

EFFECTIVENESS OF ACUPUNCTURE/ACUPRESSURE IN THE PATIENT WITH ACUTE PULMONARY NEEDS

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INTRODUCTION

Acupuncture and Acupressure in the RACU

- The Telemachus and Irene Demoulas Family Foundation funded an acupuncture/acupressure pilot program which allowed The MGH Cancer Center's Katherine A. Gallagher Integrative therapies program to share its clinical expertise with the staff and patients of the Respiratory Acute Care Unit (RACU).
- Acupuncture/acupressure was offered to patients as a complementary therapy to enhance well-being and to help manage physical and emotional symptoms.
- Susan Gavaghan, Clinical Nurse Specialist in the RACU, worked in collaboration with Regina Gibbons, Licensed Acupuncturist, to develop and implement the program.
 - Clinical staff were educated.
 - Appropriate referral criteria was determined.
- Acupuncture/acupressure program:
 - Each week 3-4 patients were recommended by staff based on referral criteria.
 - Patient clinical status was reviewed by the acupuncturist.
 - Therapy was discussed with the patient and consent obtained.
 - Acupuncture/acupressure therapy was implemented.
 - Early and ongoing communication as well as flexibility and support from all members of the RACU team ensured no interruption in the existing workflow.

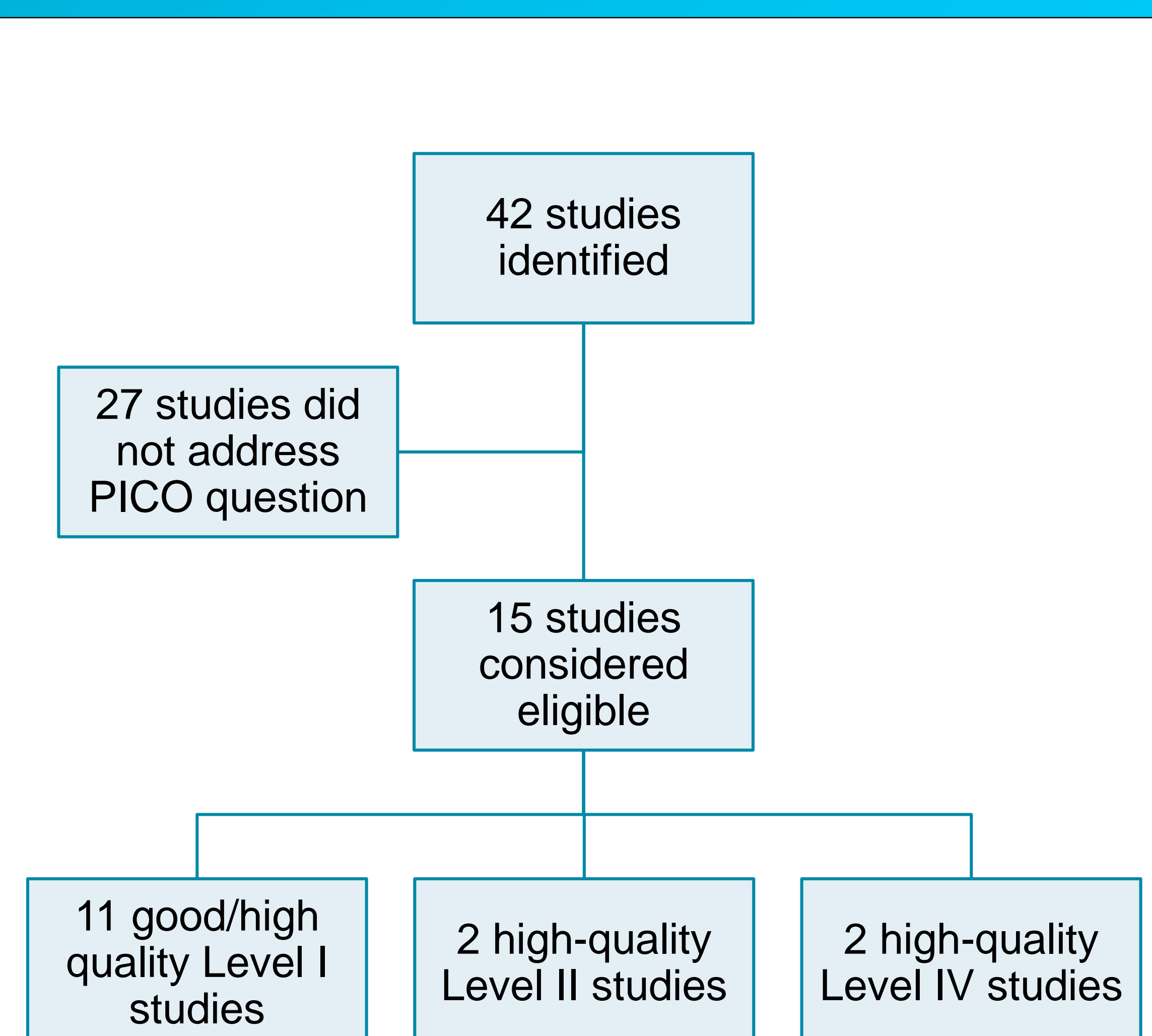


Figure 1: Evaluation of identified studies

EVIDENCE-BASED PRACTICE PROJECT Background and Significance

- Patients are often transferred to the Respiratory Acute Care Unit (RACU) for assistance with mechanical ventilation (MV) weaning.
- Mechanically ventilated patients often experience dyspnea and anxiety, affecting their medical course and outcomes:
 - Dyspnea and anxiety may interfere with MV weaning trials.
 - Increased use of pharmacological agents to treat dyspnea and anxiety may contribute to delirium and prolonged ventilator use.
- The acupuncture/acupressure program in the RACU prompted a review of the evidence on the effectiveness of this therapy in reducing dyspnea, anxiety and other physiological signs/symptoms.

PURPOSE

A search for evidence was conducted to investigate the following PICO Question: *In a patient with acute pulmonary needs (P) is acupuncture/acupressure (I) more effective than standard care (C) in reducing dyspnea, anxiety, and related physiological signs such as tachypnea and tachycardia(O)?*

METHODS

- A literature search was conducted through:
 - Ovid
 - CINAHL
 - PubMed
- The Johns Hopkins Nursing Evidence-Based Practice model was utilized.
