

Successful Integrative Medicine Assessment and Treatment of Chronic Pain Associated With Breast Surgery

A Report of 3 Cases

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Presented is the first reported case series of chronic neck and back pain associated with breast scars from breast surgery and successfully treated with an integrative medicine assessment and treatment approach, which included the assessment technique of autonomic response testing and the scar therapy technique of neural therapy. Implications for nursing practice are discussed. **KEY WORDS:** *autonomic response testing (ART), breast, neural therapy (NT), pain* *Holist Nurs Pract* 2016;00(00):1–9

INTRODUCTION

Many people experience neck and back pain at some point in their lifetime. Most often neck and back pain runs chronic episodic courses.^{1,2} It has been reported that a significant number of patients develop ill-defined pain problems after breast surgery. Wallace et al³ reported that 15% of women with breast augmentation and 9% of patients with breast reduction had persistent pain 1 year after their surgery in the entire breast, a specific area of the breast or arm pain. Wallace et al's³ survey questionnaire did not specifically inquire about neck or back pain. We present a retrospective report of 2 patients with breast augmentation and 1 patient with breast reduction who

presented with chronic back and/or neck pain. They were seen at a US integrative medicine multiphysician practice that sees chronically ill patients who have failed standard medical therapy. All 3 successfully responded to a combination of integrative medicine assessment and integrative medicine interventions. Most notably all 3 patients responded dramatically within minutes of intradermal procaine injected into their surgical breast scars (neural therapy), which appeared well healed. A literature search of PubMed (which includes Medline), EMBASE, AMED, and CINAHL revealed no previous reported cases of chronic back or neck pain treated with neural therapy applied to breast scars in the treatment of neck and back pain. This case series is also the first report of the use of autonomic response testing (ART) to identify scars associated with pain at a location remote to the location of the scar.

If these observations are confirmed by further studies using more vigorous research designs, there would be significant implications for public health and health care delivery via the nursing profession.

BACKGROUND INFORMATION ON NEURAL THERAPY AND AUTONOMIC RESPONSE TESTING

Overview

Chronic refractory medical problems are complex in nature. Our integrative medicine clinical successes in

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this area are the result of complex assessment and treatment processes. Describing all these processes in detail is beyond the scope of this article. The purpose of this article is to stimulate further research and attention to the described processes; it is not our intention to teach readers how to perform these processes for use in their practices. The following discussion will vary in detail regarding our assessment and treatment processes. Our main thrusts are pointing out (1) the possible significance of breast scars in neck and back pain; (2) the clinical effectiveness of scar therapy; and (3) the value of ART in informing clinical assessment and treatment. The effectiveness of scar therapy and the effectiveness of ART as an assessment technique have implications for nursing.

Neural therapy of scars

Neural therapy (NT) has been used frequently in Germany.⁴ NT was developed by 2 brothers who were physicians, Ferdinand and Walter Huneke. The injection of scars with preservative-free procaine “unblocks interference fields” produced by abnormal scars. Damaged tissue can generate chronic stimulation of autonomic efferent neurons resulting in chronic autonomic reflex activity such as nausea, vomiting, and pain.⁵⁻⁸ Whenever the pain or any other symptom is relieved immediately and completely after injection of the scar, this is called “the lightening reaction of Huneke.”⁵ All 3 of the herein described patients exhibited Huneke-like reactions.

In our institute, we have seen numerous patients present with upper back, neck, and shoulder stiffness and pain many months or years following a variety of surgical procedures of the head, neck, and chest including tonsillectomy, tooth scars, root canal scars, thyroidectomy scars, thoracotomy scars, shoulder surgery, vaccine scars, and breast scars, who respond significantly to NT of their scars. We have even seen dramatic improvement treating body piercings⁶ and tattoos.⁷

Also, we want to point out that scar therapy can be accomplished by other means besides injections. In patient number 2, a rectal scar was treated by means of ear acupuncture, which resulted in rapid marked reduction of her low back pain. Strittmatter⁹ has written on scar therapy via ear acupuncture. A physical therapy colleague has observed pain relief by means of manual therapy of surgical breast scars. Louisa Williams¹⁰ discusses a number of noninvasive methods of scar therapy in her book *Radical Medicine*,

which is a compendium of holistic medicine. Future research will determine the most efficient and effective methods.

