CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Diatrizoate Meglumine and Diatrizoate Sodium Solution for Treatment of Small Bowel Obstruction: Clinical Effectiveness
Authors: Deba Hafizi, Hannah Loshak


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Questions or requests for information about this report can be directed to requests@cadth.ca
Research Questions

1. What is the clinical effectiveness of diatrizoate meglumine and diatrizoate sodium solution for treatment of small bowel obstruction?

2. What are the evidence-based guidelines regarding the use of diatrizoate meglumine and diatrizoate sodium solution for the treatment of small bowel obstruction?

Key Findings

One systematic review and two randomized controlled trials were identified regarding the clinical effectiveness of diatrizoate meglumine and diatrizoate sodium solution for treatment of small bowel obstruction. No relevant evidence-based guidelines were identified regarding the use of diatrizoate meglumine and diatrizoate sodium solution for the treatment of small bowel obstruction.

Methods

A limited literature search was conducted by an information specialist on key resources including Medline via OVID, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were Gastrografin (diatrizoate meglumine and diatrizoate sodium solution) and small bowel obstructions. 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, 2014 and July 5, 2019. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

<table>
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<th>Population</th>
<th>Q1 &amp; Q2: Adult patients with small bowel obstruction admitted to a surgical ward.</th>
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<tr>
<td>Intervention</td>
<td>Q1 &amp; Q2: Diatrizoate Meglumine and Diatrizoate Sodium Solution (e.g., Gastrografin)</td>
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| Comparator          | Q1: Any comparator (e.g., nothing by mouth, clear fluids only, nasogastric tube, watchful waiting)  
                              Q2: Not applicable |
| Outcomes            | Q1: Clinical effectiveness (e.g., resolved obstruction, harms)  
                              Q2: Evidence-based guidelines |
| Study Designs       | Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, and evidence-based guidelines |
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 evidence-based guidelines.

One systematic review and two randomized controlled trials were identified regarding the clinical effectiveness of diatrizoate meglumine and diatrizoate sodium solution for treatment of small bowel obstruction. No relevant health technology assessments or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One systematic review and two randomized controlled trials were identified regarding the clinical effectiveness of diatrizoate meglumine and diatrizoate sodium solution (DM and DS) for treatment of small bowel obstruction (SBO). The authors of the systematic review found that patients with SBO who received DM and DS solution had significantly reduced need for surgery compared to those who did not. The authors of one randomized controlled trial found that DM and DS solution was more effective than enemas in the treatment of colon obstruction. However, the authors of a different study found no benefit in administering DM and DS solution for adhesive SBO and found no significant difference in surgical intervention, bowel resection, in-hospital mortality, length of stay, or time to feed between the intervention and control group.

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials


Guidelines and Recommendations

No literature identified.
Appendix — Further Information

Previous CADTH Reports


Systematic Review

Alternative Population


Alternative Outcome – Diagnostic Accuracy


Randomized Controlled Trials – Alternative Population


Non-Randomized Studies


Alternative Population


Alternative Outcome


Guidelines and Recommendations – Methodology Not Specified


Review Articles