How Well Do Primary Care Physicians Manage Diabetic Nephropathy?

Kraft SK, Lazaridis EN, Qiu C, Clark CM Jr, Marrero DG. Screening and treatment of diabetic nephropathy by primary care physicians. J Gen Intern Med 1999;14:88–97.

Study Overview

Objective. To describe primary care physicians' (PCPs) self-reported screening and management practices for diabetic nephropathy.

Design. Cross-sectional, observational survey of physicians.

Setting and participants. 1018 active PCPs in Indiana who were providing care for patients with diabetes at the time the survey was conducted in 1995. Survey response rate was 48%. Two thirds of the study participants were family practice physicians, 23% were internal medicine physicians, and 10% were general practitioners. Participants characterized their practice as solo or 2-person (45%), group practice (44%), or hospital-based (11%). Eighty-three percent of participants treated at least 26 patients with type 2 diabetes, and most reported seeing their patients with diabetes at least 3 times annually.

Main outcome measures. Physician self-reported practice patterns for overt albuminuria and microalbuminuria screening and management were assessed along 2 dimensions: the percentage of patients to whom screening and management practices were applied and the frequency with which the practices were performed. Self-reported treatment practices for abnormal urinary albumin excretion also were examined.

Main results. Ninety-eight percent of physicians reported screening for abnormal urinary albumin excretion. Eighty-six percent of physicians reported screening more than half of patients for overt albuminuria in type 1 cases, and 82% reported doing so in type 2 cases. In contrast to screening for overt albuminuria, more than 40% of physicians reported screening none of their diabetic patients for microalbuminuria, and many reported using standard urine dipsticks to measure microalbuminuria even though this method does not detect albumin excretions in the microalbuminuria range.

ACE inhibitor therapy was used frequently (in 76% to 82% of patients) to treat abnormal urinary albumin excretion when hypertension was present but less often (in 48% to 58% of patients) when hypertension was absent. Physician specialty, year of graduation from medical school, practice location, and familiarity with the results of the Diabetes Control and Complications Trial were significant predictors of screening and treatment practice patterns.

Conclusion

The majority of PCPs follow American Diabetes Association (ADA) guidelines for detection of overt albuminuria in their patients with diabetes, but most do not screen these patients for microalbuminuria.

Commentary

Diabetic nephropathy is the major cause of new cases of end-stage renal disease in the United States and leads to more than $2 billion in direct medical costs annually [1]; however, therapies to achieve tight glycemic control and to combat hypertension can reduce this burden [2,3]. The effectiveness of these therapies depends on early detection, as recognized in the ADA's published recommendations for the appropriate screening and management of diabetic nephropathy [4,5]. The current study by Kraft and colleagues indicates that a greater awareness of and improved adherence to the existing guidelines is needed.

Applications for Clinical Practice

Efforts to educate PCPs about recommended screening techniques, the overall value of microalbuminuria screening as an opportunity to detect early signs of renal damage, and the important potential preventive role of ACE inhibitors would encourage physicians to engage in routine microalbuminuria screening in diabetic patients. More effective use of screening and treatment strategies would help to reduce the significant burden of diabetic nephropathy and subsequent end-stage renal disease.

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