Safety Aspects of Acupuncture in Palliative Care

Jacqueline Filshie

Summary
Acupuncture can mask symptoms of cancer and tumour progression. It is not safe to use such a therapy without full knowledge of the clinical stage of the disease, and the current status of orthodox therapy. Contraindications to acupuncture needling include an unstable spine, severe clotting disorder, neutropenia and lymphoedema. Whilst semi-permanent needles are used increasingly in symptom control and pain management they should not be used in patients with valvular heart disease or in vulnerable neutropenic patients. Acupuncture has an increasing role in support for pain and symptom management, but patients should not be advised to abandon conventional treatments in favour of complementary or alternative therapies alone, and should not have their hopes raised inappropriately, or have any guilt projected on to them for the cause of their cancer.

Keywords
Acupuncture, palliative medicine, adverse events, safety.

Introduction
Complementary and alternative medicine (CAM) is enjoying increasing popularity amongst the general public and cancer patients are no exception. Its use for cancer pain has been reviewed and includes some of the following data: In a review of 26 surveys of the use of CAM by cancer patients in 13 different countries the use varied from 7-64%, with an average of approximately 30%. In children, the frequency was up to 50%, with patients often using multiple therapies. One hundred and forty-one health care professionals in Ontario, working with cancer patients, were asked to identify which pharmacological therapy, out of a choice of 19, they would like to learn more about. Of the top 5, acupuncture/acupressure was the foremost choice, followed by massage, hypnosis, ‘therapeutic touch’ or healing and biofeedback.

The main reasons that patients turn to CAM have been explored, but the plain fact is that orthodox medicine cannot reliably deliver a cure for many symptoms and conditions. The need for self-empowerment and ability to cope, both physically and emotionally, attracts patients to therapies often perceived as gentle, and natural, with fewer side effects than conventional treatment.

The attitudes of the medical, nursing and allied health professions are progressing from antagonism to amicable coexistence. There is increasing acceptance of therapies that have efficacy in the areas of symptom control, for example, nausea and vomiting, xerostomia, dyspnoea, pain, and anxiety. There is also increasing acceptance of a multiplicity of mind body therapies that help patients adopt a positive approach and improve their quality of life.

The incidence of cancer is rising in the UK, where it is responsible for approximately 25% of all deaths per year. The commonest cancers are breast, lung, gut, prostate and skin. Treatment is ideally preventive, through education about the risks of, for example, smoking and use of sunscreens, and the benefits of, for example, healthy eating. Treatment can also be therapeutic. Cancers are locally invasive and many metastasise...
to other sites, through loco-regional spread, especially to lymph nodes, but also through distant spread, to bone, lung, brain and liver. Bone metastases are particularly common in cancers of the lung, breast, prostate, thyroid and kidney. A reasonable knowledge about the types of cancer and their therapeutic options, including surgery, chemotherapy, hormone therapy and biological therapies, is necessary before treating these patients. Cancer treatments are continually evolving, and current treatments are based on a combination of scientific research and clinical trials. Knowledge of the subject, therefore, needs continuous updating.

Pain in a cancer patient may be related to the primary disease, metastatic disease, the cancer treatment, or it may be unrelated. Common sources of cancer related pain include bone pain, nerve pain, soft tissue infiltration, visceral pain and myofascial pain. Multiple pains with multiple aetiologies may exist in the same patient. It is important to fully assess each symptom prior to treatment.

Acupuncture in the cancer patient

Direct effects of acupuncture

Acupuncture has an increasing part to play in the treatment of cancer pain and symptom management. It is not uncommon to have unexpectedly welcome side-effects, such as the disappearance of long standing psoriasis, migraine, gastrointestinal problems, or symptoms of prostatism. Acupuncture can, however, mask a serious problem, or disease progression, so the clinical condition needs continuous monitoring alongside the oncology team treating the patient. As a consequence, acupuncture treatment in cancer patients should ideally be given by, or closely supervised by, a physician who is knowledgeable about the clinical staging and current treatment of their patients.

It is regrettable that, despite numerous papers describing largely observational work in palliative care patients, specific side effects, including aggravation of symptoms, have not often been mentioned. Blom et al mentioned bleeding and tiredness post-treatment. Rydholm and Strang specifically looked for infection and haemorrhage in 20 late-stage palliative care patients and found neither. The multiple acupuncture treatments for advanced cancer related pain were very time consuming for the practitioners, Wen, 1977 and the short-lived relief not thought to be practical by Mann, 1973. Informal recommendations based on papers and chapters plus clinical practice remains for the moment the best sources of advice on this topic.

Table 1 shows a list of contraindications to acupuncture treatment in cancer patients.

