Medication Use Evaluation of Angiotensin II

Kevin Baumgartner PharmD
Dustin D Linn PharmD, BCCCP
Michael Todt PharmD

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Angiotensin II is a vasopressor agent used for septic shock and has been found to effectively raise the blood pressure in patients who did not respond to other conventional high dose vasopressors.

The Parkview IRB approved a retrospective chart review.

- Evaluate compliance with angiotensin II institutional restriction criteria and assess response to therapy to determine if cost savings through limited warranty program could be realized through therapy response evaluation.

- The Parkview IRB approved a retrospective chart review.
- Patient Population
  - Adults who received at least one dose of angiotensin II from Jan-2019 to May-2022.
- Outcomes
  - Proportion of patients who received angiotensin II per institutional restriction criteria.
  - Percentage of patients having a response to angiotensin II (defined as an increase of MAP of 10 mmHg or reaching a MAP of 65 mmHg).
  - Potential cost-savings achievable through the manufacturer limited warranty program.

Angiotensin II’s wholesale acquisition cost (WAC) of $1800 per vial

- The institution may have saved $37,800 by participating in the limited warranty program and should consider enrolling in this program in the future.
- Patients who will respond to angiotensin II will typically experience an increase in MAP almost immediately.
- Pharmacists may play a role in early discontinuation recommendations to assist with cost savings.

**Patient Characteristics (n=72)**

| Male, n (%) | 47 (65.3) |
| Age on Admission, years | 59 (14) |
| Weight, kg | 100.3 (33) |
| Lactate, mmol/L | 5.8 (5.2) |
| MAP, mmHg | 62 (17) |
| Heart Rate, bpm | 105 (32) |

**RESULTS**

- **Non-Responder**
- **Non-Responders**

**Restriction Criteria Met**

- Max Pressor Dose
- Stress Dose Steroids

**Patients That Received Angiotensin II**

| Responders | 38 |
| Non-Responders | 64 |

**Reasons for Initiation Restriction Criteria Failure**

- Max Pressor Dose
- Stress Dose Steroids

**Total potential cost savings based on 1 bag of angiotensin II per non-responder by $1800 per bag**: $37,800

**DISCUSSION & CONCLUSIONS**

- 47% of the patients who received angiotensin II met restriction criteria, with 50% of those patients not meeting criteria on initiation.
- The most common reason for restriction criteria not being met was vasopressors not being at maximum dose.
- Response rate to angiotensin II is comparable to the ATHOS-3 trial (70.8% vs. 69.9%), despite greater shock severity.
- The institution may have saved $37,800 by participating in the limited warranty program and should consider enrolling in this program in the future.
- Patients who will respond to angiotensin II will typically experience an increase in MAP almost immediately.
- Pharmacists may play a role in early discontinuation recommendations to assist with cost savings.

**REFERENCES**


**Disclosure**

All authors of this presentation have nothing to disclose concerning potential financial or personal relationships with commercial entities that may have a direct or indirect influence in the subject matter of this presentation.