Diagnostic workup for asymptomatic microhematuria in patients younger than 50 years

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INTRODUCTION & OBJECTIVES: Complete urologic workup including urine cytology, upper tract imaging and cystourethroscopy is usually recommended for evaluation of adults with asymptomatic microhematuria and no recognized etiology. However these recommendations are based on studies which include all age groups. We conducted this study to evaluate the efficacy of various urologic investigations in determining etiology of asymptomatic microhematuria in young adults.

MATERIAL & METHODS: Two hundred and seventy five consecutive patients < 50 years old were evaluated for incidentally diagnosed asymptomatic microscopic hematuria in our institution between December 2008 and March 2013. Patients with evidence of urolithiasis in ultrasonography and urinary tract infection were excluded from enrollment. All patients underwent complete urologic investigation including, ultrasonography, Computed tomography (CT) urography or Intravenous urography (IVU), urine cytology and cystourethroscopy.

RESULTS: In total 95% (261/275) of patients had no pathology, simple renal cysts were noted in 8 (3%) patients. Four bladder tumors and two renal masses (one angiomyolipoma and one renal cell carcinoma) were seen in patients older than 35 years. Ultrasonography was capable of detecting all malignant pathologies except for one bladder tumor which was detected by cystourethroscopy. No malignant pathology was recorded for patients younger than 35 years.

CONCLUSIONS: Our results revealed that the probability of malignant pathologies is low in young patients with asymptomatic microhematuria. Moreover CT urography and urine cytology seem to add little, if any information to that obtained by ultrasonography especially in patients younger than 35 years. Extensive evaluations in patients with asymptomatic microhematuria may also expose them to unnecessary risks.