire(SSQ)

Simulator sickness Questionnaire (SSQ) is used as reliable assessment measures for the effect of treatment. With the permission and supply of the questionnaire from Kennedy, R.S., Lane, N.E., Berbaum, K.S., & Lilienthal, M.G. (1993).

Simulator Sickness Questionnaire is an enhanced method for quantifying simulator sickness taken from International Journal of Aviation Psychology, 3(3). The Questionnaire consisted of 16 parameters on two domains namely,

1. Nausea domains
2. Oculomotor domains

1. Nausea items

In the questionnaire general discomfort, salivation increasing sweating, nausea, dizziness with eyes open and eyes closed, vertigo, stomach awareness and burping comes under nausea items because they are triggered by vagal nerve and it produces these symptoms.

2. Oculomotor items

In the questionnaire fatigue, head ache, eye strain, difficulty focusing,

difficulty focusing, fullness of head and blurred vision. These items are considered under oculomotor items because from disturbance between audio- visual sensory organs these are taken.

Discussion on results of the clinical study

Among 80 individuals, 16 symptoms were asked for assessment of motion sickness. Among the 16 symptoms, Masuradhi mantha showed statistical significant results for,

General discomfort: Due to laghu guna of mantha, sadyobalakara property it is reduced the symptom general discomfort significantly.

Difficulty focusing: Mantha contains madhu, madhu had chaksusya property, so Masuradhi mantha showed significant result in difficulty focusing.

Dizziness with eyes open: Due to tridoshagna property of Masuradhi mantha, it helpful in controlling the dizziness with eyes open significantly.

Vertigo: Dadima in the Masuradhi mantha is having the karma like Mastishka balya due to its laghu and snigdha guna. It is helpful in controlling vertigo significantly.

Burping: Due to Kashya rasa and sita veerya of masura it is helpful in controlling burping significantly.

Conclusion:

Motion sickness is condition caused due to mis coordination between sense organs. Masuradhi mantha it is the combination of masurdal, madhu and dadima rasa it is helpful in reduction of general discomfort, difficulty focusing, dizziness with eyes open, vertigo and burping significantly.

Bibliography

1. www.wikipedia/ **Motin sickness seen on 21st june 2016.**
2. Prof.K.R.Srikantamurthy (editor), Sharangadhara, Sharagadhara samhita, Chaukhambha Orientalia, Varanasi, Reprint edition 2009, 56
3. www.wikipedia/ **ICD- 10 motion sickness on 22rd june 2016**

Corresponding author:

Dr.Ajit. N. B

PG Scholar, Department of Samhita and Siddhanta, GAMC, Mysuru

Email: ajitnb25@gmail.com

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