Orders for CrCl Testing Decreased after eGFR Reporting

The introduction of estimated glomerular filtration rate (eGFR) reporting with prompts at outpatient laboratories has led to decreased physician requests for creatinine clearance (CrCl) testing in Ontario, reports Kidney International.

The study was designed to evaluate the 2006 introduction of eGFR reporting with prompts at outpatient laboratories in Ontario whenever a serum creatinine test was ordered. The change was implemented to improve recognition of chronic kidney disease. It also supported the 2002 Kidney Disease Outcomes Quality Initiative (KDOQI) clinical practice guideline recommending the use of eGFR and discouraging timed urine collection for CrCl, except in specific situations. The effects of these interventions were analyzed using data on adult patients in Ontario from 1999 to 2009. The KDOQI guideline had little or no effect on the monthly rate of CrCl testing: 42.3 versus 46.2 per 100,000 adult population. In contrast, after introduction of eGFR reporting with prompts, the rate of CrCl testing decreased from 44.6 to 34.1 per 100,000 adult population. This represented a “sudden and significant” 23.5 percent decrease over the 43-month period analyzed. The study shows a significant reduction in the sex- and age-adjusted rate of CrCl testing after the introduction of routine eGFR reporting, whereas a clinical practice guideline alone had no significant effect. Laboratory reporting and other educational and structural changes may be more likely to achieve compliance with evidence-based guidelines (Kagoma YK et al: Reporting of the estimated glomerular filtration rate decreased creatinine clearance testing. Kidney Int 2012; 81: 1245–1247).

Pioglitazone May Increase Bladder Cancer Risk

Patients taking pioglitazone for type 2 diabetes may be at increased risk of bladder cancer, according to a study in the British Medical Journal.

The analysis included data on nearly 116,000 British primary care patients who started oral hypoglycemic drug treatment for type 2 diabetes from 1988 through 2009. During mean follow-up of 4.6 years, there were 470 diagnosed cases of bladder cancer: incidence rate 89.4 per 100,000 person-years. In a case-control study, 376 patients with bladder cancer diagnosed more than one year after starting treatment were matched to up to 20 controls. Any pioglitazone exposure was associated with an increased risk of bladder cancer: rate ratio 1.83. Risk increased with both duration of treatment and total exposure to pioglitazone: rate ratio 1.99 for more than 24 months of treatment and 2.54 for a cumulative dosage greater than 28,000 mg. Patients taking rosiglitazone showed no increase in bladder cancer risk.

The study supports previous, limited data suggesting an increased incidence of bladder cancer among patients taking pioglitazone. The association appears specific to pioglitazone and appears to increase along with treatment duration and total drug exposure over time. The researchers emphasize that, although the relative risk of bladder cancer is about twice as high in patients taking pioglitazone, the absolute excess risk is low: adjusted rate difference 74 per 100,000 person years (Azoulay L, et al: The use of pioglitazone and the risk of bladder cancer in people with type 2 diabetes: nested case-control study. BMJ 2012; 344: c3645).

All U.S. Centers Show Racial Disparities in Living Donor Kidney Transplantation

African American patients have reduced access to living donor kidney transplantation (LDKT) at every transplant center in the United States, reports a study in American Journal of Kidney Diseases.

The analysis included 247,707 adults waitlisted for kidney-only transplantation from 1995 to 2007, as reported by the Scientific Registry of Transplant Recipients. Center-specific rates of LDKT attainment were estimated for African American versus non-African American patients, in models including data on a wide range of patient- and center-level characteristics.

All 275 U.S. transplant centers showed evidence of racial disparities. Center-specific adjusted odds ratios for LDKT attainment in African American patients ranged from 0.24 to 0.65. Center-level factors associated with greater disparity included higher percentages of African American and prelisted patients. Centers with higher overall rates of LDKT had lower levels of disparity.

Previous studies have reported lower rates of LDKT attainment among African American patients, but most have focused on patient-level factors. The new study, looking at center-level variations, finds that no U.S. transplant center has achieved racial parity in LDKT. The authors call for changes in transplant center policies and procedures to help narrow the racial gap in access to LDKT (Hall EC, et al: Center-level factors and racial disparities in living donor kidney transplantation. Am J Kidney Dis 2012; 59: 849–857).

Mixed Results on Functional Impact of Frequent Hemodialysis

Increasing hemodialysis frequency from three to six times weekly improves subjective but not objective measures of physical functioning, reports a trial in the Clinical Journal of the American Society of Nephrology.

The researchers analyzed data on physical performance, health, and functioning in patients enrolled in two Frequent Hemodialysis Network (FHN) trials: 245 in the daily FHN trial and 87 in the nocturnal FHN trial. In both studies, patients were randomly assigned to frequent or conventional hemodialysis: six versus three times per week.

Consistent with other studies of hemodialysis patients, 12-month scores on the short physical performance battery (SPPB), the RAND 36-item health survey physical health composite (PHC), and the physical functioning subscale were below population norms. Patients assigned to frequent hemodialysis in the daily trial had a significant 3.4-point improvement in the PHC score, as well as a relatively large (but nonsignificant) improvement in the physical functioning subscale.

In contrast, there was no significant change in the SPPB score. None of the three measures showed a significant difference between frequent and conventional hemodialysis in the nocturnal trial.

Previous FHN trial reports have suggested beneficial effects of frequent hemodialysis, including a reduced risk of death or change in left ventricular mass. The new analysis evaluated the effects of hemodialysis frequency on important disability outcomes.

The results show significant improvement in patient-reported measures of physical health and functioning with center hemodialysis performed six versus three times per week. However, objective assessments of physical performance are not significantly improved. Neither type of outcome is altered for patients assigned to more frequent nocturnal hemodialysis ([Hall YN, et al: Effects of six versus three times per week hemodialysis on physical performance, health, and functioning; Frequent Hemodialysis Network (FHN) randomized trials. Clin J Am Soc Nephrol 2012; 7: 782–794]).

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