

Drug for kidney injury after cardiac surgery does not reduce need for dialysis

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Among patients with acute kidney injury after cardiac surgery, infusion with the antihypertensive agent fenoldopam, compared with placebo, did not reduce the need for renal replacement therapy (dialysis) or risk of death at 30 days, but was associated with an increased rate of abnormally low blood pressure, according to a study published in *JAMA*. The study is being posted early online to coincide with its presentation at the European Society of Intensive Care Medicine annual congress.

More than 1 million patients undergo cardiac surgery every year in the United States and Europe. One of its most common complications is acute kidney injury. Because of its hemodynamic effects, fenoldopam has been widely promoted for the prevention and therapy of acute kidney injury, with apparent favorable results in cardiac surgery. However, the absence of a definitive trial leaves clinicians uncertain as to whether fenoldopam should be prescribed after cardiac surgery to prevent deterioration in kidney function, according to background information in the article.

Tiziana Bove, M.D., of the IRCCS San Raffaele Scientific Institute, Milan, Italy, and colleagues randomly assigned 667 patients admitted to intensive care units after [cardiac surgery](#) with early [acute kidney injury](#) to receive fenoldopam infusion (338 patients) or placebo (329 patients). The study was conducted from March 2008 to April 2013 in 19 cardiovascular intensive care units in Italy.

The study was stopped for futility as recommended by the safety

committee after a planned interim analysis. Acute kidney injury progressed to treatment with dialysis in 69 of 338 patients (20 percent) in the fenoldopam group and 60 of 329 patients (18 percent) in the placebo group. Thirty-day mortality was 78 of 338 (23 percent) in the fenoldopam group and 74 of 329 (22 percent) in the placebo group. The number of patients experiencing hypotension (abnormally [low blood pressure](#)) during study drug infusion was 85 (26 percent) in the fenoldopam group vs 49 (15 percent) in the [placebo group](#).

"Given the cost of fenoldopam, the lack of effectiveness, and the increased incidence of hypotension, the use of this agent for renal protection in these patients is not justified," the authors conclude.

More information: [DOI: 10.1001/jama.2014.13573](https://doi.org/10.1001/jama.2014.13573)

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