AMTA Position Statement Proposal Form

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BACKGROUND INFORMATION:

Postoperative pain can complicate and delay a patient's recovery, lengthen hospital stays and costs, and interfere with a patient's return to activities of daily living (1). In many people, pain medications can have unpleasant side effects (1). Research indicates that massage can decrease postoperative pain(4, 5, 6, 8, 10, 12, 13), decrease postoperative pain intensity (3, 7), decrease postoperative pain unpleasantness/distress(5, 9) decrease sympathetic responses to postoperative pain (7), accelerate the rate of decline in the intensity of postoperative pain (3, 8) accelerate the rate of decline of the unpleasantness of postoperative pain (3, 8) decrease doses of analgesics (10) and increase levels of calmness/feelings of well-being(11) .

RATIONALE:

Pain management is an important aspect of a massage therapist's work. With the growing numbers of people seeking complementary care modalities (2) and with the large numbers of inpatient and outpatient procedures (14, 15), the need for postoperative pain management is evident. Those patients who seek **complementary** methods for pain management will benefit from the structured touch of trained massage therapists. The following AMTA core values will be supported by the position statement.

- We believe that massage benefits all
- We are a diverse and nurturing community working with integrity, honesty and dignity.
- We embrace excellence in education, service and leadership.

These primary goals of the AMTA are also addressed in the position.

- People recognize the power of touch to affect the mind/body/spirit continuum.
- The role of massage therapy will be expanded in all practice settings
- There will be international recognition for the value of massage. All societies will be educated and accept massage therapy and AMTA will be a global networking resource for massage therapy and therapists.

POSITION STATEMENT:

It is the position of the American Massage Therapy Association (AMTA) that massage has been shown to aid in postoperative pain relief.

REFERENCES:

1. Janie Franz, The Gale Group Inc. Gale, Detroit, Gale Encyclopedia of Surgery, 2004

2. Barnes P, Powell-Griner E, McFann K, Nahin R. *CDC Advance Data Report #343*. Complementary and Alternative Medicine Use Among Adults: United States, 2002. May 27, 2004.

3. Mitchinson AR, Kim HM, Rosenberg JM, Geisser M, Kirsh M, Cikrit D, Hinshaw DB. Acute postoperative pain management using massage as an adjuvant therapy: a randomized trial. Arch Surg. 2007 Dec;142(12):1158-67; discussion 1167.

   HYPOTHESIS: Adjuvant massage therapy improves pain management and postoperative anxiety among many patients who experience unrelieved postoperative pain. Pharmacologic interventions alone may not address all of the factors involved in the experience of pain.

   DESIGN: Randomized controlled trial.

   SETTING: Department of Veterans Affairs hospitals in Ann Arbor, Michigan, and Indianapolis, Indiana.

   PATIENTS: Six hundred five veterans (mean age, 64 years) undergoing major surgery from February 1, 2003, through January 31, 2005.

   INTERVENTIONS: Patients were assigned to the following 3 groups: (1) control (routine care), (2) individualized attention from a massage therapist (20 minutes), or (3) back massage by a massage therapist each evening for up to 5 postoperative days. Main Outcome Measure Short- and long-term (> 4 days) pain intensity, pain unpleasantness, and anxiety measured by visual analog scales.

   RESULTS: Compared with the control group, patients in the massage group experienced short-term (preintervention vs postintervention) decreases in pain intensity (P = .001), pain unpleasantness (P < .001), and anxiety (P = .007). In addition, patients in the massage group experienced a faster rate of decrease in pain intensity (P = .02) and unpleasantness (P = .01) during the first 4 postoperative days compared with the control group. There were no differences in the rates of decrease in long-term anxiety, length of stay, opiate use, or complications across the 3 groups.

   CONCLUSION: Massage is an effective and safe adjuvant therapy for the relief of acute postoperative pain in patients undergoing major operations.

1. Mehling WE, Jacobs B, Acree M, Wilson L, Bostrom A, West J, Acquah J, Burns B, Chapman J, Hecht FM. Symptom management with massage and acupuncture in postoperative cancer patients: a randomized controlled trial. J Pain Symptom Manage. 2007 Mar;33(3):258-66.

