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Best Health Care Medical Group, Inc.
Professor Mike Mirahmadi, M.D.
Diplomate, American Board of Internal Medicine & Nephrology
Clinical Professor of Medicine at UCLA

Stents Are Ineffective for Atherosclerotic Renal Artery Stenosis and Renal Insufficiency

Optimum medical treatment and stenting yielded similar results in a randomized trial.

Treating atherosclerotic renal artery stenosis and renal dysfunction by stenting is not supported by conclusive evidence, despite inclusion of this procedure in some practice guidelines ([JW Cardiol Mar 23 2006](#)). European investigators studied stent placement versus medical treatment alone in a randomized trial that involved 140 people with creatinine clearance <80 mL/minute and estimated atherosclerotic renal artery stenosis of $\geq 50\%$ (usually determined by noninvasive imaging). About half the participants had bilateral stenosis. Of 64 patients assigned to the stent group, 46 actually received stents. (The most common reason for not receiving a stent was that stenosis was determined to be <50% at the time of the procedure.)

Subjects in both groups were nearly equally likely to have $\geq 20\%$ declines in creatinine clearance during 2 years (16% of the stent group and 22% of the medical-treatment group). Serious adverse events occurred only in the stent group: Two patients died due to procedure-related events, one experienced a groin hematoma infection (requiring groin reconstruction and resulting in death 6 months later), and one patient required permanent dialysis after repeated angiography and cholesterol embolism.

Comment: These results on stenting for renal artery stenosis might not be the final word, as this study was small and inadequately powered. But the absolute difference between groups (5%) for the primary outcome is not promising; such a small difference is unlikely to be clinically meaningful. In addition, despite the small number of participants, several serious adverse procedure-related events occurred. Unless future studies show substantial benefits, risks of stenting patients with renal insufficiency and atherosclerotic renal artery stenosis do not seem to be worth incurring.

— [Richard Saitz, MD, MPH, FACP, FASAM](#)

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Bax L et al. Stent placement in patients with atherosclerotic renal artery stenosis and impaired renal function: A randomized trial. *Ann Intern Med* 2009 Jun 16; 150:840.