ART

ART is a form of applied kinesiology (AK). AK is a form of manual muscle testing in which an interpretation is made regarding the response (weakness, no change, or strengthening) of a muscle to manual testing. The interpretation informs the assessment of the patient and the prediction of positive, negative, or neutral responses to therapies.^{11,12} ART was developed by Dietrich Klinghardt, MD, PhD, and Louisa Williams, DC, ND.¹³ Many chiropractors and holistic/integrative medicine practitioners incorporate some form of AK within their practices. There are various forms of AK of which ART is one. AK originated with George Goodhardt, Jr, DC. Some of the other forms are the Bidigital O-Ring Test developed by Yoshiaki Omura, MD; Neural Emotional Technique developed by Scott Walker, DC; and Contact Reflex Analysis developed by Richard Versendal, DC.

The various versions of AK use different muscle testing protocols and may provide different interpretations of the results obtained from muscle testing. The various methods of AK were developed by their originators to increase the sensitivity and accuracy of testing.

Schwartz et al¹⁴ recently published a negative experimental study of AK. However, the study lumped all forms of AK together, which would be similar to a negative study on penicillin and generalizing to all other antibiotics. Clearly, ART was not tested in their study.

Without ART, scar therapy depends solely on trial and error. In our institute the success rate of helping chronically ill patients who have failed standard medical therapy has significantly improved with the addition of ART.

Implications for nursing

Although NT therapy of scars involves injections, training is available to health professionals whose license permits injections.¹³ As mentioned earlier, there are noninvasive methods of scar therapy.¹⁰ In a large integrative medicine practice, nurses can extend the care of the practice via NT scar therapy and noninvasive scar therapy methods. Our hope is that

this article stimulates further research so that scar assessment and scar therapy might become part of mainstream medical practice. ART is noninvasive and training is open to nurses.¹³ Nurses trained in ART can extend integrative medicine practices. Useful interesting nursing research can be carried out to determine the usefulness of ART in the context of mainstream nursing assessment.

METHODS

Study design

We report a retrospective analysis of 3 cases.

Subjects

Subjects were 3 female patients with chronic neck and/or back pain who presented to a multiphysician group suburban integrative medicine practice.

Assessment methods

The patients were assessed by *standard history taking and physical examination*. In addition, the integrative medicine assessment method of ART was also utilized (see the Discussion section). The results of ART determined the injection sites for NT, the selection of the ear and body acupuncture points; the sites of the trigger point injections; the sites of the prolotherapy injections; and the sites of the ozone therapy injections.

Interventions

NT of scars

All injected scars when not otherwise specified were injected with 1/2% preservative-free procaine approximately 1/2 cc per cm intradermally creating a wheal with a 30-gauge × 1-inch hypodermic needle for all breast and facial scars, and a 27-gauge × 1 1/4-inch needle for other body scars. Tooth area disturbances were treated by injecting the corresponding gum area over the root with 1/2 mL of 1/2% preservative-free procaine with a 30-gauge × 1-inch needle. Tonsillectomy scars were injected with 0.3 mL of 1/2% procaine using a 30-gauge × 1-inch needle inserted at depth of 1/4 inch. When indicated tooth extraction sites were injected with 0.5 mL of 1/2% preservative-free procaine with a 30-gauge × 1-inch needle. Stellate ganglion area injections were

performed with 3 mL of 1/2% preservative-free procaine using a 27-gauge × 1 1/4-inch needle.

