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Integration of acupuncture into the oncology clinic†

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Abstract: **Purpose/Objective**: Patients with cancer or symptoms referable to cancer therapy were offered acupuncture as potential palliation of their symptoms. This paper describes the physical integration of the discipline into the Oncology Clinic, and patient perspectives on its availability and efficacy. **Patients and methods**: Between August 1999 and May 2000, 123 patients with varying symptoms received acupuncture in our Center's Radiation and Medical Oncology Clinics and Breast Health Center. These patients had 823 visits during this time period. A practice outcome analysis was performed on patients receiving therapy between 1 January 2000 and 30 April 2000. The 89 patients treated during this interval had 444 total visits. In June and July 2000, a questionnaire was administered by phone to 79 of these patients (89%). Standard allopathic care continued while patients were receiving acupuncture. **Results**: Major reasons for referral included pain (53%), xerostomia (32%), hot flashes (6%) and nausea/loss of appetite (6%). Patients had a mean of five acupuncture visits (range 1–9). Most patients (60%) showed at least 30% improvement in their symptoms. About one-third of patients had no change in severity of symptoms. There were no untoward effects reported related to the acupuncture. When analysed by diagnosis, these values persist. Irrespective of response to therapy, 86% of respondents considered it 'very important' that we continue to provide acupuncture services. **Conclusion**: Acupuncture may contribute to control of symptoms for cancer patients. Expansion of providers, continued patient follow-up, optimization of techniques and prospective objective measurement of response continue in our clinic. *Palliative Medicine* 2002; **16**: 235–239

Key words: acupuncture; alternative and complementary therapies; cancer; nausea; palliation; xerostomia

Resumé: **Objectifs**: Nous avons proposé à des patients atteints de cancer ou de symptômes relevables d'un traitement anti-cancéreux de l'acupuncture comme traitement palliatif de leur symptôme. Cet article décrit l'intégration physique de cette discipline à une activité d'oncologie et les points de vue du patient sur sa mise en œuvre et son efficacité. **Patients et méthodes**: Entre 8/99 et 5/00, 123 patients porteurs de divers symptômes ont reçu de l'acupuncture dans notre centre de traitement des pathologies mammaires et cliniques oncologiques médicales et radiothérapeutiques. Ces patients ont reçu 823 visites pendant cette période. Nous avons réalisé une analyse des résultats de la pratique recevant une thérapie entre le 1/1/00 et 4/30/00. Les quatre vingt neuf patients traités durant cet intervalle ont eu un total de 444 visites. En juin et juillet 2000, nous avons soumis un questionnaire par téléphone à 79 de ces patients (89%). Les soins allopathiques standards ont été poursuivis en même temps que l'acupuncture. **Résultats**: Les principaux motifs de traitements étaient la douleur (53%), la xérostomie (32%), les bouffées de chaleur (6%) et les nausées/perte d'appétit (6%). Les patients ont eu une moyenne de 5 séances d'acupuncture (de 1 à 9). La plupart des patients (60%) ont montré une amélioration d'au moins 30% de leur symptôme. Dans environ 1/3 des patients, il n'y a pas eu de changement dans la sévérité des symptômes. Il n'y a pas eu d'effet indésirable lié à l'acupuncture. Ces résultats restent valables pathologies par pathologies. Quelque soit la réponse au traitement, 86% des participants considéraient que l'acupuncture était très importante de telle manière qu'elle a été

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poursuivie. **Conclusion**: L'acupuncture peut contribuer à la prise en charge de quelques symptômes chez des patients cancéreux. Dans notre clinique nous augmentons les praticiens, continuons à suivre les patients, optimisons les techniques et mesurons de façon objective et prospective les réponses. *Palliative Medicine* 2002; **16**: 235–239

Mots-clés: acupuncture; thérapies alternatives et complémentaires; cancer; nausées; traitement palliatifs; xérostomie

Introduction

Acupuncture is gaining momentum and adherents as a valid intervention in palliative medicine. In the United States, this mirrors a movement towards complementary therapies; recent data reveal that 34–40%[1,2] of patients seek nontraditional medical attention.

