



CLINICAL CASE REPORT



Effects of Acupuncture at the *Yintang* and the *Chengjiang* Acupoints on Cardiac Arrhythmias and Neurocardiogenic Syncope in Emergency First Aid

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Abstract

This study evaluated the effectiveness of *YinTang* and *ChengJiang* acupoints on patients with cardiac arrhythmia and neurocardiogenic syncope in emergency first aid. A 45 year old woman underwent acupuncture. She had a previous history of a valvuloplasty for rheumatic disease and two acute myocardial infarctions, followed by four catheterizations and an angioplasty. Needling of the *YinTang* acupoint and stimulation of the *ChengJiang* acupoint through acupressure were performed for 20 minutes soon after syncope and during tachycardia, hypertension, tachypnea, and precordial pain, without any effect on peripheral oxygen saturation (SpO₂) or the glycemic index. Data were analyzed comparatively by using the following parameters at rest, during syncope, and at 1 minute and 10 minutes after an emergency acupuncture procedure: blood pressure; heart rate; SpO₂; and respiratory rate. We found that acupuncture at *YinTang* and *ChenJiang* acupoints induced cardiovascular responses, increased the limits of the body's homeostasis, and normalized the patient's condition in the case of syncope. Acupuncture using a combination of *ChengJiang* and *YinTang* acupoints had an immediate effect on the autonomic nervous system and on maintaining homeostasis and energy balance in the body. Although this technique was effective, the patient was still referred to the Emergency Room.

1. Introduction

Heart diseases are clinically important due to their high prevalence, mortality, and morbidity. Epidemiological studies report overall mortality rates of 30% on average, with half the deaths occurring in the first 2 hours of the event and 14% of the deaths occurring before the patient receives any medical care [1,2]. The prognosis of these patients depends on the rapidity in providing medical assistance and on the effectiveness of efforts to establish coronary artery reperfusion as soon as possible [3]. In Southeast Asia, Chinese physicians have long been using acupuncture to treat heart diseases. The World Health Organization (WHO) has published an official report listing 31 symptoms, conditions, and diseases, such as cardiac pain, arrhythmias, and hypertension. In controlled trials, those symptoms, conditions, and diseases have been treated effectively by using acupuncture [4,5].

The curious meridians Yin Wei could be involved, and the precordial pain irradiates to the left arm, with a feeling of oppression of the chest and imminent death; however, all cardiology exams are normal. As Yin Wei connects all Yin meridians, the symptoms associated with some clinical particularities may appear because of an impaired meridian [6]. A pattern of disharmony is the condition, as well as the basis for the treatment, which will only be successful when the pattern is properly differentiated; in fact, the best criterion to verify a diagnosis is the effectiveness of the treatment. The basic patterns of disharmony of the body constitute a set of signs and symptoms that determine an illness and can be analyzed in traditional Chinese medicine from various points of view, e.g., loss of balance of Yin and Yang in relation to the five movements and according to the internal systems. In different periods of the development of Chinese medicine, several methods were applied to identify the patterns that could be used in different situations: "These methods have their own specificities and play a different role in diagnosis; however, they are linked and complement each other" [7].

One of the main purposes of acupuncture is to keep the energetic balance of the body. Acupuncture can modulate the autonomic tonus and, consequently, correct the abnormalities in blood pressure (BP) caused by changes in heart rate (HR), cardiac contractility and arteriolar vasomotor tone [8]. One of the mechanisms by which acupuncture inhibits centrally-mediated arrhythmias is by increasing the endorphin and dynorphin levels in the periaqueductal grey matter. This reduces the levels of norepinephrine and dopamine by decreasing the sympathetic stimulation of the heart.

The points *YinTang* and *ChengJiang* provide homeostasis, which consequently influences the cardiovascular system, and modern studies have widely evaluated the therapeutic effects of acupuncture on the cardiovascular system. The efficacy of acupuncture in treating cardiovascular disorders and their symptoms, such as arrhythmia, palpitation, dyspnea, dizziness, syncope, hypotension, hypertension, and angina, is gradually being recognized [9–13]. Based on these ideas, the main goal of this research was to evaluate the effectiveness of acupuncture at the *YinTang* and the *ChengJiang* acupoints on cardiac patients with cardiac arrhythmia and neurocardiogenic syncope in cases of emergency first aid.

2. Case Report

A 45-year-old woman with a previous history of a valvuloplasty for rheumatic disease and two acute myocardial infarctions (AMIs), followed by four catheterizations and an angioplasty, was the subject of this study. This study was approved by the Research Ethics Committee of the Claretiano University Center, São Paulo, Brazil (number: 67/2011). The participant was informed about the experiment and agreed to participate by providing her free and informed consent according to resolution 466/12 of the Health National Council.

After having walked for 20 minutes, the patient had a cardiac arrhythmia and neurocardiogenic syncope

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