   The level of evidence for the use of acupuncture and massage for the management of perioperative symptoms in cancer patients is encouraging but inconclusive. We conducted a randomized, controlled trial assessing the effect of massage and acupuncture added to usual care vs. usual care alone in postoperative cancer patients. Cancer patients undergoing surgery were randomly assigned to receive either massage and acupuncture on postoperative Days 1 and 2 in addition to usual care, or usual care alone, and were

followed over three days. Patients' pain, nausea, vomiting, and mood were assessed at four time points. Data on health care utilization were collected. Analyses were done by mixed-effects regression analyses for repeated measures. One hundred fifty of 180 consecutively approached cancer patients were eligible and consented before surgery. Twelve patients rescheduled or declined after surgery, and 138 patients were randomly assigned in a 2:1 scheme to receive massage and acupuncture (n=93) or to receive usual care only (n=45). Participants in the intervention group experienced a decrease of 1.4 points on a 0-10 pain scale, compared to 0.6 in the control group (P=0.038), and a decrease in depressive mood of 0.4 (on a scale of 1-5) compared to +/-0 in the control group (P=0.003). Providing massage and acupuncture in addition to usual care resulted in decreased pain and depressive mood among postoperative cancer patients when compared with usual care alone. These findings merit independent confirmation using larger sample sizes and attention control.

2. Kshettry VR, Carole LF, Henly SJ, Sendelbach S, Kummer B. Complementary alternative medical therapies for heart surgery patients: feasibility, safety, and impact. Ann Thorac Surg. 2006 Jan;81(1):201

BACKGROUND: Complementary therapies (touch, music) are used as successful adjuncts in treatment of pain in chronic conditions. Little is known about their effectiveness in care of heart surgery patients. Our objective is to evaluate feasibility, safety, and impact of a complementary alternative medical therapies package for heart surgery patients.

METHODS: One hundred four patients undergoing open heart surgery were prospectively randomized to receive either complementary therapy (preoperative guided imagery training with gentle touch or light massage and postoperative music with gentle touch or light massage and guided imagery) or standard care. Heart rate, systolic and diastolic blood pressure, and pain and tension were measured preoperatively and as pre-tests and post-tests during the postoperative period. Complications were abstracted from the hospital record.

RESULTS: Virtually all patients in the complementary therapy group (95%) and 86% in standard care completed the study. Heart rate and blood pressure patterns were similar. Decreases in heart rate and systolic blood pressure in the complementary therapies group were judged within the range of normal values. Complication rates were very low and occurred with similar frequency in both groups. Pretreatment and posttreatment pain and tension scores decreased significantly in the complementary alternative medical therapies group on postoperative days 1 ($p < 0.01$) and 2 ($p < 0.038$).

CONCLUSIONS: The complementary medical therapies protocol was implemented with ease in a busy critical care setting and was acceptable to the vast majority of patients studied. Complementary medical therapy was not associated with safety concerns and appeared to reduce pain and tension during early recovery from open heart surgery.

3. Chen HM, Chang FY, Hsu CT. Effect of acupressure on nausea, vomiting, anxiety and pain among post-cesarean section women in Taiwan. Kaohsiung J Med Sci. 2005 Aug;21(8):341-50.

The purpose of this study was to examine the effectiveness of acupressure for controlling post-cesarean section (CS) symptoms, such as nausea and vomiting, anxiety perception and pain perception. A total of 104 eligible participants were recruited by convenience sampling of operating schedules at two hospitals. Participants assigned to the experimental group received acupressure, and those assigned to the control group received only postoperative nursing instruction. The experimental group received three acupressure treatments before CS and within the first 24 hours after CS. The first treatment was performed the night before CS, the second was performed 2-4 hours after CS, and the third was performed 8-10 hours after CS. The measures included the Rhodes Index of Nausea and Vomiting, Visual Analog Scale for Anxiety, State-Trait Anxiety Inventory, Visual Analog Scale for Pain, and physiologic indices. Statistical methods included percentages, mean value with standard deviation, t test and repeated measure ANOVA. The use of acupressure reduced the incidence of nausea, vomiting or retching from 69.3% to 53.9%, compared with control group (95% confidence interval = 1.65-0.11; $p = 0.040$) 2-4 hours after CS and from 36.2% to 15.4% compared with control group (95% confidence interval = 0.59-0.02; $p = 0.024$) 8-10 hours after CS. Results

indicated that the experimental group had significantly lower anxiety and pain perception of cesarean experiences than the control group. Significant differences were found in all physiologic indices between the two groups. In conclusion, the utilization of acupressure treatment to promote the comfort of women during cesarean delivery is strongly recommended.

4. Wang HL, Keck JF. Foot and hand massage as an intervention for postoperative pain. Pain Manag Nurs. 2004 Jun;5(2):59-65.