Acupuncture received needed validation at a National Institutes of Health (NIH) consensus conference in November of 1997. After review of the existing literature, the attendees concluded:

> *Acupuncture as a therapeutic intervention is widely practised in the United States. While there have been many studies of its potential usefulness, many of these studies provide equivocal results because of design, sample size, and other factors. The issue is further complicated by inherent difficulties in the use of appropriate controls, such as placebos and sham acupuncture groups. However, promising results have emerged, for example, showing efficacy of acupuncture in adult post-operative and chemotherapy nausea and vomiting and post-operative dental pain. There are other situations such as addiction, stroke rehabilitation, headache, menstrual cramps, tennis elbow, fibromyalgia, myofascial pain, osteoarthritis, low back pain, carpal tunnel syndrome and asthma where acupuncture may be useful as an adjunct treatment or an acceptable alternative or be included in a comprehensive management programme. Further research is likely to uncover additional areas where acupuncture interventions will be useful.*[3]

Two recent literature reviews[4,5] have shown its efficacy in pain, and called for further research in other arenas. Formal clinical trials of acupuncture have begun.[6] Positive results are beginning to emerge in reputable, peer-reviewed journals.[7–9]

In response to this movement, it was decided to integrate acupuncture into patient care at Naval Medical Center San Diego (NMCSD). In general, medical services and medications at NMCSD are offered to active-duty military personnel in the US Armed Forces and their dependents on a no-cost basis. Retirees and their dependents may gain access to NMCSD either on a space-available basis, or by enrolling in the US Department of Defense healthcare plan, TRICARE. There has never been a per-visit charge for any oncology or acupuncture services at NMCSD, and no patients were sent elsewhere because of inability to deal with their underlying oncology problem during this interval. Thus, access and ability to pay are two variables existing in the US population at large that do not exist in the microcosm of the NMCSD population discussed here.

The first step in acupuncture integration was to add a Physician Acupuncturist to the medical staff. Although acupuncture may be administered by nonphysician providers in the United States, for accreditation purposes within the Department of Defense, a physician was preferable. Physician Acupuncturists, like their nonphysician counterparts, are licensed at the State level; in almost all cases, licensure is automatic after completion of extensive training such as the 300 credit UCLA course 'Medical Acupuncture for Physicians'. The programme was initiated using a single acupuncturist (RCN) so trained, with over 10 years of experience.

For many reasons, including acupuncture's value in symptom palliation, the sites of initial integration were the Oncology Clinics. Patients with symptoms related to cancer or to cancer treatments were offered acupuncture as potential palliation of their symptoms. Although refractory pain and nausea were the two diagnoses expected to comprise most of the therapeutic interventions, early success in patients with radiation-induced xerostomia[7,10] were an enormous and gratifying surprise.

After the programme had been in place for a year, additional providers were credentialed by the Medical Center, and nononcology patients were allowed access. However, prior to expansion of the service, a practice analysis was performed to document initial outcomes. This manuscript provides an overview of patient perspectives on this palliative programme, describes the quality assurance, peer review and oversight techniques currently in use, and lists current diagnoses being treated.

Patients and methods

In the first 9 months of the acupuncture integration, between August 1999 and May 2000, 123 patients with

- What did you have treated?
- Did you get better, worse, or stay the same?
- What percent change?
- Are you continuing or would you continue acupuncture?
- How important is it for our medical center to continue this form of therapy?

