Postprint: Integrated Chinese-Western Nursing Practice and Experience for Acute Myocardial Infarction Presenting with Chest Pain

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Abstract

This article reviews the observation of therapeutic effects in a case of acute myocardial infarction presenting with chest pain as the chief complaint, treated with thrombolysis and auricular point sticking therapy. It explores how integrated Chinese and Western medicine nursing methods can be utilized to alleviate symptoms of acutely exacerbated chest pain, reduce patient suffering, decrease complications of acute myocardial infarction, improve myocardial infarction prognosis, and enhance patients' quality of life.

Full Text

Practice and Experience of Integrated Traditional Chinese and Western Medicine Nursing for Acute Myocardial Infarction with Chest Pain as Chief Complaint

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Abstract

This article reviews the clinical outcomes of a patient with acute myocardial infarction presenting with chest pain who received thrombolytic therapy combined with auricular acupressure. We explore how integrated traditional Chinese and Western medicine nursing approaches can alleviate acute exacerbation of chest pain, reduce patient suffering, decrease complications of acute myocardial infarc-

tion, improve myocardial infarction prognosis, and enhance patients' quality of life.

Keywords: myocardial infarction; chest pain; thrombolysis; auricular acupressure

Acute myocardial infarction (AMI) is characterized by myocardial necrosis resulting from acute, persistent ischemia and hypoxia of the coronary arteries [**?**]. The fundamental pathogenesis involves atherosclerosis and thrombosis of coronary arteries, leading to stenosis or occlusion of one or more vascular lumens. Sustained acute ischemia for more than 20-30 minutes can result in myocardial necrosis. AMI is a common disease among middle-aged and elderly individuals, typically manifesting as severe and persistent retrosternal pain that cannot be fully relieved by rest or nitrate medications. Clinical examinations reveal progressive electrocardiographic changes, and laboratory data often show elevated serum myocardiac enzyme activity. The condition may be complicated by arrhythmia, shock, or heart failure, which can be life-threatening in severe cases [**?**].

Thrombolytic therapy is a commonly used clinical treatment that can improve coronary reperfusion rates and patient prognosis. Auricular acupressure is a safe, non-invasive traditional Chinese medicine (TCM) technique based on theories of zang-fu organs and meridians, skin-visceral reflexes, and holographic biology [**?**]. By stimulating acupoints on the auricle, this technique inhibits pathological neuronal impulse transmission, thereby alleviating pain and relieving symptoms. For coronary heart disease and myocardial infarction, the main acupoints selected include Heart, Adrenal Gland, Small Intestine, and Subcortex, with supplementary points including Lung, Sympathetic, Liver, Endocrine, and Shenmen. Auricular acupressure can effectively relieve pain and reduce stress responses. This article reviews the clinical data of one AMI patient with chest pain as the chief complaint treated at our hospital, and reports the nursing experience as follows.

Case Report

The patient was a male who presented with chief complaint of "chest pain for 4 hours." He reported episodic precordial pain without obvious precipitating factors for the past 2 days, accompanied by tightness in the left upper limb, left shoulder, and back, with each episode lasting several minutes and resolving spontaneously. At 5 AM on the day of admission, he experienced the above symptoms again, which persisted without relief. Self-administration of Suxiaojiuxinwan (a traditional Chinese emergency medicine) provided no improvement, prompting his visit to our hospital.

Upon admission, physical examination revealed: temperature 36.5°C, pulse 78 beats/min, respiration 18 breaths/min, blood pressure 130/80 mmHg, and oxygen saturation 98%. The patient was conscious and alert, with fluent responses. No pathological murmurs were heard in any cardiac valves, and both lungs

were clear. The abdomen was soft without tenderness or rebound pain. Muscle tension was normal, with grade IV muscle strength in all four limbs.

Laboratory examinations showed: CK 214 U/L, CK-MB 45 U/L, and troponin I 0.23 ng/ml. Bedside electrocardiogram demonstrated sinus rhythm with acute ST-segment elevation (II, III, aVF, V7-9) [Figure 1: see original paper], leading to a diagnosis of acute ST-segment elevation myocardial infarction.

Treatment Plan: The patient was immediately admitted to the emergency resuscitation room for continuous cardiac monitoring and oxygen therapy at 2 L/min via nasal cannula. Intravenous access was established in the left upper extremity. Critical condition notification and first-level medical nursing care were implemented, with cardiology consultation requested. Emergency green channel thrombolytic therapy was initiated immediately: oral aspirin 300 mg for anticoagulation, followed by intravenous alteplase 15 mg bolus and alteplase 35 mg infusion. The thrombolysis process proceeded smoothly. The patient received auricular acupressure therapy, after which chest pain was significantly relieved.

Outcome: Following emergency thrombolysis combined with auricular acupressure, the patient' s chest pain symptoms were markedly alleviated, with normal muscle strength in all four limbs. He was transferred to the CCU for continued treatment and specialized care, and was discharged on [date].

Evaluation Criteria

Thrombolysis Indications and Contraindications:
Indications for thrombolysis include: (1) presentation within 12 hours of symptom onset, age < 75 years; (2) patients aged 75-80 years may receive reduced or half-dose therapy after risk-benefit assessment. Absolute contraindications include: prior intracranial hemorrhage; cerebrovascular structural abnormalities; ischemic stroke or transient ischemic attack within 3 months; intracranial malignancy; active bleeding or bleeding diathesis (excluding menstruation); suspected or confirmed aortic dissection; and severe closed head or facial trauma within 3 months. This patient met the indications for thrombolysis without contraindications, warranting prompt thrombolytic therapy.

