Giapreza (angiotensin II)
Introduction

- **Brand name:** Giapreza
- **Generic name:** Angiotensin II
- **Pharmacological class:** Vasoconstrictor
- **Strength and Formulation:** 2.5mg/mL; per vial; solution for IV infusion after dilution
- **Manufacturer:** La Jolla Pharmaceutical
- **How supplied:** Single-dose vial (1mL, 2mL)—1
- **Legal Classification:** Rx
Indications

- To \textit{increase blood pressure} in septic or other distributive shock
Dosage & Administration

- Give by IV infusion
- **Initially** 20ng/kg/min
- May titrate every 5mins by increments of up to 15ng/kg/min as needed based on BP response; max 80ng/kg/min during first 3hrs of treatment
- **Maintenance dose:** max 40ng/kg/min
Dosage & Administration

- Doses as low as 1.25ng/kg/min may be used
- Once sufficiently improved, down-titrate every 5–15mins by increments of up to 15ng/kg/min based on BP
Considerations for Special Populations

- **Pregnancy**: Insufficient data to determine a drug-associated risk
- **Nursing mothers**: No data available on effects on breastfed child or milk production
- **Pediatric**: Not established
- **Elderly**: No significant difference in safety or efficacy
Warnings/Precautions

- Risk of **thrombosis**
- Use concurrent VTE prophylaxis
Interactions

- Concomitant *ACE inhibitors* may increase response
- Concomitant *ARBs* may decrease response
Adverse Reactions

- Thromboembolic events (eg, DVT)
- Thrombocytopenia
- Tachycardia
- Fungal infection
- Delirium
- Acidosis
- Hyperglycemia
- Peripheral ischemia
Mechanism of Action

- **Angiotensin II** raises blood pressure by vasoconstriction and increased aldosterone release
- Binding to the G-protein-coupled angiotensin II receptor type 1 on vascular cells stimulates Ca\(^{2+}\)/calmodulin-dependent phosphorylation of myosin and causes smooth muscle contraction
Clinical Studies

- **ATHOS-3** (Angiotensin II for the Treatment of High-Output Shock) trial was a double-blind study (N=321) of adults with septic or other distributive shock who remained hypotensive despite fluid and vasopressor therapy.
Clinical Studies

- Patients were randomized to Giapreza or placebo and were titrated to a target mean arterial pressure (MAP) of \( \geq 75\text{mmHg} \).
- The **primary endpoint** was the percentage of patients who achieved either a MAP \( \geq 75\text{mmHg} \) or \( \geq 10\text{mmHg} \) increase in MAP without an increase in baseline vasopressor therapy at 3 hours.
Clinical Studies

- The primary endpoint was achieved in 70% of patients who received Giapreza vs 23% of patients who received placebo (treatment effect 47%; \( P < .0001 \))
Clinical Studies

- The median time to reach target MAP endpoint was 5 minutes in the Giapreza group.
- Effect on MAP was sustained for at least the first 3 hours of treatment.
Mortality through Day 28 was 46% in the Giapreza group vs 54% in the placebo group (hazard ratio 0.78, 95% CI: 0.57 to 1.07)

For more clinical data info, see full labeling
New Product Monograph

For more information view the product monograph available at:

http://www.empr.com/giapreza/drug/34803/