Figure 1 Questions asked via telephone

Table 1 Demographics of the population administered the telephone questionnaire

Gender	male	32
	female	57
Age	mean	58
	range	19–80
Visits	mean	5
	range	1–21
444 Total visits		
	pain	53%
	xerostomia	32%
	hot flashes	6%
	nausea, vomiting, anorexia	6%
	other (weight loss, smoking cessation, nonhealing wounds and so forth)	3%

varying symptoms received acupuncture in our Center's Pain Clinic, Radiation and Medical Oncology Clinics and Breast Health Center. Most patients were referred by their physicians, but some, after learning of its availability, self-referred. Standard medical therapies were continued during acupuncture therapy, although palliative medications were discontinued if warranted. These patients had 823 visits with the single acupuncturist (RCN) during this time period. Our initial perspective was that the addition of acupuncture was a successful intervention, but prior to training more providers and further expanding services, a practice analysis was performed. It was also hoped that this would help in determining which types of complaints would be best served by acupuncture.

Techniques of acupuncture varied depending on the clinical situation. Included were traditional Chinese acupuncture, auricular acupuncture, percutaneous electrical nerve stimulation (PENS), and Korean hand and Japanese scalp acupuncture. Disposable sterile single-use needles were used exclusively. If stimulation was required of the acupuncture point, this was accomplished with heat or electricity. In no cases was moxibustion performed. As an example, therapy for hot flashes was varied among three regimens: (1) an energetic input using the Tai Yang/Shao Yin meridians, (2) an N/N+1 circuit[11] with the classical points Kidney-3, Bladder-60, and Heart-3, and (3) a classical scheme using Kidney-3, Bladder-60, Spleen-6, Stomach-36 and Large Intestine-4. Xerostomia therapy uses auricular acupuncture of three points bilaterally, and a single point on the bilateral radial index finger. Back and joint pain is generally treated with PENS, a distinctly western technique; if a depressive or anxious component is present, the patient may receive eastern regimens such as Four Gates or Internal/External Dragons. Trigger points may be deactivated by the western technique of Travell and Simons,[12] or by a modification of an eastern technique of dispersion: the Two-Needle technique.[13]

This performance analysis was performed by a single physician (GRP) with patients receiving acupuncture between 1 January 2000 and 30 April 2000. The 89 patients treated during this 4-month interval had a total of 444 visits. A simple questionnaire was administered to 79 of these patients (89%) available by phone during the months of June and July 2000. For ease of administration, and to impact minimally on the patients' time, a five-question metric was used. The questionnaire is in Figure 1; demographics of the respondents are in Table 1.

It is understood that the metric and design of the questionnaire is somewhat naïve by conventional standards. It was designed, however, not to definitively document results for any individual diagnosis, but to obtain a

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Acupuncture Peer Review
Naval Medical Center San Diego

Patient: SSN: Date:

Practitioner: Reviewer:

Informed Consent Obtained? Yes ☐ No ☐

Needle Placement: Yes ☐ No ☐

Duration: Yes ☐ No ☐

Procedure:

Electrostimulation / Frequency: Yes ☐ No ☐ N/A ☐

Piezostimulation: Yes ☐ No ☐ N/A ☐

Assessment of Outcome: Yes ☐ No ☐

Needle Count Correct Yes ☐ No ☐

Patient Tolerance: Yes ☐ No ☐

Disposition: Yes ☐ No ☐

Figure 2 Peer review form

PRIVATE AND CONFIDENTIAL / QUALITY ASSURANCE
Acupuncture Peer Review
Naval Medical Center San Diego

May, 2001

Note documentation deficits for month:	@[1]	#	&	*
1. Informed Consent documented				
2. Needle placement				
3. Duration	1			
4. Procedure				
5. Outcome				5
6. All needles accounted for				
7. Patient tolerance		2		
8. Disposition				
Total notes reviewed:	10	28	14	72
Total appropriate:	10	27	14	72

Notes:
@ Legibility is an issue.
# Consider 10 minutes per side for internal / external dragons.

[1] Identities of the individual physicians are coded for confidentiality. Each knows his/her code, and each physician signs this sheet at the monthly meeting.

