Top Papers Of The Month

Articles You Don’t Want To Miss

To Work Up or Not Work Up Asymptomatic Microscopic Hematuria: Have Primary Care Physicians Been Right All Along?

GREGORY W. RUTECKI, MD—Series Editor
University of South Alabama

How is the risk of malignancy best assessed in patients with asymptomatic microscopic hematuria?

Exactly what did we know about asymptomatic microscopic hematuria (AMH; 3 or more red blood cells per high-power field on at least 2 of 3 properly collected urine specimens) prior to this month’s “Top Paper”? AMH is common with a prevalence as high as 9% to 18%. The American Urological Association has strictly delineated workup for AMH. Guidelines propose imaging with multiphase computed tomography with and without contrast; and patients 35 years of age or older, as well as those younger than age 35 if they have risk factors for urinary tract malignancies, should also undergo a cystoscopic evaluation.

So what is the problem? Referral rates by primary care physicians for workup of AMH (to urologists) have been poor. Are primary care physicians deliberately ignoring the guidelines? The answer is a bit more complicated. The strength of evidence supporting the guidelines is low (grade C). Furthermore, population-based samples demonstrate that malignancy is discovered in only 0.5% to 5.0% of patients with AMH. This month’s “Top Paper” reconciles the disparity with an intriguing addition to the evidence regarding AMH.

HEMATURIA RISK INDEX

All persons (n = 2630) referred to urologists for AMH in an integrated care organization underwent complete workup as contained in the guidelines. Fifty-five members of this cohort (2.1%) were found to have a neoplasm and another 50 (1.9%) had a pathologically confirmed urinary tract cancer. The strongest predictors of cancer were age greater than 50 years and a recent diagnosis of gross hematuria. Utilizing the data obtained from this prospective cohort study resulted in a Hematuria Risk Index (each identified risk factor on follow-up was assigned a point value based on regression models) with a receiver operating characteristic curve (AUC) of 0.809 (a very solid AUC). A contingent validation cohort (n = 1784) documented that the Index performed accurately in follow-up (AUC = 0.829). The study identified 32% of the cohort as low risk (a 0.2% cancer detection rate) and 14% high risk (an 11.1% cancer diagnosis). What do the study and the accompanying editorial tell us and not tell us?

The data apply to AMH and not gross hematuria! As many 19% of persons evaluated for gross hematuria will harbor a urinary tract malignancy. These patients are the proverbial “horse of a different color,” and the study does not apply to them. The editorialist offered a wise interpretation of the results. He said, “The mantra of the future is individualized medicine.” Utilizing the risk index to better inform individual patients with AMH regarding their risk of cancer honors their autonomy. Rather than apply a guideline wherein “one size fits all,” these novel data can improve prognostication. An individual in the third decade of life with AMH may opt for follow-up without CT scanning and/or cystoscopy.

FUTURE DIRECTIONS

The future may contain additional insights. Improved urinary markers may better predict malignancy than cytology. In the meanwhile, the “Top Paper” is a balanced step in the right direction. Regarding the paucity of referrals for AMH in the past, maybe primary care docs were not missing the point after all.

REFERENCES: