Propofol does not significantly alter hemodynamics during TTM following cardiac arrest.

**Background**
- The AHA strongly recommends targeted temperature management (TTM) for comatose patients who achieve ROSC after cardiac arrest.
- Sedative medications are commonly administered empirically or as adjunctive therapy to control shivering, but there are no established recommendations for specific sedation strategies.
- Propofol and midazolam are the primary treatments for shivering in TTM, but both come with concerns:
  - Midazolam: accumulation in renal dysfunction, masking seizures, delirium
  - Propofol: hypotension, masking seizures, myocardial depression

**Objective**
- This study aims to quantify the hemodynamic changes due to propofol in adult survivors of cardiac arrest undergoing TTM.

**Methods**
- Single-center, retrospective cohort study.
- Included patients that received TTM for non-traumatic cardiac arrest and propofol infusion was started after initiation of TTM and continued for at least 30 minutes.
- Primary outcome: change in cardiovascular component of the Sequential Organ Failure Assessment (cvSOFA) score at 30 minutes after propofol initiation.
- Secondary outcomes: change in systolic blood pressure (SBP), mean arterial pressure (MAP), heart rate (HR), and vasopressor requirements (VR) at 30-, 60-, 120-, and 240-minutes after propofol initiation.
- A multivariate analysis was performed to assess the influence of propofol, CAHP, vasopressors, and body temperature on MAP at 30 min.

**Results**
- N=40.
- There was no statistically significant change in cvSOFA score at 30 minutes after propofol initiation (p=0.96).
- The greatest change in SBP and MAP was seen at 60 minutes of propofol infusion, decreasing by 17 mmHg and 8 mmHg (p<0.05 for both), respectively.
- The greatest change in HR was at 120 minutes decreasing by 9 bpm (p<0.05).
- All reductions were sustained through 240 minutes (p<0.05).
- Body temperature was the only variable associated with changes in MAP (coefficient 4.95%, 95% CI 1.6-8.3).

**Implications**
- Propofol should be considered in TTM patients for sedation or shivering, given the limited hemodynamic effects and benefits over benzodiazepines as sedatives.

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