- Studies were evaluated for evidence level and quality, outcomes measured, type of respiratory diagnosis and setting.



Figure 2: Acupuncture points chosen for patients with acute pulmonary needs may include Yin Tang (an acupuncture point: top left photo), Heart 7 (top right) and Liver 3 (bottom left).

RESULTS

- Fifteen eligible studies identified included:
 - Eleven Level I studies:
 - Only two of the studies discussed the use of acupressure for patients on MV. They showed that acupuncture was effective in reducing dyspnea, anxiety, heart rate and respiratory rate (Figure 3 below).
 - Nine of the 11 studies were conducted in ambulatory COPD populations.
 - Four of the studies showed significant reductions in dyspnea and anxiety.
 - Other outcomes that showed improvement included QoL scores, sleep and 6MWT.
 - Two Level II studies: Both showed improvement in outcomes including 6MWT, oxygen saturation, dyspnea, exercise capacity, and/or BMI after outpatient acupuncture.
 - Two Level III studies: The first showed that HR decreased during and after therapy, but effects did not last. The other showed no significant change in HR with acupuncture therapy.

Author/Date	Sample size/setting	Findings r/t PICO question	Limitations	Evidence level and quality
Tsay et al, 2005	52 COPD patients on MV in two groups: daily acupressure + massage vs. handholding + massage.	COPD patients on long term vent support have high levels of dyspnea and anxiety. The acupressure groups saw significant improvements in these and HR/RR	Used acupressure and massage together	Level I, high quality
Yucel et al 2015	70 ICU patients on MV in two groups: daily acupressure + massage vs. handholding + massage.	Anxiety and dyspnea scores fell significantly. HR also decreased in the acupressure group. There was no difference between groups in SpO2	Used acupressure and massage together	Level I, high quality

Figure 3: High quality Level 1 studies on use of acupressure in MV patients.

CONCLUSION AND IMPLICATIONS

- The evidence available suggests that acupuncture/acupressure may be effective in reducing dyspnea, anxiety, and related physiological signs in patients with acute pulmonary needs.
- There is a limited amount of research available to guide the use of acupuncture/acupressure in a mechanically ventilated population.
- There is a need for high quality research to determine if acupuncture/acupressure will reduce symptoms like dyspnea and anxiety in a ventilated patient.**

References:

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