TITLE: Methylene blue for the Prevention and Treatment of Ifosfamide-Induced Encephalopathy: Clinical Effectiveness and Safety

DATE: 13 August 2014

RESEARCH QUESTIONS

1. What is the clinical effectiveness of methylene blue for the prevention of ifosfamide-induced encephalopathy?

2. What is the clinical effectiveness of methylene blue for the treatment of ifosfamide-induced encephalopathy?

3. What is the clinical evidence on the safety and harms of methylene blue for the prevention and treatment of ifosfamide-induced encephalopathy?

KEY FINDINGS

One non-randomized study regarding the clinical effectiveness of methylene blue for the prevention of ifosfamide-induced encephalopathy was identified.

METHODS

A limited literature search was conducted on key resources including PubMed, EMBASE, The Cochrane Library (2014, Issue 8), 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 filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 1999 and August 7, 2014. Internet links were provided, where available.

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SELECTION CRITERIA

Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Cancer patients receiving ifosfamide chemotherapy treatment</th>
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<tbody>
<tr>
<td>Intervention</td>
<td>Methylene blue (methylthioninium chloride)</td>
</tr>
<tr>
<td>Comparator</td>
<td>No comparator, placebo</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Decrease in encephalopathy, adverse events</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies</td>
</tr>
</tbody>
</table>

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 and non-randomized studies.

One non-randomized study regarding the clinical effectiveness of methylene blue for the prevention of ifosfamide-induced encephalopathy was identified. No relevant health technology assessments, systematic reviews, meta-analyses, or randomized controlled trials were identified.

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


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APPENDIX – FURTHER INFORMATION:

Non-Randomized Studies – Mixed Intervention


Review Articles


