Medical Xpress

Why some kidney disease patients can't repair blood vessels

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In some kidney diseases, patients have high blood levels of a protein that blocks blood vessel repair, according to a study appearing in an upcoming issue of the *Journal of the American Society Nephrology* (*JASN*). Inhibiting the protein may reduce patients' risk of developing kidney failure.

Patients with an autoimmune kidney disorder called anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis produce antibodies that damage blood vessels in the kidneys. Researchers have wondered what factors play a role in determining whether patients' bodies can repair this damage.

To investigate, Sandrine Le Roux, PhD, Fadi Fakhouri, MD, PhD (Institute of Transplantation Urology Nephrology, in Nantes, France), and their colleagues examined the blood of 81 patients with ANCA-associated vasculitis, 21 patients with other types of kidney disease, and 18 healthy individuals.

The investigators found that compared with others in the study, patients with ANCA-associated vasculitis harbor elevated blood levels of the molecule Flt1, which hinders the repair of blood vessels. As a result, their bodies may not be able to fix damaged blood vessels, setting them on a path of continued disease progression.

"Our data suggest that in some kidney diseases, not only are blood vessels damaged, but their repair is also impaired by an increase of Flt1

in the blood," said Dr. Fakhouri. "Inhibiting Flt1 may help improve blood vessel repair in some kidney disease patients and thus reduce their risk of progression to kidney failure," he added.

More information: The article, entitled "Elevated Soluble Flt1 Inhibits Endothelial Repair in PR3-ANCA-Associated Vasculitis," will appear online on Thursday, October 27, 2011, doi:10.1681/ASN.2011060858

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