Ear acupuncture

Acupuncture points were determined by ART. The Nogier auricular acupuncture maps often guided the points tested with ART. All ear acupuncture was performed with 0.20 × 13-mm sterile single-use stainless steel needles. When laser stimulation of the needles was added to the treatment, it was performed with an RJ Olympus Physiolaser (a 904-nm laser) set at 150 mW for 15 seconds while using the Nogier A frequency. The laser stimulation was done with the acupuncture needles in place.

Body acupuncture

All body acupuncture was performed with 0.22 × 50-mm sterile single-use stainless steel needles. When electrical stimulation was added to the acupuncture needles, it was done at 4-Hz frequency with an Ito Electro-acupuncture IC-1107 unit for approximately 15 minutes.

Scalp acupuncture

Yamamoto scalp acupuncture was performed with 34-gauge × 1/2-inch scalp needles.

Trigger point injections

Unless otherwise stated, trigger point injections were performed using 1 mL of 1/2% preservative-free procaine with a 25-gauge × 2-inch needle.

Prolotherapy¹⁵

A solution made up of 15% dextrose in 1/2% preservative-free procaine was used for the prolotherapy⁴ treatment injections to vertebral column: laminar ligaments; facet ligaments; and transverse process ligaments. Approximately 1/2 to 1 mL was used per injection site. For the outer sacroiliac ligaments and sacrotuberous ligaments, approximately 2 mL was injected to each site. Usually, a 25-gauge × 2-inch needle was used.

Ozone therapy¹⁶

Ozone therapy,⁵ which followed prolotherapy, was performed by injecting 1 to 2 mL of 1-μg/mL ozone into the same sites as the prolotherapy using the same 25-gauge × 2-inch needle. Ozone therapy that followed neurotherapy to areas near the teeth and areas of previous tooth extractions was performed injecting

1 mL of a 1- μ g/mL ozone solution into the same sites as the neurotherapy using a 30-gauge \times 1-inch needle.

Outcome measures

Patients reported their progress by use of global impression of change scores and by their own verbal descriptions.

All patients gave written consent regarding the anonymous publication of their case reports.

CASE PRESENTATIONS

This is a report of 2 cases of patients with a history of breast augmentation and 1 case of a patient with a history of breast reduction who presented with back and/or neck pain.

Case report 1: Breast augmentation case

History of present illness: The first case is a 40-year-old woman who presented with a 1½-year history of upper interscapular tightness and pain. She was an avid tennis player with no previous history of injury. She constantly felt “quite inflamed” in the upper back. She noted an average pain level of about 6 out of 10 severity. She would get periodic massage therapy with minimal temporary help. She had no other therapy or evaluation by another provider for her condition.

Past medical history: Unremarkable.

Past surgical history: Bilateral breast implants 1½-year prior to the development of her back pain; left elbow fracture; episiotomies during childbirth.

Medications: None.

Allergies: None.

Physical examination: She was an athletic-appearing woman. She had noticeably taut rhomboid and paraspinous muscles in the T1 and T2 regions bilaterally that were moderately tender to deep palpation. She had well-healed 3-cm scars in the periareolar region of each breast, an episiotomy scar, and a small scar on the right knee. ART was positive when the breast, knee, and episiotomy scars were tested (see the Discussion section). The rest of her physical examination was unremarkable.

Initial visit: The integrative medicine treatment approaches of NT, prolotherapy, and auricular acupuncture were undertaken. NT consisted of injecting the breast scars and knee scar. Within less

than a minute or two of injecting the breast scars, the patient spontaneously noted marked relief of the tightness of her back as if someone had loosened a tight knot in her back. After which the small scar on the right knee was also injected with procaine in a similar manner. Then she was treated bilaterally with *prolotherapy* at the laminar ligament areas of T1 and T2 per ART indication. Acupuncture needles were placed at *auricular (ear) acupuncture* points per ART indication.