   Physiological responses to pain create harmful effects that prolong the body's recovery after surgery. Patients routinely report mild to moderate pain even though pain medications have been administered. Complementary strategies based on sound research findings are needed to supplement postoperative pain relief using pharmacologic management. Foot and hand massage has the potential to assist in pain relief. Massaging the feet and hands stimulates the mechanoreceptors that activate the "nonpainful" nerve fibers, preventing pain transmission from reaching consciousness. The purpose of this pretest-posttest design study was to investigate whether a 20-minute foot and hand massage (5 minutes to each extremity), which was provided 1 to 4 hours after a dose of pain medication, would reduce pain perception and sympathetic responses among postoperative patients. A convenience sample of 18 patients rated pain intensity and pain distress using a 0 to 10 numeric rating scale. They reported decreases in pain intensity from 4.65 to 2.35 ($t = 8.154$, $p < .001$) and in pain distress from 4.00 to 1.88 ($t = 5.683$, $p < .001$). Statistically significant decreases in sympathetic responses to pain (i.e., heart rate and respiratory rate) were observed although blood pressure remained unchanged. The changes in heart rate and respiratory rate were not clinically significant. The patients experienced moderate pain after they received pain medications. This pain was reduced by the intervention, thus supporting the effectiveness of massage in postoperative pain management. Foot and hand massage appears to be an effective, inexpensive, low-risk, flexible, and easily applied strategy for postoperative pain management.

5. Piotrowski MM, Paterson C, Mitchinson A, Kim HM, Kirsh M, Hinshaw DB. Massage as adjuvant therapy in the management of acute postoperative pain: a preliminary study in men. J Am Coll Surg. 2003 Dec;197(6):1037-46.

   BACKGROUND: Opioid analgesia alone may not fully relieve all aspects of acute postoperative pain. Complementary medicine techniques used as adjuvant therapies have the potential to improve pain management and palliate postoperative distress.

   STUDY DESIGN: This prospective randomized clinical trial compared pain relief after major operations in 202 patients who received one of three nursing interventions: massage, focused attention, or routine care. Interventions were performed twice daily starting 24 hours after the operation through postoperative day 7. Perceived pain was measured each morning.

   RESULTS: The rate of decline in the unpleasantness of postoperative pain was accelerated by massage ($p = 0.05$). Massage also accelerated the rate of decline in the intensity of postoperative pain but this effect was not statistically significant. Use of opioid analgesics was not altered significantly by the interventions.

   CONCLUSIONS: Massage may be a useful adjuvant therapy for the management of acute postoperative pain. Its greatest effect appears to be on the affective component (ie, unpleasantness) of the pain.

6. Taylor AG, Galper DI, Taylor P, Rice LW, Andersen W, Irvin W, Wang XQ, Harrell FE Jr. Effects of adjunctive Swedish massage and vibration therapy on short-term postoperative outcomes: a randomized, controlled trial. J Altern Complement Med. 2003 Feb;9(1):77-89.

   OBJECTIVE: To examine the effects of adjunctive postoperative massage and vibration therapy on short-term postsurgical pain, negative affect, and physiologic stress reactivity.

DESIGN: Prospective, randomized controlled trial. The treatment groups were: (1) usual postoperative care (UC); (2) UC plus massage therapy; or (3) UC plus vibration therapy.

SETTING: The University of Virginia Hospital Surgical Units, Gynecology-Oncology Clinic, and General Clinical Research Center. SUBJECTS: One hundred and five (N = 105) women who underwent an abdominal laparotomy for removal of suspected cancerous lesions.

INTERVENTIONS: All patients received UC with analgesic medication. Additionally, the massage group received standardized 45-minute sessions of gentle Swedish massage on the 3 consecutive evenings after surgery and the vibration group received 20-minute sessions of inaudible vibration therapy (physiotones) on the 3 consecutive evenings after surgery, as well as additional sessions as desired.

OUTCOME MEASURES: Sensory pain, affective pain, anxiety, distress, analgesic use, systolic blood pressure, 24-hour urine free cortisol, number of postoperative complications, and days of hospitalization.

RESULTS: On the day of surgery, massage was more effective than UC for affective (p = 0.0244) and sensory pain (p = 0.0428), and better than vibration for affective pain (p = 0.0015). On postoperative day 2, massage was more effective than UC for distress (p = 0.0085), and better than vibration for sensory pain (p = 0.0085). Vibration was also more effective than UC for sensory pain (p = 0.0090) and distress (p = .0090). However, after controlling for multiple comparisons and multiple outcomes, no significant differences were found.

CONCLUSIONS: Gentle Swedish massage applied postoperatively may have minor effects on short-term sensory pain, affective pain, and distress among women undergoing an abdominal laparotomy for removal of suspected malignant tissues.

7. Le Blanc-Louvry I, Costaglioli B, Boulon C, Leroi AM, Ducrotte P. Does mechanical massage of the abdominal wall after colectomy reduce postoperative pain and shorten the duration of ileus? Results of a randomized study. J Gastrointest Surg. 2002 Jan-Feb;6(1):43-9.