Acupuncture is contraindicated around an unstable spine, in case the removal of protective muscle spasm causes spinal cord transection. Patients with multiple myeloma are particularly vulnerable, and the use of transcutaneous

<table>
<thead>
<tr>
<th>Table 1 Contraindications and Cautions</th>
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<tr>
<td><strong>Contraindications</strong></td>
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<tr>
<td>Do not needle in the local area of an unstable spine – this could lead to spinal cord injury or transection</td>
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<tr>
<td>Do not directly needle superficial tumour nodules or ulceration</td>
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<tr>
<td>Avoid needling a lymphoedematous limb</td>
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<td>Avoid needling if blood clotting is seriously impaired</td>
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<tr>
<td>Do not needle into a prosthesis</td>
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<tr>
<td>Do not needle intracranial deficits</td>
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<tr>
<td>Avoid electroacupuncture in patients with a demand pacemaker</td>
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| **Cautions**                           |
| Cancer patients can be more sensitive to acupuncture, and nursing assistance is recommended for each case |
| Take great care with needling depth in cachectic patients, especially over the chest wall |
| If tolerance occurs it may represent progressive disease and full investigation of tumour status is advised |


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electrical nerve stimulation (TENS) may be a safer option, paravertebrally near the site of instability. There are no published case reports of spinal transection following acupuncture treatment of the spine in cancer patients, but the author has collected numerous ‘anecdotes’, albeit low level evidence, over the years. For example, one patient with metastatic breast cancer, who had complete pain relief from back pain following acupuncture treatment, subsequently suffered a spinal transection ten days later at home. Unfortunately, no specific details are available. Another patient with multiple myeloma experienced an increase in neurological symptoms, accompanied by band-like pain, shortly after acupuncture treatment. The patient had already had one operation to stabilise the spine internally, and was not expected to suffer any more spinal instability in that region of the spine. Figure 1 shows the moth-eaten spine of a patient with multiple myeloma. This patient would be vulnerable to spinal cord transection at a number of spinal levels.

Acupuncture is a very profound muscle relaxant. Patients with metastatic disease around the cervical spine often exhibit excessive muscle spasm in the muscles that hold the head in an upright position. The muscles involved in supporting the lower back may also be in extreme spasm in an effort to maintain stability in patients with lower spinal instability. This is not necessarily immediately obvious on external examination. As a consequence, it would be prudent not to needle around an unstable spine, and to use TENS as a suitable non-drug alternative. In more recent years, the employment of bisphosphonates, such as clodronate and pamidronate, have decreased the incidence of pathological fractures due to bone metastases, particularly from breast cancer and multiple myeloma. Reliance on traditional Chinese energetic diagnosis alone could be potentially dangerous in this type of patient.

Superficial tumour nodules or skin ulceration should not be directly needled, since this may
result in an increased likelihood of local or distant spread.

Needles should not be inserted in a limb with lymphoedematous swelling\(^1\) (figure 2). Broken skin is a source of potential infection and cellulitis, and the patient could continue to ooze fluid from sites of needle insertion. For the most part, acupuncture treatment, even at distant sites, does not improve lymphoedema. On occasions, however, the author has seen a dramatic reduction in swelling by as much as 30-50% following treatment, with the needles inserted proximal to the lymphoedematous limb, a most welcome side effect!

Blood clotting is commonly compromised in patients with leukaemias and other haematological disease. Clotting dysfunction is a frequent accompaniment to many types of chemotherapy and is extreme following bone marrow transplantation, either allograft or autograft. A platelet count of over 20,000 is preferable and caution needs to be exercised in patients anticoagulated with warfarin. In many cases the results of clotting tests are unavailable, so it is inadvisable to give acupuncture to any patient whose clotting function is moderate or severe, or to one who bleeds and bruises spontaneously, or to one with multiple petechiae.

One should not needle into a prosthesis, e.g. a breast implant after a latissimus dorsi flap reconstruction. Needling may result in leakage from the implant or infection around the capsule. One should not needle directly over an intracranial deficit following neurosurgery. Needling may cause infections, such as meningitis, or could result in intra-cranial haemorrhage.

Cancer patients may appear to be more sensitive to acupuncture than other patients, and may become excessively sleepy even after very short acupuncture treatments. It is inadvisable to treat them without nursing assistance. All patients should be given very gentle treatments initially, and subsequent treatments should be tailored to the individual, based on their responses. Cachectic cancer patients should be needled only very superficially. If tolerance occurs in a cancer patient it may be due to disease progression and the patient may need further investigation.

Of 25 patients who become tolerant to acupuncture, 17 were subsequently diagnosed to have metastatic spread, sometimes pre-clinical detection.\(^{15}\) If a patient becomes tolerant after previously responding well, it is reasonable to suggest restaging of that patient in case of recurrent disease. Interestingly, following treatment of any cancer metastasis, such patients often resume being responsive to treatment.

