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Prevention of Recurrent Nephrolithiasis in Adults

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TO THE EDITOR: Qaseem and colleagues' (1) recommendation to drink at least 2 L of fluid per day and use thiazide diuretics, citrate, or allopurinol when fluids alone are insufficient mirror a recent guideline released by the American Urological Association. However, several features of the American College of Physicians' recommendations disagree with those of the American Urological Association. For example, Qaseem and colleagues do not recommend baseline evaluation of stone composition or 24-hour urine analysis for stone risk factors. Kidney stone analysis by infrared spectroscopy is relatively inexpensive; very precise; and, in our opinion, essential to properly diagnose the form of kidney stone disease. A thiazide diuretic would not be helpful for a patient with uric acid kidney stones or someone with cystinuria, both of which can be determined by stone analysis alone. Furthermore, 24-hour urine analysis can help to guide logical therapeutic choices and specific dietary advice for an individual patient. For example, pharmacotherapy may not help persons in whom a very low urine volume is the only major risk factor and those with enteric hyperoxaluria need specific therapy geared toward dietary measures to reduce oxalate loads. In these cases, allopurinol or thiazide would probably not have any benefit.

Although rare, certain genetic conditions associated with stone disease, such as primary hyperoxaluria, can be diagnosed by extreme abnormalities noted on 24-hour urine studies. Early intervention in such conditions can slow disease progression. Urine studies would be diagnostic and extremely helpful for management of patients in only a few situations and show potential flaws in the minimalistic approach recommended by Qaseem and colleagues. Like many disorders, kidney stone disease is complicated with a variable phenotype. The guideline does little to acknowledge or highlight these issues. Current studies indicate that fewer than 10% of persons with kidney stone disease have a full metabolic workup to prevent further stone formation (2). The approach implied by Qaseem and colleagues' guideline will do little to increase the rate of appropriate metabolic evaluations or help to abate the increasing incidence of stone disease in the United States (3). In contrast, the American Urological Association guideline seems to be more balanced and, in general, contain more useful advice for a physician faced with a patient who has recurrent kidney stones.

References

1. Qaseem A, Dallas P, Forciea MA, Starkey M, Denberg TD; Clinical Guidelines Committee of the American College of Physicians. Dietary and pharmacologic management to prevent recurrent nephrolithiasis in adults: a clinical practice guideline from the American College of Physicians. *Ann Intern Med.* 2014;161:659–67. doi:10.7326/M13-2908 [PubMed: 25364887]
2. Milose JC, Kaufman SR, Hollenbeck BK, Wolf JS, Jr, Hollingsworth JM. Prevalence of 24-hour urine collection in high risk stone formers. *J Urol.* 2014;191:376–80. doi:10.1016/j.juro.2013.08.080 [PubMed: 24018242]
3. Scales CD, Jr, Smith AC, Hanley JM, Saigal CS; Urologic Diseases in America Project. Prevalence of kidney stones in the United States. *Eur Urol.* 2012;62:160–5. doi:10.1016/j.eururo.2012.03.052 [PubMed: 22498635]