Visit number 2, eleven days after previous visit: The patient noted that her upper back was 70% better. She no longer felt inflamed. Her muscles in that area were more pliable. She complained of some residual right-sided neck tightness. Physical examination revealed that her breast scar was still abnormal on ART. She had some tightness over her T4, T2, and C3 laminar and facet areas. The distal attachment of her right levator scapular muscle was also tender to palpation. Also, noted on this visit was a chickenpox scar noted just over the right eye brow, which tested abnormally on ART. NT treatment included bilateral breast scar injections as well as an injection to her right chickenpox scar. Notably, she noticed marked reduction of back tightness within 1 to 2 minutes of injecting both breast scars.

Then *prolotherapy* was performed at her C3 laminar and C3 facet areas. *Auricular acupuncture* was performed per ART point selection. *Body acupuncture* was performed at Governing Vessel 14 and performed bilaterally at Triple Warmer 5 and Gall Bladder 12.

Visit number 3, two and a half months after previous visit: The patient felt that her back was 100% well for 1½ months. Then, again she noted some recurrence of her back pain to the original level. NT injections were performed on the 2 breast scars. *Prolotherapy* was performed bilaterally at the T6 and T5 laminar regions. *Auricular acupuncture* was performed per ART specification. *Body acupuncture* was performed at Urinary Bladder 15, 16, 17 bilaterally and at Governing Vessel 14.

Visit number 4, one month after previous visit: The patient reported 100% improvement in her upper back pain. She reported bilateral wrist and elbow pain. ART suggested both pains were related to an old episiotomy scar. Breast scars tested normal. The patient was treated with a single ear needle placed into the right ear for the episiotomy scar followed by laser stimulation.

Visit number 5, two months after previous visit: The patient reported that her upper back remained 100% improved. She complained of allergies, irregular

menses, “PMS” symptoms, and right tennis elbow pain. She was treated with ear *acupuncture* bilaterally and body *acupuncture* bilaterally at Spleen 6, and Large Intestine 11.

Visit number 6, two months after previous visit: The patient reported her upper back was 100% improved for 3 months and then her pain recurred for a 1-month duration. On ART, the breast scar was again abnormal. Treatments included: *NT* to the breast scars; *prolotherapy* to the laminar and transverse ligaments of T4, 5, 6, and the facet and transverse process ligaments of C3; *auricular acupuncture* related to the breast scars; and *body acupuncture* at Governing Vessel 14, bilaterally at Small Intestine 9, 10, 11 and bilaterally at the Huatojiaji points at thoracic vertebral levels 3, 4, 5, and 6.

Visit number 7, two months after previous visit: She had no complaints of upper back pain. She complained of low back pain and some neck pain of 2-week duration and mild right elbow discomfort. She was treated with: *prolotherapy* bilaterally at C5, T1, L4, L5, iliolumbar, and sacroiliac ligaments; and *body acupuncture* at Governing Vessel 14, bilaterally at Urinary Bladder 24, 25, 26, ashi points in the sacroiliac and iliolumbar areas and at right Large Intestine 11 and 4.

Visit number 8, five months after previous visit: The patient reported that her upper back was 100% improved for 6 months followed by recurrence of 1-month duration along with neck pain. She also complained of some low back pain of 1-month duration. Treatments included *NT* and body *acupuncture*. *NT* to her breast scars resulted in complete relief of her upper back pain and resolution of tightness of her upper back. Her neck pain was treated with *NT* to the area of gum overlying the root area of her #12 tooth as indicated by ART. The treatment resulted in prompt relief of her neck pain. *Body acupuncture* was performed at Gall Bladder 14, Triple Warmer 5, and Small Intestine 11 bilaterally in addition to Governing Vessel 14.

Visit number 9, four months after previous visit: The patient was seen and treated for unrelated complaints.

Visit number 10, two months after previous visit: The patient reported doing well for 6 months before recurrence of upper back pain. Treatments included: *NT* to the breast scars; and *prolotherapy* to the laminar regions of T3 and T4 bilaterally.

Visit number 11, eight months after previous visit: The patient reported doing well for 7 months before a mild recurrence of upper back pain. *NT* was

performed on the breast scars. As on previous visits there occurred immediate resolution of pain within 2 minutes. No injections were performed on the upper back.

