TITLE: Treatment of Angiotensin Converting Enzyme Inhibitor-Induced Angioedema: Guidelines

DATE: 26 November 2015

RESEARCH QUESTION

What are the evidence-based guidelines regarding the treatment of patients with angiotensin-converting enzyme inhibitor-induced angioedema?

KEY FINDINGS

Four evidence-based guidelines were identified regarding the treatment of patients with angiotensin-converting enzyme inhibitor-induced angioedema.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, and guidelines. The search was also limited to English language documents published between Jan 1, 2010 and Nov 16, 2015. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

SELECTION CRITERIA

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

<table>
<thead>
<tr>
<th>Population</th>
<th>Patients presenting to the emergency/urgent care with ACEI-induced angioedema; Patients developing ACEI-induced angioedema on apheresis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Treatments or procedures administered</td>
</tr>
<tr>
<td>Comparator</td>
<td>No comparator</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Guidelines and recommendations of treatments for resolution of angioedema symptoms</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, evidence-based guidelines</td>
</tr>
</tbody>
</table>

ACEI = angiotensin-converting enzyme inhibitor.

### 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 evidence-based guidelines.

Four evidence-based guidelines were identified regarding the treatment of patients with angiotensin-converting enzyme inhibitor-induced angioedema. No relevant health technology assessments, systematic reviews, or meta-analyses were identified.

Additional references of potential interest are provided in the appendix.

### OVERALL SUMMARY OF FINDINGS

Four evidence-based guidelines\(^1\text{-}^4\) were identified regarding the treatment of patients with angiotensin-converting enzyme (ACE) inhibitor-induced angioedema.

At the onset of ACE inhibitor-induced angioedema, ACE inhibitor therapy should be discontinued and ACE inhibitors should be avoided in future.\(^3\) Icatibant,\(^1\text{-}^2\) ecallantide,\(^2\) and C1 esterase inhibitor\(^2\) are recommended for the treatment of ACE inhibitor-induced angioedema. Antihistamines or corticosteroids may be used to treat mild cases.\(^1\text{-}^2\) Fresh frozen plasma is recommended when no other treatment options are available.\(^2\) No specific recommendations regarding ACE inhibitor-induced angioedema were provided in one guideline abstract.\(^3\)
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Guidelines and Recommendations

See: Angioedema with ACE inhibitors, pages 551-552
   Figure 1, page 553
   Treatment in adults, pages 553-557

See: Table 2, page 124


See: Angiotensin-Converting Enzyme (ACE) Inhibitors

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APPENDIX – FURTHER INFORMATION:

Position Statements and Expert Consensus


Review Articles


Additional References