

Persistent, microscopic blood in urine associated with increased risk of kidney disease

August 16 2011

Adolescents and young adults who had persistent, microscopic blood in their urine (hematuria) were more likely to develop end-stage renal disease over a follow-up period of about 20 years, although the absolute risk was low, according to a study in the August 17 issue of *JAMA*.

"Persistent asymptomatic isolated microscopic hematuria is a frequent incidental finding on routine examination of children, adolescents, and [young adults](#). The most recent American Academy of Pediatrics guidelines rescinded the recommendation for urine screening during the second decade of life," according to background information in the article. "Microscopic hematuria can be either an isolated finding accompanied by other kidney abnormalities or part of a systemic condition. It also can be transient or persistent." Few data are available on long-term outcomes among adolescents and young adults with persistent asymptomatic isolated microscopic hematuria.

Asaf Vivante, M.D., of the Edmond and Lily Safra Children's Hospital, Tel Hashomer, Israel, and colleagues conducted a nationwide, population-based study in Israel to evaluate the risk of treated end-stage [renal disease](#) (ESRD) in [adolescents](#) and young adults with persistent asymptomatic isolated microscopic hematuria. The study included medical data from 1,203,626 persons aged 16 through 25 years (60 percent male) who were examined for fitness for military service between 1975 and 1997 and who were linked to the Israeli treated ESRD

registry. Incident cases of treated ESRD from January 1980 to May 2010 were included.

Persistent asymptomatic isolated microscopic hematuria was diagnosed in 3,690 of the 1,203,626 eligible individuals (0.3 percent). The condition at enrollment was twice as prevalent among male as female participants (0.4 percent and 0.2 percent). During 21.9 years of follow-up, treated ESRD developed in 26 individuals (0.70 percent) with and 539 (0.045 percent) without persistent asymptomatic isolated microscopic hematuria. A multivariate model adjusted for age, sex, paternal country of origin, year of enrollment, body mass index, and blood pressure at baseline revealed a significantly increased risk of developing ESRD associated with persistent asymptomatic isolated microscopic hematuria. However, the researchers note that the incidence and absolute risk of ESRD were quite low.

"A substantially increased risk for treated ESRD attributed to primary glomerular disease was found for individuals with persistent asymptomatic isolated microscopic hematuria compared with those without the condition. The fraction of treated ESRD attributed to microscopic hematuria was 4.3 percent," the authors write.

"... demonstrating that persistent isolated microscopic hematuria is a risk marker for ESRD highlights the importance of early detection of pre-dialysis chronic kidney disease for the application of current and future strategies to slow the deterioration to ESRD. It also shows the importance of considering complications and comorbid conditions across the range of chronic kidney disease."

"In light of our findings, future studies are warranted to evaluate the utility of population screening in improving clinical outcomes," the researchers conclude.

More information: *JAMA*. 2011;306[7]:729-736.

Provided by JAMA and Archives Journals

Citation: Persistent, microscopic blood in urine associated with increased risk of kidney disease (2011, August 16) retrieved 18 April 2024 from

<https://medicalxpress.com/news/2011-08-persistent-microscopic-blood-urine-kidney.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.