Current status 21 months later: The patient has had multiple unrelated visits. She has reported no recurrence of her upper back pain. She has frequently remarked during these visits her pleasant surprise at how her tightness and pain sensations would “release” almost immediately after the procaine injections of her breast scars.

Case report 2: Breast augmentation

History of present illness: The second case is a 53-year-old woman who presented with a 3-month history of low back pain, right-side pain, and leg pain. She was training for a marathon when she began developing pain in the lower right buttock, right upper thigh, and pain down the leg. She also noted mid-back pain and neck pain, with occasional pain radiation down both arms. She went to a reputable orthopedic sports medicine facility. She was told she had a strained piriformis muscle. She was treated with physical therapy and manipulation of her piriformis muscle with no relief. She tried to do stretching exercises, rest, heat, and ibuprofen with no relief. An MRI obtained at that time noted degenerative disc disease and some nerve root impingement at the L4-L5 level. She received further physical therapy for 5 weeks with only mild improvement. She also tried *acupuncture* with 2 different practitioners without any effect. Her pain worsened with leaning over, standing, or sitting for prolonged periods as well as running. This mild improvement regressed recently prior to her visit with us. At the time of the visit, her daily pain level ranged from 6 to 8 out of 10 severity.

Past medical history: Menopause and mild insomnia.

Past surgical history: 2 vaginal births; several root canals; 4 wisdom teeth extractions; breast augmentation 2002 (not mentioned until the third visit); removal of benign tumors in the rectum; and tubal ligation (not mentioned until the sixth visit)

Medications: Estrogen/progesterone implanted pellet; trazodone 50 mg for sleep.

Physical examination: The patient was a healthy and fit-appearing woman whose examination was unremarkable with the exception of the following: she had moderate tenderness over her right gluteus minimus muscle, and over her right piriformis muscle.

She also had taut, tender bilateral paraspinous muscles along her paracervical region of C6 through C7; parathoracic region of T1 through T4 region; and lumbar region L4 through L5. Neurological examination was within normal limits. She had well-healed-appearing wisdom teeth extraction site scars, and a right lower first molar extraction site scar. She had old well-healed surface scars on her right knee (from abrasions from childhood). She had well-healed breast scars under her breasts from breast augmentation surgery. The breast scars were noted on her third visit. There was a tubal ligation laparoscopy scar in the umbilical area, which was noted on her sixth visit. ART was positive for her right knee scar and 3 tooth scars from tooth extractions #1, #30, and #32 (right upper and lower wisdom teeth and right lower first molar extraction sites).

Initial visit interventions: Based on ART evaluation, she was assessed as having spinal enthesopathy pain associated with her teeth and knee scars. NT injections were performed on the knee scars. The 3 tooth extraction sites were treated with NT followed by ozone therapy. A trigger point injection was performed on the right gluteus minimus muscle. Body acupuncture was performed unilaterally on the right at acupuncture points Bladder 23, 24, 25, 53, 54, and Gall Bladder 29. Electrical stimulation was applied to the acupuncture needles.

Visit 2, five days later: This was a very brief visit in which the tooth scars were treated with NT and ozone therapy in the manner of the initial visit injections.

Visit 3, seven days after previous visit: The patient noted no improvement of her pain condition. In fact, she stated she had more pain than usual since the first visit. When the patient was questioned again about any other scars, she revealed that she had scars from breast augmentation in 2002 (11 years prior to her development of her pain syndrome) and a benign rectal tumor removed transrectally. ART of these scars was positive. NT injections were applied to the breast scars taking care not to puncture the implants. The rectal scar situation was handled by means of auricular acupuncture: points indicated by ART were acupunctured and the needles were stimulated with the 904 nm RJ Olympus Physiolaser. No other therapy was performed. The patient noted within 1 minute a relaxation and marked diminution of pain in her neck and mid-back after the breast surgery scar injection and marked diminution of pain in the lower back after the placement of the ear needles.

Visit 4, seven days after previous visit: The patient reported much improvement. The interventions of visit 3 were repeated.

