

Medical Acupuncture In The Emergency Department Martha Grout, MD

ABSTRACT

Background Pain is one of the most common symptoms in patients who present to the emergency department for treatment. Acupuncture may be an efficient and effective modality to treat such pain. Objective To determine whether the use of medical acupuncture is both feasible and effective in the emergency department setting.

Design, Setting, and Patients A retrospective study of patients treated with medical acupuncture in the emergency department of Phoenix Memorial Hospital between August 1999 and May 2000. All included patients had received either no prior pain medication, or pain medication at least 1 hour prior to the treatment. Most patients treated with acupuncture presented with musculoskeletal complaints.

Intervention Acupuncture treatments were varied, depending on the presenting complaint. Because of the acute nature of the treatment setting, protocols were mainly either linear or tendinomuscular meridians with focusing points. Standard acupuncture needles were used for treatment.

Main Outcome Measure Improvement of patient pain, documented by either the physician or the patient's nurse.

Results A total of 198 cases were reviewed; 21 cases demonstrated 100% improvement, 6 cases showed no improvement. Overall, 74% of the patients had greater than 40% relief of their presenting symptoms.

Conclusion Medical acupuncture is a viable option for treatment of patients presenting to the emergency department, depending on the presenting problem and the physician's patient load. Acupuncture has the additional advantage of being a non-narcotic treatment, leaving the patient awake, alert, and able to drive home immediately after treatment.

KEY WORDS

Pain Management, Emergency Department, Acupuncture, Alternative Medicine, Complementary Medicine

INTRODUCTION

In 2000, about 10% of US residents visited hospital emergency departments for treatment of nonfatal injuries, according to a report released by the Centers for Disease Control and Prevention.¹ Most of these patients leave the hospital with prescriptions for pain medication, and many of them are given pain medication while in the emergency department. Patients who are discharged and given narcotic pain medication are not allowed to drive themselves, thus forcing them into the uncomfortable situation of either being medicated and requiring assisted transportation or receiving no immediate pain relief.

In this study, I examined both the feasibility and effectiveness of medical acupuncture in the emergency department, either as the sole therapy or as adjunctive therapy, for patients presenting with conditions amenable to acupuncture.

METHODS

Data were collected on a series of 201 patients presenting for treatment to the emergency department of Phoenix Memorial Hospital in Phoenix, Arizona, between August 1999 and May 2000. This inner-city hospital treats a largely indigent population. The emergency department at the time of the study had 28,000 visits per year, and was staffed by 1 emergency medicine-trained physician and 1 physician assistant. In this particular emergency department, the physician was responsible for patients in 17 acute-care beds as well as all in-house cardiac arrests, and wrote admission orders on almost all the admitted patients as well. The physician assistant was responsible for patients in 5 additional "fast track" beds.

The physician performed an average of 2 acupuncture treatments per shift in the emergency department for patients who, in the physician's judgment, might benefit from medical acupuncture. Some of the patients were employees of the hospital who presented to the emergency department specifically requesting acupuncture treatment. Standard allopathic diagnostic methods and criteria were used for establishment of diagnosis prior to the initiation of any acupuncture treatment. Approximately 10%-15% of patients refused acupuncture, mainly because of fear of needles. No effort was made to select every patient whose complaints were amenable to acupuncture. Acupuncture was offered at the physician's discretion, depending on the state of activity in the emergency department. Patient consent was obtained for all acupuncture treatment.

Patients were eliminated from the study if there was a lack of information on the timing of medications in relation to the acupuncture treatment, thus possibly confusing benefit from medications with benefit from acupuncture. Others received pain medication at least 1 hour before the treatment and thus, were considered to have had maximum benefit of medication so that subsequent improvement could reasonably be credited to the acupuncture treatment.

TREATMENT

Acupuncture treatments were varied, depending on the presenting complaint. Most patients treated with acupuncture presented with musculoskeletal complaints. Because of the acute nature of the treatment setting, protocols were mainly either linear treatments (e.g., LI 4, LI 5, LI 11 for a wrist injury) or tendinomuscular meridians with focusing points (GB 44, GB 40, SI 18 for a lateral malleolus sprain). Constitutional or French Energetic treatments were occasionally used when the patient's primary axis of symptoms and/or structural biopsychotype was easily determined.² Standard acupuncture needles were used for treatment (length, 25-40 mm; gauge, 30-34). Needles were retained for 20 minutes, and the nurses were trained to remove them (cephalad to caudad) if necessary.