Acupuncture is increasingly used as an adjunct to cancer surgery for ‘acute pain’ management. It is advisable to secure the needles safely peroperatively and to record the number of needles inserted on a white/blackboard, much like a swab count, ensuring that the needle number is checked very carefully at the end of the case to avoid leaving unwelcome ‘souvenirs’ in the patient postoperatively.

**Direct effects of semi-permanent needles**

Semi-permanent needles are now used quite extensively in advanced cancer related dyspnoea,\(^6,16\) anxiety,\(^7\) pain,\(^17,18\) and treatment of disabling hot flushes due to hormone therapy for breast\(^19\) and prostate cancer (personal observation). Contraindications and cautions are outlined in Table 2.

Do not use if the patient has heart valve disease, a pacemaker, or a post cardiac transplant. There is

### Table 2  Contraindications and Cautions for the Use of Semipermanent Needles in Cancer Patients

<table>
<thead>
<tr>
<th>Contraindications and Cautions</th>
<th>Notes</th>
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<tr>
<td>Do not use in patients with valvular heart disease</td>
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<td>Do not use in neutropenic patients</td>
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<tr>
<td>Post-splenectomy</td>
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<tr>
<td>Avoid in patients with known hepatitis B or C due to risk from needle stick ‘fall out’</td>
<td>‘Strong reactors’</td>
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<tr>
<td>Caution in patients with keloid scars</td>
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a chance of infection, e.g. subacute bacterial endocarditis.

Post-splenectomy patients are relatively immunocompromised, and it makes sense to take care with, and possibly avoid the use of, semi-permanent needles in these patients.

Avoid their use in patients with known hepatitis B and C. If a semi-permanent needle were to ‘fall out’ it could represent a risk of needle stick injury to others.

‘Strong reactors’ to acupuncture are unfortunately too sensitive to have semi-permanent needles left in situ, so they need to have their treatment maintained by intermittent ‘top ups’.

It may be a relative contraindication to treat patients prone to keloid formation.

Semi-permanent needles should not be inserted in patients during cycles of chemotherapy or radiation treatment, as the needle is a potential source of infection, and patients are, at these times, vulnerable to develop life-threatening sepsis, especially if the white cell count is low and the patient profoundly neutropenic. Any severe immunosuppression from any cause is in fact a contraindication to the use of semi-permanent needles, and this consequently includes many patients in the intensive care unit.

Needles that ‘fall out’ could represent a sharps hazard. It is not always clearly stated in the literature what happens to the needles when they fall out. It is possible that it may not always be known.

Side effects to indwelling studs for palliative care have not been formally audited, but in my own practice they include redness and soreness on occasions, pain and discomfort around the site, and slight thickening in a patient who gets keloid scars. I have seen occasional reactions to the clear plastic dressings that are placed over the studs to decrease the chance of accidental loss of the needles.

Do it yourself (DIY) needle kits are becoming commonplace for outpatient maintenance of symptom control, such as hot flushes associated with tamoxifen therapy. It is essential that patients provided with these are given clear instructions for their use, including skin cleansing prior to insertion, and that they are given suitable containers for safe disposal, and transport back to the clinic, of used needles.

**Indirect effects of acupuncture**

Patients should be advised not to abandon conventional treatment in favour of any alternative treatment. This can happen is centres for CAM, often with limited medical input, and perhaps by well intentioned individuals. Patients should not be given false hopes by practitioners, or have any guilt projected on to them regarding the cause of their cancer.

Inappropriate advice about the effects of a treatment on the cancer, or on life style, can be risky, especially if acupuncture and other complementary medical treatments are offered as an alternative to conventional anticancer treatment. Pain and suffering are not separate, but are closely intermingled. Anger and denial about cancer are common in patients, and the sensitive handling of such patients requires considerable skill and specialised counselling, with the addition, in many cases, of formal psychological support. Inappropriate advice can also be exceedingly emotionally damaging. Financial exploitation can occur in these patients, and prolonged courses of treatment are sometimes given inappropriately.

The lack of understanding of the cancer process and treatment can be a handicap, and remission may be seen as a cure by well meaning practitioners who are inexperienced in treating this type of patient. The author has unfortunately and sometimes tragically seen all of these complications, plus the masking of diagnosis and disease progression, with a consequent delay in appropriate treatment.

**Conclusion**

The beneficial effects of treatment for cancer pain and symptom control generally appear to outweigh the negative side effects of acupuncture treatment in the cancer population. The use of
acupuncture for symptom control in palliative medicine can be one of the most rewarding aspects of medical care, when used appropriately. However, there is also significant potential for serious adverse events. A prospective study of side effects to more accurately identify the risks in this population would be ideal. This would represent a huge organisational task, but given the vulnerability of the patients and theoretical dangers, this is a task that urgently needs to be performed.

Reference List
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