EPA Contraindications in Women’s Health: Current Evidence Reconsidered

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Scope and Plan
- Several sets of Guidance over last 15 years
- Not identical in their advice
- Different books and papers also have differing opinion
- Try to evaluate and come to a set of recommendations which are consistent with the best evidence
- Focus on (a) pregnancy and (b) malignancy
- Made pdf of slide set available at www.electrotherapy.org/downloads

Guidance + Authors
- Australian (2001):
  - V Robertson; L Chipchase; L Laakso; K Whelan; L McKenna
- CSP (2006) (listed authors):
  - (Authors): S Bazin; S Kitchen; D Maskill; A Reed; A Skinner; D Walsh; T Watson
  - (Contributors): D Baxter; B Diffy; M Docker; M Dyson; S McDonough;
- Canadian (2010):
  - (Authors): P Houghton; E Nussbaum; A Hoens
  - (Contributors): AY Belanger; S Michlovitz; S Rennie; B Shay; J Anthony

:: General Issues :: Pregnancy ::
- Clearly a concern that the use of an EPA may have a detrimental effect on the developing foetus
- Most research derived from lab / animal work
- Most conclusions tend to fall on the conservative side
- Shockwave not included in any of the Guidance documents, so ‘advice’ delivered at CSP Shockwave presentation (2012)
- Understandable on the basis that most therapists would not want to put the baby at any kind of risk

:: Electro Physical Agent Use when the Patient is Pregnant ::

General vs Local
- Did the review based on a separate consideration of the LOCAL and the GENERAL risks
- LOCAL (in my analysis – not clearly defined in the guidance) is taken to be:
  “WOULD THE DELIVERED ENERGY REACH THE DEVELOPING FOETUS”
  and
  “IF IT DID, WOULD/COULD THERE BE AN ADVERSE OUTCOME”
EPA Contraindications Pregnancy and Malignancy

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Expert Opinion Summary from Canadian Guidance

Table A.1: Percent trial agreement on commonly cited contraindications for selected electrophysical agents (EPAs) by North American experts (N=6), unless otherwise specified. A higher percentage indicates greater consensus than the EPA should not be used for the given condition.

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy</td>
<td>100</td>
<td>100</td>
<td>66 (p = 0.1)</td>
<td>80 (p &lt; 0.05)</td>
<td>13</td>
<td>100</td>
</tr>
</tbody>
</table>

Appendix 1: Summary Table of Consensus by Experts
Electro Physical Agent Use when there is, or suspicion of malignancy

:: General Issues :: Malignancy ::
- Clearly a concern that the use of an EPA may have a detrimental effect on malignant tissue
- Most research derived from lab / animal work
- Most conclusions tend to fall on the conservative side
- Shockwave not included in any of the Guidance documents, so 'advice' delivered at CSP Shockwave presentation (2012)
- Understandable on the basis that most therapists would not want to put the patient at any kind of risk
- HISTORY of MALIGNANCY not identified as an issue in any of the guidance consulted

CSP (2006) Guidance

6 Contraindications, precautions, safety and application issues:

During the selection and application of any electrophysical agents (EPA), the following measures should be taken to ensure safety and good practice.

6.1 Contraindications for all agents
- Those who are unable to comprehend instructions, or who are unable to co-operate.
- The application of electrophysical agents over the abdomen, near back or pelvic area should be undertaken during the first 16 weeks of pregnancy. Refer to specific information for each agent.
- Areas of recent bleeding or inflammatory conditions.


Expert Opinion

Canadian Guidance (2010)

- The Canadian Guidance is not only the most recent, but also the most detailed.
- Their recommendations are certainly similar to UK and Australian.
- They make explicit statements by modality or modality group.
- Use traffic light system for rapid indication.
EPA Contraindications Pregnancy and Malignancy

3.1 Malignancy

Recommendation
LLLT should not be used over confirmed or suspected malignancies. Abnormal growth should be regarded as malignant until it has been diagnosed. Caution is required in the presence of enlarged pain in patients with a history of cancer within the last 5 years. TENS may be used for pain management for patients in palliative care. MESS may improve quality of life in the last stage of disease.

Nonsurgical Evidence
LOW

Research Evidence
MODERATE

Reports and observations of laser therapy over malignant cells and skin cancers provide no evidence of malignant cell growth. Some studies have suggested that laser therapy can improve symptoms in patients with cancer, but these effects are inconsistent and vary by treatment. Further research is needed to determine the effectiveness and safety of laser therapy for patients with cancer.

Table A1: Percent agreement on common clinical contraindications for selected electrophysical therapy (EPT) by North American experts (n = 8, unless otherwise specified). A higher percentage indicates greater consensus that the EPT should not be used for the given condition.

<table>
<thead>
<tr>
<th>Condition</th>
<th>SGT</th>
<th>SPT</th>
<th>E STIM</th>
<th>LLLT</th>
<th>Light</th>
<th>Heat</th>
<th>Cold</th>
<th>SWT Therapy</th>
<th>SMT None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malignancy</td>
<td>100</td>
<td>88</td>
<td>100 (n = 7)</td>
<td>100 (n = 7)</td>
<td>100</td>
<td>100</td>
<td>100 (n = 7)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix 1: Summary Table of Consensus by Experts

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Summary

- Could spend the rest of the day looking at the details!
- Substantial agreement on the key issues
- Most therapists tend to make a conservative judgement when in doubt
- Summary Tables available for download @ www.electrotherapy.org/downloads

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