   The aim of this study was to determine the effectiveness of mechanical abdominal massage on postoperative pain and ileus after colectomy. We hypothesized that parietal abdominal stimulation could counteract induced pain and postoperative ileus, through common spinal-sensitive pathways, with nociceptive visceral messages. After preoperative randomization, 25 patients (age 52 +/- 5 years) underwent active mechanical massage by intermittent negative pressure on the abdominal wall resulting in aspiration (Cellu M50 device, LPG, Valence, France), and 25 patients (age 60 +/- 6 years) did not receive active mechanical massage (placebo group). Massage sessions began the first day after colectomy and were performed daily until the seventh postoperative day. In the active-massage group, amplitude and frequency were used, which have been shown to be effective in reducing muscular pain, whereas in the placebo group, ineffective parameters were used. Visual analogue scale (VAS) pain scores, doses of analgesics (propacetamol), and delay between surgery and the time to first passage of flatus were assessed. Types and dosages of the anesthetic drugs and the duration of the surgical procedure did not differ between groups. From the second and third postoperative days, respectively, VAS pain scores (P < 0.001) and doses of analgesics (P < 0.05) were significantly lower in patients receiving active massage compared to the placebo group. Time to first passage of flatus was also significantly shorter in the active-massage group (1.8 +/- 0.3 days vs. 3.6 +/- 0.4 days, P < 0.01). No adverse effects were observed. These results suggest that mechanical massage of the abdominal wall may decrease postoperative pain and ileus after colectomy.

8. Hattan J, King L, Griffiths P. The impact of foot massage and guided relaxation following cardiac surgery: a randomized controlled trial. J Adv Nurs. 2002 Jan;37(2):199-207.

   BACKGROUND: Because of the widely presumed association between heart disease and psychological wellbeing, the use of so-called 'complementary' therapies as adjuncts to conventional treatment modalities have been the subject of considerable debate. The present study arose from an attempt to identify a safe

and effective therapeutic intervention to promote wellbeing, which could be practicably delivered by nurses to patients in the postoperative recovery period following coronary artery bypass graft (CABG) surgery. Aim. To investigate the impact of foot massage and guided relaxation on the wellbeing of patients who had undergone CABG surgery.

METHOD: Twenty-five subjects were randomly assigned to either a control or one of two intervention groups. Psychological and physical variables were measured immediately before and after the intervention. A discharge questionnaire was also administered.

RESULTS: No significant differences between physiological parameters were found. There was a significant effect of the intervention on the calm scores (ANOVA, P=0.014). Dunnett's multiple comparison showed that this was attributable to increased calm among the massage group. Although not significant the guided relaxation group also reported substantially higher levels of calm than control. There was a clear (nonsignificant) trend across all psychological variables for both foot massage and, to a lesser extent, guided relaxation to improve psychological wellbeing. Both interventions were well received by the subjects.

CONCLUSIONS: These interventions appear to be effective, noninvasive techniques for promoting psychological wellbeing in this patient group. Further investigation is indicated.

9. Hulme J, Waterman H, Hillier VF. The effect of foot massage on patients' perception of care following laparoscopic sterilization as day case patients. J Adv Nurs. 1999 Aug;30(2):460-8.

   This randomized-controlled study examined the effects of foot massage on patients' perception of care received following surgery. The sample of 59 women who underwent laparoscopic sterilization as day case patients were randomly allocated into two groups. The experimental group received a foot massage and analgesia post-operatively, whilst the control group received only analgesia post-operatively. Each participant was asked to complete a questionnaire on the day following surgery. This examined satisfaction, memory and analgesia taken. The 76% response rate was comparable with other patient satisfaction studies following day-case surgery. Statistical analysis showed no overall significant difference in the pain experienced by the two groups; however, the mean pain scores recorded following surgery showed a significantly different pattern over time, such that the experimental group consistently reported less pain following a foot massage than the control group. This study has attempted to explore the use of foot massage in a systematic way and is therefore a basis for further study.

10. Nixon M, Teschendorff J, Finney J, Karnilowicz W. Expanding the nursing repertoire: the effect of massage on post-operative pain. Aust J Adv Nurs. 1997 Mar-May;14(3):21-6.

    An equivalent groups design with a treatment group of 19 patients and a control group of 20 patients was used to investigate the impact of massage therapy on patients' perceptions of post-operative pain. Data were analysed using analysis of covariance repeated measures (within subjects) design. Controlling for age, the results indicated that massage produced a significant reduction in patients' perceptions of pain over a 24 hour period. A linear positive relationship emerged between patients' age and the duration of the massage. The study indicates that further investigation of the potential for massage to reduce pain is warranted.

11. 2005 National Hospital Discharge Survey, Tables 1, 4, 8

12. Avalere Health analysis of American Hospital Association Annual Survey data, 2005, for community hospitals. Chart 3.14.