

REFERENCE

Wagner D, Kronick SL, Nower H, Cranford JA, Bradley SM, Neumar RW. Comparative Effectiveness of Amiodarone and Lidocaine for the Treatment of: In-Hospital Cardiac Arrest. *Chest*. Published online November 2, 2022:S0012-3692(22)04039-9.

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SUMMARY

Compared with amiodarone, lidocaine was associated with significantly higher rates of ROSC, 24h survival, survival to hospital discharge, and favorable neurologic outcome among adult patients with in-hospital cardiac arrest from ventricular fibrillation or ventricular tachycardia.

BACKGROUND

- ACLS guidelines support the use of either amiodarone or lidocaine for cardiac arrest caused by ventricular fibrillation or ventricular tachycardia based on studies of out-of-hospital cardiac arrest. Studies comparing the two in in-hospital cardiac arrest (IHCA) are lacking

STUDY OBJECTIVE

- To determine if treatment with amiodarone vs lidocaine has differential associations with outcomes among adults with IHCA

STUDY DESIGN

- Retrospective cohort study with data sourced from the American Heart Association's Get With the Guidelines-Resuscitation inpatient registry, a national, multicenter, prospective registry

STUDY INTERVENTION & COMPARISON

- **Amiodarone vs lidocaine during cardiac arrest**
 - Dosing not specified, presumed to be dosed according to ACLS

RESULTS

- **Primary Outcome**
 - Lidocaine associated with significantly higher odds of return of spontaneous circulation (aOR 1.15, p=0.01)
- **Secondary Outcomes**
 - Lidocaine associated with significantly higher odds of:
 - 24-hour survival postarrest (aOR 1.16, p=0.004)
 - Survival to hospital discharge (aOR 1.19, p<0.001)
 - Favorable neurologic outcome at discharge (aOR 1.18, p<0.001)

*Outcomes reported above are statistically controlled for all covariates

ADDITIONAL READINGS

- Kudenchuk PJ, Cobb LA, Copass MK, et al. Amiodarone for resuscitation after out-of-hospital cardiac arrest due to ventricular fibrillation. *N Engl J Med.* 1999;341(12):871-878.
- Dorian P, Cass D, Schwartz B, Cooper R, Gelaznkas R, Barr A. Amiodarone as compared with lidocaine for shock-resistant ventricular fibrillation. *N Engl J Med.* 2002;346(12):884-890.
- Kudenchuk PJ, Brown SP, Daya M, et al. Amiodarone, lidocaine, or placebo in out-of-hospital cardiac arrest. *N Engl J Med.* 2016;374(18):1711-1722.