Visit 5, two weeks after previous visit: The patient noted much improved neck pain, and mid-back and low back pain lasting 1 week. Her neck pain was improved 85% whereas her back pain was 75% improved. She reported being able to perform most activities. The same treatments of visit 4 were carried out.

Visit 6, five weeks after previous visit: The patient reported her neck pain to be 80% improved and her back pain to be 70% improved. However, she still experienced some burning pain. More history revealed a tubal ligation that the patient failed to mention on initial history. The patient complained of Raynaud symptoms that she has had for quite some time. ART revealed that the breast scar, umbilical scar, stellate ganglion, transrectal scar, and upper and lower wisdom teeth extraction sites were abnormal.

The integrative medicine treatments performed on this visit included: NT to the breast scars, umbilical tubal ligation scar, wisdom teeth extraction sites, and stellate ganglion; ozone therapy to the tooth extraction sites; auricular acupuncture bilaterally per ART indications; auricular acupuncture to right ear ART-indicated points; and scalp acupuncture to Yamamoto scalp acupuncture "C" point bilaterally.

Visit 7, one month after previous visit: The patient reported that her back pain was improved. She reported mild intermittent discomfort. She was able to perform all activities including running. Her neck pain was 100% better. She reported some chronic itching in the back. Physical examination indicated tenderness bilaterally over the outer sacroiliac joint ligament area and the sacrotuberous ligament area. These areas were positive on ART. ART also revealed that the wisdom teeth extraction scars, transrectal scar, and breast scars no longer tested abnormally. Treatments included: prolotherapy bilaterally to the outer sacroiliac ligaments, and sacrotuberous ligaments followed by ozone therapy; and ear acupuncture performed at the left ear Nogier phase I master skin point.

Telephone follow-up 8 months later: The patient reported being at least 95% improved, with no recurrences or activity restrictions. She reported occasional stiffness after a great deal of stress on her back. She has had no further treatments or medications for her back.

Case report 3: Breast reduction

History of present illness: This third case is a 49-year-old white woman complaining of severe pain from her neck to her lower back. She had the pain in her back for almost 11 years. Her pain first started when she reached for something and heard a “pop” and then she fell to the floor and could not get up because it was too painful. After failing physical therapy, she underwent spinal fusion of L4, L5, and S1 4 years later. Two years after failing the surgical treatment, she had a spinal stimulator placed. The stimulator increased her pain and was removed 1 year later. She has noted overall worsening since then. During the past 4 years, her pain has gradually increased and all activities cause severe pain. Her pain level averaged 8 to 9/10 severity throughout the entire day every day. Other failed treatments included: acupuncture by an oriental medicine doctor in Chinatown; epidural steroid injections; radiofrequency ablation of L4, L5, and S1; and removal of a hemangioma at L4.

Past medical history: Mild irritable bowel syndrome, otherwise noncontributory.

Past surgical history: In addition to the earlier-mentioned surgical procedures the patient had: 3 cesarean sections 25, 20, and 15 years ago; laparoscopy approximately 17 years ago; breast reduction 23 years ago; wisdom teeth removal approximately 30 years ago; 2 root canals; and tonsillectomy as a child.

Physical examination: It revealed a middle-aged woman with facial grimacing due to pain with almost any movement of her back and neck. She had marked inability to turn her neck more than 30° in either direction without pain. Her back was notable for tenderness and tightness along most of her spinal column as well as her upper gluteus muscles.

She had old surgical scars that included: large breast reduction scars; cesarean section scar; central lumbar surgery scar; spinal stimulator implantation scar; and tonsillectomy scars.

Neurological examination was within normal limits and the rest of her physical examination was noncontributory. ART was positive at the breast scars, the cesarean section scar, and the lumbar surgery scar.

