

Methylprednisolone no benefit in cardiopulmonary bypass for infants

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Prophylactic use of methylprednisolone does not reduce the likelihood

of worse outcome for infants undergoing surgery with cardiopulmonary bypass, according to a study published in the Dec. 8 issue of the *New England Journal of Medicine*.

Kevin D. Hill, M.D., from the Duke Pediatric and Congenital Heart Center in Durham, North Carolina, and colleagues conducted a multicenter, randomized, placebo-controlled trial involving infants (younger than 1 year of age) undergoing [heart surgery](#) with cardiopulmonary bypass at 24 sites. The infants were randomly assigned to receive either methylprednisolone or placebo (599 and 601 [infants](#), respectively), which was administered into the cardiopulmonary-bypass pump-priming fluid. The primary end point was a ranked composite of death, [heart](#) transplantation, or any of 13 major complications; a ranked outcome based on postoperative length of stay was assigned to patients without any of these events.

The researchers observed no significant difference between the methylprednisolone and placebo groups in terms of the likelihood of a worse outcome (adjusted odds ratio, 0.86; 95 percent confidence interval, 0.71 to 1.05; $P = 0.14$). In a secondary analysis unadjusted for [risk factors](#), the odds ratio for a worse outcome was 0.82 (95 percent confidence interval, 0.67 to 1.00) and a win ratio was 1.15 (95 percent confidence interval, 1.00 to 1.32), indicating benefit for methylprednisolone. Patients in the [methylprednisolone](#) group were more likely to receive postoperative insulin for hyperglycemia (19.0 versus 6.7 percent).

"Our overall findings are consistent with those from contemporary cardiopulmonary bypass trials of glucocorticoids in adults and children," the authors write.

More information: Kevin D. Hill et al, Methylprednisolone for Heart Surgery in Infants—A Randomized, Controlled Trial, *New England*

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