

New study identifies better treatment option for common complication of dialysis

August 19 2020

A Mount Sinai-led study has identified a better treatment option for a common complication of hemodialysis, bringing new hope to millions of patients who rely on dialysis to survive but often must undergo repeated hospital visits to make continued treatment possible.

The study, published today in the *New England Journal of Medicine*, used drug-coated [balloon angioplasty](#) to treat arteriovenous fistulas, access points created by surgeons through which the patient's blood can be removed, sent through the dialysis machine to have impurities filtered out, and returned to the patient's body. Hemodialysis fistulas frequently become blocked and stop working. This has traditionally been treated by either inserting a stent to keep the fistula open, or by standard angioplasty, in which a tiny balloon is threaded through the blood vessel and then expanded to force the fistula open. Both procedures are commonly used, but in many cases, they only are able to keep the vessel open for a few months.

"Patients with this debilitating disease frequently require multiple visits to the hospital for treatment and face a life-long battle to maintain their access point used for dialysis," said Robert A. Lookstein, MD, MHCDL, Professor of Radiology, and Surgery, at the Icahn School of Medicine at Mount Sinai and Executive Vice Chair of Diagnostic, Molecular, and Interventional Radiology at Mount Sinai Health System, who led the international team of investigators. "The access points often become blocked or damaged and unable to be used, requiring multiple procedures or interventions to restore the function of the access."

Nearly 2.5 million patients worldwide regularly undergo hemodialysis, according to the European Renal Care Provider Association.

In this prospective, randomized trial (IN.PACT AV, Medtronic access study), 170 subjects were assigned to receive treatment with a drug-coated balloon and 160 were assigned to receive treatment with a standard balloon. Patients who received the drug-coated balloon were 25 percent more likely to still have a functioning [access point](#) after 6 months, compared to those receiving the standard balloon treatment. In addition, the number of procedures required to maintain the opening was decreased by over 50 percent for those who received the drug coated balloon.

"This treatment has the potential to offer patients with end-stage renal disease continuous hemodialysis, avoiding unnecessary procedures and surgeries which can dramatically affect patients over the course of their lives. This is a game changer for patients who are often tethered to a health care facility for treatment and maintenance of a poorly functioning dialysis access. If we can reduce the number of interventions and keep these patients out of the hospital, we can dramatically improve their quality of life," said Dr. Lookstein.

Provided by The Mount Sinai Hospital

Citation: New study identifies better treatment option for common complication of dialysis (2020, August 19) retrieved 6 May 2024 from <https://medicalxpress.com/news/2020-08-treatment-option-common-complication-dialysis.html>

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