Pain Assessment: Using the Numeric Rating Scale (NRS) pain scoring standard [**?**], pain is rated as: 0 = no pain; 1-3 = mild pain, tolerable; 4-6 = moderate pain affecting sleep but tolerable; 7-10 = severe pain, intolerable, affecting appetite and sleep. This patient scored 7-8 points at admission, indicating severe pain. After thrombolysis and auricular acupressure, pain scores decreased significantly, with the patient reporting marked chest pain relief.

Nursing Care

Pre-thrombolysis Nursing

Upon admission and definitive diagnosis, continuous cardiac monitoring and oxygen therapy at 2 L/min were immediately initiated per physician orders. Oxygen therapy not only improves arterial oxygen partial pressure but also enhances oxygen supply to infarcted myocardium and reduces myocardial damage [**?**]. Meanwhile, nurses assisted physicians in completing laboratory examinations including myocardial enzymes, and placed a defibrillator at the patient' s bedside to manage potential ventricular fibrillation and gain critical time for resuscitation. Psychological communication with the patient was essential to alleviate anxiety and fear, encouraging treatment compliance. Health education about early thrombolytic therapy for AMI was provided to ensure correct understanding and active cooperation [**?**]. Nurses employed various psychological counseling methods tailored to individual patient needs to enhance treatment adherence [**?**].

Thrombolysis Nursing

During Thrombolysis: Nurses assisted the patient in taking oral aspirin 300 mg. Intravenous medications were prepared and administered strictly according to physician orders. Vital signs, particularly heart rate and blood pressure, were closely monitored to prevent hypotension. Thrombolysis may cause complications including bleeding, arrhythmia, heart failure, cardiogenic shock, or sudden death, requiring vigilant observation. Bleeding at the eyelids, gums, and gastrointestinal tract was monitored, as was bleeding at venipuncture sites. If bleeding occurred or infusion was obstructed, the venous access was immediately replaced.

Post-thrombolysis Nursing: Vital signs and thrombolysis efficacy indicators were closely monitored. Following AMI, myocardial contractility decreases significantly, leading to insufficient peripheral blood volume, necessitating close blood pressure monitoring. Systematic patient assessment was performed to develop scientific, reasonable early rehabilitation plans [**?**]. Health education for patients and families was also provided.

Traditional Chinese Medicine Characteristic Nursing

The patient experienced significant chest pain. Auricular acupressure provides sustained stimulation that achieves good analgesic effects while reducing pain-related stress responses. **Specific 操作方法:** First, examine the patient' s auricles for disease or skin damage [**?**]. Locate corresponding acupoints on the ears. Clean the auricles with 75% alcohol from inner to outer, top to bottom, to remove secretions and oils. Then use a probe to press acupoints until positive reactions (soreness, numbness, distension, pain) are elicited. Apply Vaccaria seeds to corresponding acupoints (Heart, Adrenal Gland, Small Intestine, Subcortex) and perform pressing-kneading manipulation. Apply vertical pressure to

avoid skin damage, then intensify stimulation. Instruct patients to self-massage 3-5 times daily, 1-2 minutes per acupoint, until a sensation of soreness, numbness, distension, and mild warmth is achieved. Alternate between both ears. Increase pressing frequency if pain intensifies. Closely observe patients during application and notify physicians immediately if discomfort occurs.

Psychological Nursing

Patients experiencing sudden onset of critical illness often develop fear and anxiety. Nurses should fully understand patient behavior, value their chief complaints, and provide psychological counseling. Through communication, nurses can assess psychological status, offer comfort and encouragement, and patiently address patient concerns. Health education helps patients develop correct understanding and actively cooperate with treatment.

Conclusion

Acute myocardial infarction is a severe form of coronary heart disease. Various factors cause acute coronary blood supply reduction or interruption on the basis of atherosclerotic lesions, while collateral circulation is not yet fully established. If substantial blood supply decreases or stops for more than 20 minutes, myocardial infarction occurs. Acute ST-segment elevation myocardial infarction requires emergency thrombolysis or PCI. As this patient was hemodynamically unstable, active fluid resuscitation and thrombolysis were administered. Intravenous thrombolysis represents a crucial treatment for myocardial infarction in recent years. Administered via peripheral veins, it restores effective myocardial reperfusion, protects ventricular function, saves dying myocardium, and improves prognosis. The procedure is convenient and cost-effective. For AMI patients without obvious contraindications, thrombolysis combined with active nursing care can rapidly relieve chest pain and reduce mortality to below 5%, while significantly decreasing treatment-related complications and improving prognosis [**?**].

Auricular acupressure is a safe, non-invasive TCM technique that adjusts bodily functions through meridian transmission by stimulating corresponding auricular points, thereby relieving pain. As a non-pharmacological therapy, it has proven effective for various pain conditions [**?**]. According to *Lingshu · Kouwen*, "The ear is where all vessels converge." Physiological changes in tissues often manifest as positive reactions in the ear, which serves as a confluence of all meridian qi and blood. The auditory function results from qi and blood perfusion through the twelve meridians and 365 collaterals, establishing close connections between auricular points and zang-fu organs [**?**]. For AMI patients with chest pain, selecting appropriate acupoints based on disease characteristics and applying pressure-kneading stimulation regulates yin-yang balance and achieves internal disease external treatment effects, thereby improving chest pain symptoms [**?**]. Auricular acupressure is safe, reliable, and helps improve patient satisfaction and compliance. In summary, integrated traditional Chinese and Western medicine

nursing techniques can effectively relieve chest pain and improve clinical outcomes in AMI patients.

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Note: Figure translations are in progress. See original paper for figures.