Stellate Ganglion Block for the Treatment of Pain

January 2021
Key Messages

• Four systematic reviews, 1 randomized controlled trial, and 3 non-randomized studies were identified regarding the clinical effectiveness of stellate ganglion block for the treatment of chronic or acute pain in the head, neck, or upper extremities.

• No evidence-based guidelines were identified regarding the use of stellate ganglion block for the treatment of chronic or acute pain in the head, neck, or upper extremities.

Research Questions

1. What is the clinical effectiveness of stellate ganglion block for the treatment of chronic or acute pain in the head, neck, or upper extremities?

2. What are the evidence-based clinical practice guidelines regarding the use of stellate ganglion block for the treatment of chronic or acute pain in the head, neck, or upper extremities?

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, the Cochrane Database of Systematic Reviews, the international HTA database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were stellate ganglion block and acute and chronic pain in the upper extremities (neck, head, arms, shoulder, and so forth). No 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, 2016 and January 20, 2021. Internet links were provided, where available.

Selection Criteria

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. Open access full-text versions of evidence-based guidelines were reviewed when abstracts were not available.

Results

Four systematic reviews,1-4 1 randomized controlled trial,5 and 3 non-randomized studies6-8 were identified regarding the clinical effectiveness of stellate ganglion block for the treatment of chronic or acute pain in the head, neck, or upper extremities. No health technology
assessments were identified regarding the clinical effectiveness of stellate ganglion block for the treatment of chronic or acute pain in the head, neck, or upper extremities. No evidence-based guidelines were identified regarding the use of stellate ganglion block for the treatment of chronic or acute pain in the head, neck, or upper extremities.

Additional references of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

Table 1: Selection Criteria

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<tr>
<th>Criteria</th>
<th>Description</th>
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<td><strong>Population</strong></td>
<td>Individuals (any age) with chronic or acute pain in the head, neck, or upper extremities</td>
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<td><strong>Intervention</strong></td>
<td>Stellate ganglion block (i.e., anesthetic [any kind] injection into the stellate ganglion)</td>
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| **Comparator**| Q1: Standard or usual treatment for pain (e.g., pharmacological, behavioural, psychological); placebo; no treatment (safety outcomes only)  
Q2: Not applicable |
| **Outcomes** | Q1: Clinical benefits and harms (e.g., pain control, health-related quality of life, mobility, hematoma, accidental injection of anesthetic into wrong space [e.g., intravascular, brachial plexus], allergic response, muscle spasm, infection)  
Q2: Recommendations regarding best practices (e.g., treatment protocols, who should be treated, counter indications for treatment) |
| **Study Designs** | Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, evidence-based guidelines |

References

Health Technology Assessments
No literature was identified.

Systematic Reviews and Meta-analyses

Randomized Controlled Trials
Non-Randomized Studies


Guidelines and Recommendations
No literature was identified.
Appendix 1: References of Potential Interest

Systematic Reviews and Meta-Analyses

Stellate Ganglion Block Not Specified


Randomized Controlled Trials

Alternative Comparator


Non-Randomized Studies

No Comparator


Alternative Comparator


Guidelines and Recommendations

Unclear Intervention and Methodology


Review Articles