Pain was measured on a 1–10 scale (10 = worst possible pain). Patients reported perceived change in pain following treatment. Improvement was documented by either the physician or the patient's nurse.

RESULTS

A total of 198 cases were reviewed: 21 cases had 100% improvement after acupuncture, 6 cases had no improvement, and no patients were worse after acupuncture treatment. A total of 75 cases were eliminated from the study because the timing of administration of pain medication in relation to acupuncture treatment was unclear from review of the charts; 111 cases had no prior pain medication, and 12 cases had medication more than 1 hour before the acupuncture treatment but were still experiencing significant pain or other symptoms.

Overall, 91 patients (74%) experienced greater than 40% relief of symptoms with acupuncture. Musculoskeletal complaints comprised the majority of cases treated (n=77), with 70% of those patients experiencing more than 40%

relief of their pain. Headache was the 2nd most prevalent presenting condition (n=16), and 94% of these patients experienced greater than 40% relief of their symptoms. A miscellaneous category included patients with complaints such as abdominal pain, respiratory tract infection, and bladder spasms. Of these patients, 81% experienced greater than 40% relief of their complaints. The category of facial paralysis (Bell's palsy) showed no immediate relief of symptoms, although 1 patient returned 2 days later with a complete cure of his paralysis. Most patients (75%) for whom pharmaceutical medication had failed experienced greater than 40% relief of symptoms with acupuncture (Table 1).

The average overall visit time in the emergency department is about 2 hours. The average visit time for the acupuncture-treated patients was 1.63 hours. It does not appear that acupuncture treatments caused any expansion of stays in the emergency department.

DISCUSSION

Medical acupuncture appears to be a viable option for treatment of selected patients presenting to a busy emergency department. This study demonstrated that it is possible to perform acupuncture in the emergency

Symptoms	No. of Patients	Relief Achieved, No.			>40% Improvement Due to Acupuncture, % of Patients
		80%-100%	40%-70%	0%-30%	
Headache	16	10	5	1	94
Musculo-skeletal pain	77	24	30	23	70
Facial paralysis*	2	0	0	2	0
Miscellaneous ♦	16	5	8	3	81
Drug failure	12	5	4	3	75
* One of these patients returned 2 days later to show 100% improvement.					
♦ Included abdominal pain, laryngitis, leg hematoma, cat bite, scorpion sting, bladder infection, earache, nausea, toothache, upper respiratory tract infection.					

department without an increase in length of stay. Relief of symptoms was significant, with greater than 40% relief in 74% of patients treated. The advantage of acupuncture is that patients leave the emergency department lucid, unclouded by narcotics or other sedating drugs. Therefore, the patients may be permitted to drive themselves much sooner than those who receive narcotic pain medication. A further advantage is that acupuncture, in addition to providing relief of symptoms, also promotes healing by increasing the local blood supply and can result in more rapid resolution of traumatic injury than treatment with pain medication and rest alone.

A MEDLINE search revealed a few articles on pain management policies in the emergency department, but nothing on actual results of administration of pain medication. Therefore, it is impossible to compare the effects of medical acupuncture with those of pain medication. One study reported on a survey of the use of alternative therapies, including acupuncture, by emergency department patients. The conclusion was that 56% of those patients had used alternative therapies,³ and 87% of the patients believed that the alternative therapies were effective. However, the study did not document any use of alternative therapies in the emergency department itself. Another study reported on the use of Chinese therapies among Chinese patients seeking emergency department care.⁴ This study concluded that more than 40% of the Chinese patients with a Western medical physician had also used a Chinese medicine modality, and suggested that emergency department physicians should be aware of the medical implications of unconventional therapies.

CONCLUSION

This study suggests the need for further research into the application of medical acupuncture in the emergency department. More specific treatments and protocols could easily be devised, with randomized patient selection, using specific injuries or illnesses commonly presenting to the emergency department, e.g., ankle sprain, simple fractures, lacerations, and sore throat, with documentation of follow-up visits and length of time to complete healing of the original symptom or injury

This would be possible to achieve, even in a busy emergency department, if several physicians were participating in the study or if the ancillary personnel were trained to use specific acupuncture protocols for specific conditions. Thus, a greater number of patients could be studied.

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