

## Wearing the seaband around the wrist and seasickness prevention

Mohammad A. Khoshnevis<sup>1</sup>, Fakhraddin Faizi<sup>1</sup>, Abbas Mahmoodzadeh<sup>2</sup>,  
Mohammad A. Raiesee<sup>3</sup>, Gholam R. Poorheidari<sup>4</sup>, Ali F. Ashtiani<sup>5</sup>

<sup>1</sup>Nursing Faculty, Baqiyatallah Medical Sciences University, Tehran, Iran

<sup>2</sup>Health Faculty, Baqiyatallah Medical Sciences University, Tehran, Iran

<sup>3</sup>Baqiyatallah Hospital, Medical Faculty, Baqiyatallah Medical Sciences University, Tehran, Iran

<sup>4</sup>Research Center of Chemical Injuries, Baqiyatallah Medical Sciences University, Tehran, Iran

<sup>5</sup>Behavioral Sciences Research Center, Baqiyatallah Medical Sciences University, Tehran, Iran

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**Corresponding author:**

Fakhraddin Faizi, MSc

Baqiyatallah Hospital

Tehran 14359, Iran

Phone: +98 88 05 37 69-70

Fax: +98 88 04 01 06

E-mail: fnehrir@yahoo.co.uk

### Abstract

**Introduction:** Acupuncture at the P6 or Neiguan point has been practiced in China for many years to treat nausea and vomiting. More recently, acupressure at P6 has been used successfully to decrease the symptoms of motion sickness. Objective: To determine whether the Seaband, a commercially available acupressure wristband, would relieve the symptoms of motion sickness (nausea and vomiting).

**Material and methods:** 94 healthy men, aged 19 to 43 years, prescreened for susceptibility to motion sickness, divided into two groups as case (50) and control (44). They were tested on 2 separate voyages by transporter boats in the Persian Gulf with the following conditions: wearing the Seaband on the wrist (Neiguan point) as the case group, wearing the Seaband on the dorsal side of the hand as the control group. Main Outcome Measures: Subjective symptoms of motion sickness were assessed using a questionnaire.

**Results:** In the sea band stimulation group, the incidence of nausea and vomiting was significantly lower (22% & 28%) than that in the control group (61% & 48%) respectively.

**Conclusion:** The Seaband worn on the wrist (Neiguan point) and pressing the point before the early onset, decreases the symptoms of motion sickness.

**Key words:** seaband, seasickness, Neiguan point.

### Introduction

Motion sickness is a temporary condition causing dizziness, nausea, and vomiting. Many people will be afflicted by motion sickness when in a car (carsickness), in an airplane (airsickness), on a train or on a boat (seasickness). As a common problem, it affects up to half of airline travelers during heavy turbulence, more than half of children in cars or airplanes, and nearly all boat passengers in very rough seas [1]. Acupuncture has been used to treat gastrointestinal symptoms in China and other Asian countries for many years. The most commonly used acupuncture point in treating nausea and vomiting is P6 or the Neiguan point [2]. Acupuncture at P6 had a significant antiemetic effect on postoperative nausea and vomiting [3]. Also electro acupuncture at P6 decreased cisplatin-associated nausea and vomiting in cancer patients [4, 5]. The incidence of nausea and vomiting following laparoscopic surgery was

reduced to 19% in patients treated with acupressure at P6, compared with 42% in patients given a placebo [6]. The manual stimulation of the Neiguan point by an experimenter, when compared with 2 control groups, significantly reduced abnormal gastric dysrhythmias and the symptoms of vection-induced motion sickness [7]. However, a few studies indicated Acuband having no antiemetic effect at all [8, 9].

This study aims to determine whether the Seaband, a commercially available acupressure wristband, would relieve the symptoms of motion sickness (nausea and vomiting) in military transfer boats in the Persian Gulf.

## Material and methods

The procedure was approved by the Baqiyatallah Medical Sciences University institutional review board, and written informed consent was obtained from each subject before implementing the seaband. Before the first session and embarking the boats, the subjects were instructed as: "In China and Japan certain points on the body have been identified which relieve nausea, vomiting and other symptoms of seasickness. This study is designed to compare two of these points, one on the dorsal part of the hand and one on the wrist. If you feel the onset of nausea and vomiting, immediately press the central point of the seaband". At the start of each session, the subjects were randomly divided in two groups as case (50) and control (44).

All of the 94 subjects were among the navy troops and had a history of susceptibility to nausea and vomiting in the past voyages. In the case group, the Seaband was adjusted to the size of the subject's wrist and placed between the 2 tendons on the wrist and 3 finger widths up from the carpal crease. In the control group the Seaband was placed 3 finger widths on the dorsal side of the hand. For both groups, the subjects were told to apply circular (rotating) pressure on the button of the Seaband as soon as they began to experience any symptoms. Each voyage lasted 4 hours and at the end, the subjects were asked through a standard questionnaire if they had experienced any nausea and vomiting after 1, 2, 3, 4 hr during the transportations. The symptoms were noted and data were collected from the questionnaires afterwards [10].

## Results

The incidence of nausea in the subjects in the past (before the study) was 29 (58%) in the case group, 14 (32%) in the controls. The incidence of vomiting was 14 (28%) and 17 (34%) for cases and controls, respectively. After applying the seaband, 39 (78%) of cases and 17 (39%) of controls reported that they did not have nausea during transportation. The Pearson chi-square test revealed a statistically significant difference between the groups ( $p < 0.000$ ). Also 36

(72%) of cases and 23 (52%) of the control group stated that they did not have any vomiting during the voyages. Using the Pearson chi-square test; there was a significant difference between the groups ( $p < 0.048$ ). The post study analysis indicated that there was a significant difference between symptom reports of the Seaband-wrist condition compared with the seaband-hand condition and control.

## Discussion

The results of this study indicate that the Seaband worn on the wrist relieves the symptoms of motion sickness and reduces the nausea and vomiting rate during transportation in boats when compared with a control condition. We excluded the subjects who reported motion sickness symptoms just before starting the manipulation from the study. Although the assessed symptoms and susceptibility of cases were reported subjectively and no objective measure was examined in this study, the results show that using the Seaband has a remarkable effect in reducing the symptoms of seasickness. These results can be evaluated further using more objective measures.

In conclusion, the Seaband worn on the wrist (Neiguan point) and pressing the point before the early onset, decreases the symptoms of motion sickness.

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