Figure 3 Monthly peer review summary

broad overview of patient perspectives and results. Results for specific diagnoses are subsequently obtained in individual, in-depth surveys using specific metrics such as a visual analogue scale for pain, the Xerostomia Inventory,[14] or the Mayo Clinic Hot Flash metric.[15]

Results

No adverse events referable to acupuncture were noted.

Of the 42 patients referred for palliation of pain, 15 (36%) had no response. However, those with a response noted a mean value of 71% improvement. When that figure is averaged over all pain patients (including those who had no response), the mean improvement was 46%. Twenty-three pain patients (55%) showed at least 30% improvement, and 14 (33%) showed at least 80% improvement. Duration of response was variable, but often resulted in lessening of oral analgesia. Further, patients stated that they had improvement in their ability to perform daily activities and tolerate the side effects from the treatment of their illness.

Of the 25 patients referred for xerostomia, 7 (28%) had no durable response. Responders experienced a mean 50% improvement, with 14 patients (56%) showing at least 30% improvement and 4 patients (16%) with at least 80% improvement. Most of these patients were previously reported using a different metric.[7]

All patients in the smaller groups referred for hot flashes, or nausea and vomiting, experienced palliation of their symptoms. The mean improvement in hot flashes was 81%, and was 96% for nausea and vomiting.

When asked the global question regarding acupuncture's worth, 68 patients (86%) considered it very important, 9 patients (11%) considered it slightly important and 2 patients (3%) considered it unimportant. Those percentages continued when patients were asked whether our centre should continue acupuncture services: 90% recommended continuing the service and 10% (8 patients) recommended discontinuation of services.

Table 2 Major diagnoses treated with acupuncture (first 2 months of expanded programme)

Diagnosis	Number of		Percentage of	
	Patients	Visits	Patients	Visits
Pain (incl.)	41	103	36%	41%
RSD	2	4		
Neuropathy	6	14		
Xerostomia	19	43	17%	17%
Hot flashes	8	26	7%	10%
Obesity	3	13	3%	5%
Protocol (IRB approved, for lower urinary tract symptoms)	8	28	7%	7%
Others	34	39		
Total	121	270		

Discussion

Success in treating xerostomia with acupuncture has been previously reported by our group.[7,10] While we were struck by such success in the limited oncology population of patients with head and neck cancer post-radiotherapy, it was also clear that acupuncture was valuable in the larger, general oncology community. However, prior to expanding the number of acupuncture providers and offering acupuncture services to non-oncology patients, prudent business practice dictated that validation of our impressions in terms of baseline patient satisfaction was documented.

It was reproducible across the two largest diagnoses that about 30% of patients had no response to acupuncture. This is concordant with the literature.[16,17] The cost of acupuncture is less than all but the most inexpensive pain medications (US$0.10–US$0.15 per sterilized, disposable acupuncture needle), and no adverse events were noted. It is somewhat time intensive for the practitioner, who happens to be a physician in our system. Non-physician acupuncturists may be integrated in the United States or elsewhere, if available – but we strongly recommend active physician oversight if this is the case.

Our current programme has four physician acupuncturists: the full-time, senior acupuncturist, and three part-time practitioners (an anesthesiologist, a rheumatologist and a radiation oncologist). Caveats of their privileges are that 100% peer review is performed of their acupuncture charts, outcome analyses are performed, and monthly meetings are held for discussion of practice issues and new data. The peer review form currently used is included in Figure 2, and the monthly summary form is in Figure 3. All patient visits are input into a database for data extraction and to provide easy recall for recredentialing.

In the first 2 months of the integrated programme, over 200 patient visits occurred; the most frequent are listed by diagnosis in Table 2. Outcome analyses by diagnosis are being collated and will be submitted for publication as follow-up matures.

Conclusion

These data document that acupuncture is safe, inexpensive and is considered an important service by our patients. Our previous data have revealed its use for palliation of pilocarpine-resistant xerostomia after head and neck radiotherapy.[7] We concur with other investigators that it is a useful adjunct in chemotherapy-induced emesis,[9] and as an adjunct mechanism of pain control.

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