TITLE: Heating Standards for Clinical Interventions: Clinical Evidence

DATE: 04 September 2013

RESEARCH QUESTIONS

1. What is the evidence regarding acceptable limits on temperature and duration of heating before clinically significant tissue damage for patients undergoing clinical interventions other than magnetic resonance imaging (MRI)?

2. What is the evidence regarding different heating limits, depending on tissue type, for patients undergoing clinical interventions other than MRI?

3. What is the clinical evidence for the use of CEM43 criteria as a limit on acceptable tissue heating?

4. What are the guidelines and standards regarding acceptable local and average heating for patients undergoing clinical interventions other than MRI?

KEY MESSAGE

No literature was identified regarding acceptable limits on temperature and duration of heating before clinically significant tissue damage for patients undergoing clinical interventions other than MRI.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2013, Issue 6), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No methodological filters were applied to limit the retrieval to study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2008 and August 28, 2013. Internet links were provided, where available.

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RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

No literature was identified regarding acceptable limits on temperature and duration of heating before clinically significant tissue damage for patients undergoing clinical interventions other than MRI. Additional references of potential interest are provided in the appendix.

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials
No literature identified.

Non-Randomized Studies
No literature identified.

Guidelines and Recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Clinical Practice Guidelines – Methodologies Uncertain


Additional References


Thermal Index


Magnetic Resonance Imaging


Magnetic Resonance Imaging – Case Reports of Thermal Injury