Initial visit treatments: NT was performed on the breast scars. Within 1 to 2 minutes of the injection of her breast scars, there was immediate reduction of her neck pain with marked improved range of motion. The patient’s facial expression expressed surprise and a reduction of pain and stress. After injection of her

cesarean section scar and all her back scars, she moved much more easily without visible expressions of pain. *Ear acupuncture* was performed as was *body acupuncture* with electrical stimulation bilaterally at Bladder 18, 19, 20, and 21.

Visit 2, three weeks after previous visit: She reported marked improvement of her neck. Her lower and thoracic spine pain temporarily improved for 3 days and then returned to baseline level. Physical examination revealed marked improvement of her neck range of motion and marked decrease in tenderness of her cervical paraspinal muscles bilaterally. Her thoracic spine and lumbar spine areas however were still markedly tender to palpation with multiple trigger points bilaterally. ART revealed abnormalities: in the treated scars of the previous visit; the bilateral laminar regions of T11, T12, L2, L3, L4, L5; the iliolumbar and sacrotuberous ligaments bilaterally; and her quadratus lumborum ligaments. Treatments included NT to the scars; *trigger point injections* to the laminar ligament areas of T11, T12, L2, L3, L4, L5 bilaterally; the iliolumbar and sacrotuberous ligaments bilaterally; and her quadratus lumborum ligament bilaterally.

Visit 3, two weeks after previous visit: She noted continued improvement of her neck and partial temporary improvement of the rest of her back. Treatments included: NT to the breast and back scars; and *body acupuncture* bilaterally at Urinary Bladder 60, Gall Bladder 41, and Triple Warmer 5.

Visit 4, six weeks after previous visit: The patient reported no more neck pain and partial improvement of the rest of her back. NT was performed on the breast and back scars.

Visit 5, four weeks from previous visit and through visit 11, in which the patient was treated every 2 to 4 weeks over a period of 7 months: The patient’s back was treated with various combinations of *body acupuncture*, *trigger point injections*, *prolotherapy*, and *ozone therapy* injections. Her breast scars were not injected because ART was negative in the context of the patient being free of neck symptoms during this period. Her mid-back and low back gradually improved with these interventions.

Visit 12, two months after the 11th visit: After more than 8 months of freedom from neck pain, the patient reported recurrence of stabbing pain with chronic stiffness of her neck and trapezius muscles. She reported a pain severity of 8/10. Her low back pain remained 50% improved. Again her breast scars tested abnormal on ART. Within minutes of injecting her

breast reduction scars, she noted marked improvement of her neck pain. Her other scars were injected and *ear acupuncture* was performed.

Visit 13, one month after previous visit: She reported 50% reduction in neck pain. Her back pain however had minimal improvement. Treatments included *NT* to the patient's breast scars and back scars. Her tonsillectomy scars tested abnormal by ART and were treated by *NT*. *Ear acupuncture* was performed bilaterally. *Body acupuncture* was performed bilaterally at Triple Heater 8 and Urinary Bladder 60.

Visit 14, 4 months after previous visit: The patient reported that her neck was much better for 2 months, with gradual recurrence to level 7/10. Her low and mid-back pain was 75% better. Treatments included *NT* performed to left breast scar, left upper and lower wisdom teeth extraction scars, and tonsil scars bilaterally. *Ear acupuncture* was performed at ART-indicated points. *Body acupuncture* was performed at Governing Vessel 14 and at Spleen 6, Gall Bladder 21 and Gall Bladder 20 bilaterally. As usual the body acupuncture points were selected by ART.

Visit 15, one month after previous visit: The patient's neck pain was about 85% improved whereas her back pain was 75% improved. Treatments included: *NT* to the left breast scar and to both tonsil scars; *NT* followed by *ozone therapy* injection to the left wisdom teeth extraction sites; and *ear acupuncture* to the left ear.

Visits 16 to 18 over a 4-month period: Her neck pains were at least 90% improved. We focused on her back pains by treating her wisdom teeth scars, back fusion scar, and stimulator implant scar.

Current status: This patient continues (as of this writing) to require treatment for her longstanding back pains at 1- to 2-month intervals. She states that her neck pain is over 95% better but her low back bothers her periodically.

DISCUSSION

Limitations and research directions

The main limitation of this article is that it is a retrospective report of 3 cases. The retrospective case study is at the bottom of the research design hierarchy. However, case reports can serve as early detection signals of significant medical findings. Based on our

clinical experience, we believe our findings deserve further investigation using more rigorous research designs.

In the context of the clinical treatment of chronic pain, patients at our institute are treated with a program based on our clinical experience, training, and study to efficiently, without side effects, relieve pain and restore function. Three women with chronic neck and back pain, 2 of whom had previously failed both standard and integrative medicine treatments, responded to an integrative medicine assessment and treatment approach, which included ART as an assessment tool and multiple treatment modalities, which included *NT* of scars, *ear acupuncture* with and without low-level laser stimulation, *body acupuncture* with and without electrical stimulation, *scalp acupuncture*, *trigger point injections*, *prolotherapy*, and *ozone therapy*. All 3 patients had a good response to treatment.

In the context of retrospective case reports with multiple confounding variables, it is impossible to have certainty, determining the relative effectiveness and/or synergism of the components of the integrative medicine assessment/treatment program. However, we can make an educated estimate of the more important factors based on clinical experience and training. Based on this educated estimate, the research community can implement more vigorous research designs to answer the questions concerning the relative effectiveness and synergism of the integrative medicine components. The purpose of this report is to stimulate further research to improve the current treatment of chronic pain and avoid adverse effects of the treatment of chronic pain such as narcotic medication dependence. Currently, the FDA has not evaluated any of the procedures we have mentioned. Hopefully, others will be motivated to move in the direction of performing vigorously designed studies, with whom we would be happy to collaborate.

In a case report one cannot rule out the possibility of a placebo effect. Each patient had been seen by other practitioners, and 2 patients had received both standard medical therapies (1 patient had multiple invasive procedures) and the integrative therapies of massage and acupuncture. All 3 patients failed to demonstrate any response including a placebo response. Neck pain occurred in a patient with breast reduction surgery as well as the 2 cases who had breast augmentation surgery. Marked changes began to occur as soon as the breast scars were treated. The clinical decision to treat the breast scars was prompted by ART

assessment. There was delay in the second patient's start of breast scar therapy. During this delayed period, she received other therapies at our institute but did not report improvement. Upon performing NT to her breast scars, her neck and mid-back pain immediately improved and continued to improve over the course of follow-up visits. In addition, the second patient's low back pain began to improve immediately and over the course of follow-up visits immediately after her rectal scar was treated via ear acupuncture. Treatment of the rectal scar had also been delayed. Thus, we feel the most important integrative medicine components were the ART assessment technique, which identified the scars to be treated and the NT breast scar treatments.

In regard to the possible association of breast scars with neck and upper back pain, a prospective cohort study with a nested case control component would be very useful. However, an analysis of a very large database would allow for a retrospective case control study, which would be cheaper and more feasible. The usefulness of ART in clinical practice can be studied with survey methodology and qualitative research to ascertain the perceived effectiveness of those health care practices that incorporate ART. Given positive results from the preceding less costly study designs, more rigorous and costly research studies can be undertaken. In regard to NT for breast scars associated with neck and upper back pain, small Phase II studies can be undertaken as a prelude to randomized controlled trials.

CONCLUSIONS

In certain instances breast scars may be important contributing factors to neck and back pain. ART may be very helpful in identifying scars associated with neck and back pain. NT appears to be an effective therapy for treating these scars. More rigorous research is needed to confirm these conclusions. In light of the public health problem of opioid medications in the context of chronic benign pain, it behooves the clinical research community to look closely at NT scar therapy and ART. In addition, other scar therapies such as ear acupuncture according to Strittmater,⁹ manual therapies, and other noninvasive

scar therapies¹⁰ can be considered for research. Nurses could expand the availability of scar therapy to the public by utilizing noninvasive scar therapy methods and within certain settings performing NT of accessible scars on the skin.

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